Stay on Track

2020 - 2021 COLLEGE CATALOG

OAKLAND COMMUNITY COLLEGE

Excellence Empowered.
## Table of Contents

Graduation Requirements ................................................. 5  
Procedure for Graduation ............................................. 5  
Degree and Certificate Requirements ................................. 5  
General Education Requirements ..................................... 6  
Michigan Transfer Agreement Requirements ....................... 6  
General Education Distribution Requirements ................... 8  
Program Integrity and Guarantees ................................. 11  
Degree and Certificate Program Index ................................ 12  
Career Clusters .......................................................... 16  
Programs .................................................................. 19  
  Accounting ................................................................ 19  
    Business Administration with a Concentration in Accounting  
       (ACC.ABA) .......................................................... 20  
    General Accounting (ACC.GA.CT) ................................. 20  
  Applied Science Degree .............................................. 21  
  Associate in Arts ...................................................... 21  
  Automobile Servicing ............................................... 22  
    Automobile Servicing (AUS.AAS) .................................. 22  
    Automobile Servicing (AUS.CT) .................................... 23  
  Business Administration ............................................. 23  
  Cinematic Arts .......................................................... 24  
  Cinematic Arts (CIN.AA) ............................................... 24  
  Collision Auto Repair .................................................. 25  
    Collision Auto Repair - Non-Structural Repair Technology  
       Option (CAR.NRT.CT) ........................................... 25  
    Collision Auto Repair - Paint and Refinish Technology  
       Option (CAR.PRT.CT) ........................................... 25  
    Collision Auto Repair - Body Repair Technician Assistant  
       (CAR.NRT.CA) .................................................... 26  
    Collision Auto Repair - Detailer/Painter Assistant (CAR.PRT.CA) ........................................... 26  
  Computer Aided Design and Engineering Technology ............ 26  
    Computer Aided Design and Engineering Technology -  
       Computer Aided Engineering Option (CAD.CAE.AAS) .... 27  
    Computer Aided Design and Engineering Technology -  
       Product Design Option (CAD.PDO.AAS) ....................... 27  
    Computer Aided Design and Engineering Technology -  
       Vehicle Design Option (CAD.VDO.AAS) ....................... 28  
    Computer Aided Design and Engineering Technology -  
       Level II Intermediate (CAD.LV2.CT) ......................... 29  
    Computer Aided Design and Engineering Technology -  
       Architectural Applications (CAD.ARC.CA) .................... 29  
  Computer Aided Design and Engineering Technology -  
     Fundamentals (CAD.LV1.CA) ..................................... 30  
  Computer Information Systems ..................................... 30  
  Computer Information Systems - Business Systems Analysis  
     Option (CIS.BSA.AAS) ............................................ 31  
  Computer Information Systems - Cybersecurity Option  
     (CIS.CYS.AAS) .................................................... 32  
  Computer Information Systems - Information Technology Support  
     Option (CIS.ITS.AAS) ............................................ 32  
  Computer Information Systems - Software Engineering Option  
     (CIS.SWE.AAS) .................................................... 33  
  Computer Information Systems - Cybersecurity Certificate  
     (CIS.CYS.CT) ...................................................... 33  
  Computer Information Systems - Information Technology Support  
     Certificate (CIS.ITS.CT) ....................................... 34  
  Computer Information Systems - Software Engineering Certificate  
     (CIS.SWE.CT) ..................................................... 35  
  Computer Information Systems - Web Designer Certificate  
     (CIS.WDE.CT) ..................................................... 35  
  Computer Information Systems - Cisco Internetworking Certificate  
     of Achievement (CIS.CIN.CA) ................................ 36  
  Construction Management .......................................... 36  
    Construction Management (CMN.AAS) ............................ 36  
    Construction Management (CMN.CT) ............................. 37  
  Construction Management Professional .......................... 37  
    Construction Management Professional (CMP.AAS) .......... 37  
  Criminal Justice ...................................................... 38  
    Criminal Justice - Corrections (CRJ.CRO.AAS) ............... 38  
    Criminal Justice - Generalist (CRJ.GEN.AAS) ............... 39  
    Criminal Justice - Law Enforcement (CRJ.LAW.AAS) ........... 40  
    Criminal Justice - Police Evidence Technology (CRJ.PET.AAS)  ............... 41  
    Criminal Justice - Homeland Security (CRJ.HLS.CA) ........ 41  
    Criminal Justice - Police Academy (CRJ.OPA.CA) ............ 42  
  Culinary Arts .......................................................... 42  
    Culinary Arts (CUL.AAS) ........................................... 42  
    Culinary Arts - Baking and Pastry Arts (CUL.BPA.CT) .... 43  
  Dental Hygiene ......................................................... 43  
    Dental Hygiene (DHY.APP) ........................................ 43  
  Diagnostic Medical Sonography .................................... 45  
    Diagnostic Medical Sonography (DMS.APP) .................... 45  
  Digital Media Communications .................................... 46  
  Early Childhood Education ........................................ 46  
    Early Childhood Education (ECE.AAS) .......................... 47  
  Emergency Medical Services ..................................... 47
Emergency Medical Services (EMS.APP) .......................... 48
Emergency Medical Services - Paramedic (EMS.PAR.CT) .... 49
Emergency Medical Services - EMT (EMS.EMT.CA) .......... 49
Fine Arts/Visual ............................................................. 49
Fine Arts/Visual Concentration - Associate in Arts Degree (FAV.AA) ............................................................. 50
Fire Fighter Technology ...................................................... 51
Fire Fighter Technology (FFT.AAS) ................................... 51
Fire Fighter Technology - Fire Academy (FFT.CA) ............. 51
General Studies ............................................................. 52
Global Studies .............................................................. 52
Global Studies (GLS.AA) .................................................. 52
Graphic Design ............................................................. 54
Graphic Design (GRD.AAS) .............................................. 54
HVAC/R Systems Technology ............................................ 55
  Heating, Ventilation, Air Conditioning and Refrigeration Technician Option (HVA.HVT.AAS) ........................................ 55
  HVAC/R Systems Technology - Building Air and Water Balance/ Retro-Commissioning (HVA.AWB.CT) ............................ 56
  HVAC/R Systems Technology - Heating (HVA.HV.CT) ........ 56
  HVAC/R Systems Technology - Air Conditioning (HVA.HVC.CT) ............................................................................. 56
  HVAC/R Systems Technology - Refrigeration (HVA.HVR.CT) ................................................................................. 57
  HVAC/R Systems Technology - Alternative Thermal Energy Systems (HVA.TES.CA) .................................................. 57
Health Care Administration ................................................. 57
  Health Care Administration (HCA.AAS) ............................... 57
  Health Care Administration (HCA.CT) ............................... 58
Industrial Technology ......................................................... 59
Interior Design .................................................................. 60
  Interior Design (INT.AAS) ................................................ 60
International Commerce ..................................................... 61
  International Commerce (ICM.INT.AA) ............................... 61
Library Services and Technology ........................................... 62
  Library Services and Technology (LIB.AAS) ....................... 62
  Library Services and Technology (LIB.CA) ......................... 63
Machine Tool Technology .................................................... 63
  Machine Tool Technology (MTT.CNC.AAS) ....................... 63
  Machine Tool Technology (MTT.CNC.CT) ......................... 64
Management Development ............................................... 64
  Management Development - Business Management (MGT.BUS.AAS) ................................................................. 64
  Management Development - Hospitality (MGT.HSP.AAS) ...... 65
Medical Assisting ................................................................. 66
  Medical Assisting (MDA.AAS) .......................................... 66
  Medical Assisting (MDA.CT) ............................................ 67
  Medical Assisting - Medical Insurance Coding and Billing (MDA.MIC.CA) .......................................................... 68
  Medical Assisting - Medical Office Administrative Procedures (MDA.MOA.CA) ....................................................... 68
  Medical Assisting - Phlebotomy (MDA.PHT.CA) ................. 69
Mental Health/Social Work .................................................. 69
  Mental Health/Social Work (MHS.AAS) ............................... 69
Music .............................................................................. 70
  Associate in Arts with a Concentration in Music (MUS.AA) .... 70
  Music (MUS.CT) .............................................................. 71
Nursing ............................................................................. 72
  Nursing (NUR.AAS) ........................................................ 72
  Nursing - Transitional LPN to ADN Track (NUR.TPN.AAS) ... 73
Occupational Therapy Assistant ......................................... 74
  Occupational Therapy Assistant (OTA.MCC.REC) ............... 74
Paralegal ............................................................................ 75
  Paralegal (PLG.AAS) ........................................................ 75
  Paralegal - Post-Bachelor Degree Professional Paralegal (PLG.CT) ........................................................................ 76
Photographic Technology .................................................. 77
  Photographic Technology (PHT.AAS) ................................. 77
  Photographic Technology (PHT.CT) .................................... 77
Physical Therapist Assistant ............................................... 78
  Physical Therapist Assistant (PTA.MCC.REC) ..................... 78
Radiologic Technology ....................................................... 79
  Radiologic Technology (RAL.AAS) ................................. 79
  Radiologic Technology (RAL.CT) ..................................... 79
Respiratory Therapy .......................................................... 80
  Respiratory Therapy (RSP.AAS) ........................................ 80
Robotics/Automated Systems Technology ........................... 81
  Robotics/Automated Systems Technology (ROB.AUT.AAS) .... 81
  Robotics/Automated Systems Technology (ROB.AUT.CT) ....... 82
  Robotics/Automated Systems Technology - Programmable Controllers (ROB.PCT.CA) ........................................... 83
Science ........................................................................... 83
  Sign Language Interpreter .............................................. 84
  Sign Language Interpreter (SLI.AAS) ............................... 84
Surgical Technology .......................................................... 85
  Surgical Technology (SUR.AAS) ........................................ 85
  Surgical Technology (SUR.CT) ......................................... 85
Technological Sciences ...................................................... 86
<table>
<thead>
<tr>
<th>Course Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course Descriptions</td>
<td>91</td>
</tr>
<tr>
<td>Academic Support Center (ASC)</td>
<td>91</td>
</tr>
<tr>
<td>Accounting (ACC)</td>
<td>92</td>
</tr>
<tr>
<td>Anthropology (ANT)</td>
<td>93</td>
</tr>
<tr>
<td>Apprentice Applied Technology (APP)</td>
<td>94</td>
</tr>
<tr>
<td>Apprentice Engineering / Drafting (TED)</td>
<td>94</td>
</tr>
<tr>
<td>Apprentice Mathematics (APM)</td>
<td>94</td>
</tr>
<tr>
<td>Apprentice Tinsmith (APT)</td>
<td>94</td>
</tr>
<tr>
<td>Arabic (ARB)</td>
<td>94</td>
</tr>
<tr>
<td>Architecture (ARC)</td>
<td>95</td>
</tr>
<tr>
<td>Art (ART)</td>
<td>97</td>
</tr>
<tr>
<td>Automotive Technology (AUT)</td>
<td>100</td>
</tr>
<tr>
<td>Biology (BIO)</td>
<td>102</td>
</tr>
<tr>
<td>Business (BUS)</td>
<td>103</td>
</tr>
<tr>
<td>Chemistry (CHE)</td>
<td>104</td>
</tr>
<tr>
<td>Chinese (CHI)</td>
<td>105</td>
</tr>
<tr>
<td>Collision Auto Repair (CAR)</td>
<td>105</td>
</tr>
<tr>
<td>Communication (COM)</td>
<td>107</td>
</tr>
<tr>
<td>Computer Aided Design and Engineering (CAD)</td>
<td>108</td>
</tr>
<tr>
<td>Computer Information Systems (CIS)</td>
<td>111</td>
</tr>
<tr>
<td>Construction Management (CMN)</td>
<td>118</td>
</tr>
<tr>
<td>Counseling (CNS)</td>
<td>119</td>
</tr>
<tr>
<td>Criminal Justice (CRJ)</td>
<td>119</td>
</tr>
<tr>
<td>Culinary Arts (CUL)</td>
<td>124</td>
</tr>
<tr>
<td>Dental Hygiene (DHY)</td>
<td>131</td>
</tr>
<tr>
<td>Diagnostic Medical Sonography (DMS)</td>
<td>133</td>
</tr>
<tr>
<td>Diesel Technology (DHE)</td>
<td>134</td>
</tr>
<tr>
<td>Drafting and Design Technology (DDT)</td>
<td>134</td>
</tr>
<tr>
<td>Early Childhood Education (ECE)</td>
<td>135</td>
</tr>
<tr>
<td>Economics (ECO)</td>
<td>136</td>
</tr>
<tr>
<td>Education (EDU)</td>
<td>136</td>
</tr>
<tr>
<td>Electrical / Electronics Technology (EEC)</td>
<td>136</td>
</tr>
<tr>
<td>Electrical Trades Technology (ETT)</td>
<td>137</td>
</tr>
<tr>
<td>Emergency Medical Services (EMS)</td>
<td>137</td>
</tr>
<tr>
<td>Pre-Engineering (EGR)</td>
<td>140</td>
</tr>
<tr>
<td>English (ENG)</td>
<td>140</td>
</tr>
<tr>
<td>English as a Second Language (ESL)</td>
<td>142</td>
</tr>
<tr>
<td>Fire Fighter Technology (FFT)</td>
<td>144</td>
</tr>
<tr>
<td>Fluid Power Technology (ATF)</td>
<td>145</td>
</tr>
<tr>
<td>Foundational Studies (FSH)</td>
<td>145</td>
</tr>
<tr>
<td>Foundational Studies (FSN)</td>
<td>145</td>
</tr>
<tr>
<td>French (FRE)</td>
<td>145</td>
</tr>
<tr>
<td>General Science (GSC)</td>
<td>146</td>
</tr>
<tr>
<td>Geography (GEO)</td>
<td>146</td>
</tr>
<tr>
<td>German (GER)</td>
<td>146</td>
</tr>
<tr>
<td>Global Studies (GLS)</td>
<td>147</td>
</tr>
<tr>
<td>Graphic Design (GRD)</td>
<td>148</td>
</tr>
<tr>
<td>Health (HEA)</td>
<td>149</td>
</tr>
<tr>
<td>Health Care Administration (HCA)</td>
<td>149</td>
</tr>
<tr>
<td>Heating Ventilation Air Conditioning (HVA)</td>
<td>150</td>
</tr>
<tr>
<td>History (HIS)</td>
<td>153</td>
</tr>
<tr>
<td>Humanities (HUM)</td>
<td>154</td>
</tr>
<tr>
<td>Interior Design (INT)</td>
<td>156</td>
</tr>
<tr>
<td>Italian (ITA)</td>
<td>157</td>
</tr>
<tr>
<td>Japanese (JPN)</td>
<td>157</td>
</tr>
<tr>
<td>Library Services and Technology (LIB)</td>
<td>158</td>
</tr>
<tr>
<td>Machine Tool Technology (MTT)</td>
<td>159</td>
</tr>
<tr>
<td>Marketing (MKT)</td>
<td>160</td>
</tr>
<tr>
<td>Material Science (MSE)</td>
<td>160</td>
</tr>
<tr>
<td>Mathematics (MAT)</td>
<td>160</td>
</tr>
<tr>
<td>Mechatronics (MCT)</td>
<td>162</td>
</tr>
<tr>
<td>Medical Assisting (MDA)</td>
<td>163</td>
</tr>
<tr>
<td>Mental Health / Social Work (MHA)</td>
<td>165</td>
</tr>
<tr>
<td>Music (MUS)</td>
<td>166</td>
</tr>
<tr>
<td>Nursing (NUR)</td>
<td>174</td>
</tr>
<tr>
<td>Paralegal (PLG)</td>
<td>176</td>
</tr>
<tr>
<td>Philosophy (PHI)</td>
<td>178</td>
</tr>
<tr>
<td>Photographic Technology (PHO)</td>
<td>178</td>
</tr>
<tr>
<td>Physical Education and Recreation (PER)</td>
<td>180</td>
</tr>
<tr>
<td>Physical Science (PSC)</td>
<td>183</td>
</tr>
<tr>
<td>Physics (PHY)</td>
<td>183</td>
</tr>
<tr>
<td>Political Science (POL)</td>
<td>183</td>
</tr>
<tr>
<td>Psychology (PSY)</td>
<td>184</td>
</tr>
<tr>
<td>Radiologic Technology (RAD)</td>
<td>185</td>
</tr>
</tbody>
</table>
Respiratory Therapy (RSP) ........................................ 187
Robotics / Automated Systems Technology (ROB) ........... 189
Service Learning (SRV) ........................................... 190
Sign Language Interpreter (SLI) .................................. 190
Sociology (SOC) ..................................................... 193
Spanish (SPA) ....................................................... 194
Surgical Technology (SUR) ....................................... 195
Technical Internships (IND) ...................................... 197
Technological Sciences (TSC) .................................... 197
Theatre (THE) ....................................................... 197
Welding (WEL) ..................................................... 199
Index ........................................................................... 201
Graduation Requirements

Procedure for Graduation

The Oakland Community College graduation ceremonies cap the educational experiences of its students. The graduation ceremonies are held annually. The conferring of associate degrees and certificates highlight the ceremonies. Degrees and certificates are mailed only after the annual commencement ceremony. All candidates for graduation are encouraged to attend commencement.

Graduation Requirements

The requirements for graduation may be completed during any semester, but the degree or certificate would be conferred following the conclusion of the semester in which the degree or certificate is being awarded. Individual programs may hold additional award events. To be eligible for a diploma or certificate, the student must complete all of the following requirements:

1. Complete all academic requirements of the degree or certificate program sought.
2. File a properly and completely executed Application for Graduation. Graduation applications for a desired semester must be completed before the next semester begins.
3. Fulfill all financial obligations to the College. Financial Aid recipients must clear the Office of Financial Aid’s special requirements for exiting students.

Multiple awards may be issued simultaneously; however, students must meet the eligibility and procedural standards for each award.

Course Substitution

In certain circumstances, students may substitute a comparable course for a required course provided that the minimum number of credit hours for the degree or certificate is met. Students should inquire about the substitution procedure at any campus counseling office.

Extended Degree Programs

Degree programs have a minimum of 60 semester hours. However, certain program requirements are so extensive that they can only be satisfied with a higher minimum. When a program requires a minimum of 73 or more credit hours, we designate the program as an “Extended Degree” program in recognition of the efforts of students in that program.

Graduation Ceremony

Before students are allowed to participate in the graduation ceremonies, they must have filed a properly and completely executed Application for Graduation.

Graduation with Honors

Students are eligible to graduate with honors according to the following grade point average requirements:

<table>
<thead>
<tr>
<th>Honor</th>
<th>Grade Point Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summa Cum Laude</td>
<td>3.86 - 4.00</td>
</tr>
<tr>
<td>Magna Cum Laude</td>
<td>3.66 - 3.85</td>
</tr>
<tr>
<td>Cum Laude</td>
<td>3.50 - 3.65</td>
</tr>
</tbody>
</table>

Degree and Certificate Requirements

Requirements for a Certificate of Achievement

A Certificate of Achievement is a validation of employability of students with specific work-related skills. Candidates for a Certificate of Achievement must have completed the specified courses identified within the academic program section of the catalog with an overall 2.00 grade point average and a minimum of 10 credit hours at OCC.

Requirements for a Certificate

Most OCC certificate programs require between 28 and 36 credit hours. Candidates for a certificate must complete a minimum of 15 credit hours at OCC as well as satisfy the requirements in their selected program indicated in the Degree Programs section of this catalog with a minimum cumulative 2.00 grade point average.

Requirements for an Associate Degree

Eligibility for a certificate or degree rests upon the satisfaction of these requirements:

1. Complete all academic requirements of the program. Academic requirements for each certificate program are listed with the parallel degree program description in this catalog.
   a. Upon completion of 30 hours toward a degree (15 hours toward a certificate), students should consult with a counselor.
   b. Upon preparing to enter the final semester, students should again consult with a counselor to determine degree and/or certificate eligibility.
2. Complete a minimum of 60 credit hours for a degree with a minimum cumulative 2.00 grade point average (GPA) overall, though many programs have a minimum-credit-hour requirement greater than 60.
3. All transfer students must complete a minimum of 15 credit hours at OCC.
4. Meet all General Education Distribution requirements (Associate in Applied Science degrees, Associate in Business Administration degrees, Associate in General Studies degrees, or Associate in Science degrees) or Michigan Transfer Agreement requirements (Associate in Arts degrees).

**Effective Catalog Determination for Degree Requirements**

Students leaving OCC who have completed 15 or more OCC credits may apply for graduation upon submission of transfer credits to complete degree requirements.

1. If the break is longer than three years, the effective catalog for the determination of degree requirements becomes the one in effect at the point at which the transfer credit is applied. Note: An Application for Admission is needed before the transfer credit can be processed. (Also see Procedure for Graduation.)
2. If the break is less than three years, the effective catalog remains unchanged for determining the completion of program requirements.

**Reverse Transfer**

Reverse transfer is an opportunity in which students who attended OCC in the past and then transferred to a four-year college or university will transfer credits from the four-year school back to OCC to determine eligibility for an associate degree or certificate at OCC. Several agreements exist between OCC and four-year colleges and universities to promote these opportunities. Students may also pursue a reverse transfer on their own by meeting with an OCC counselor.

**General Education Requirements**

It is the philosophy of Oakland Community College that General Education is intended for all students. OCC offers a variety of General Education opportunities to enable students to acquire and apply a broad foundation of knowledge and skills needed to be productive and responsible citizens of a changing world. All students enrolled at the college will experience learning in at least one General Education outcome in each course they take at OCC.

**Philosophy**

General Education will enable students to acquire and apply a broad foundation of knowledge and skills needed to be productive and responsible in a changing world.

**Outcomes**

The Oakland Community College General Education distribution courses and other campus experiences lead to the development of the following:

1. Critical Thinking
2. Effective Communication
3. Global Understanding and Responsibility
4. Information Literacy
5. Personal Development
6. Social Responsibility
7. Quantitative Literacy
8. Scientific Literacy
9. Aesthetic Literacy

This list was derived from the College faculty’s rigorous research reviews in the following areas:

- Knowledge and skills desired by employers for college graduates.
- Knowledge and skills necessary for success in the most common adult roles of citizen, worker and family member to trends in other colleges and universities.

The General Education Distribution requirements will provide the student with an in-depth focus on the 9 outcomes through exposure to a breadth of disciplines. For a comprehensive description of each General Education Outcome, please visit www.oaklandcc.edu/assessment/ (http://www.oaklandcc.edu/assessment/).

**Michigan Transfer Agreement Requirements**

The Michigan Transfer Agreement (MTA) was designed to facilitate the transfer of general education requirements from one institution to another. Students may complete the MTA as part of an associate’s degree or as a stand-alone package.

The intent is that the 30 credits of core college courses will most likely fulfill all or the majority of the student’s lower-level general education requirements at the receiving institution, though students should always discuss transfer options with a counselor as requirements may vary by school.

1. To receive the MTA endorsement, students must fulfill the requirements noted for each category and successfully complete at least 30 credits. All coursework used to fulfill MTA requirements must be completed with a grade of 2.0 or higher in each course. Course equivalencies awarded from a College-Level Examination Program (CLEP), a DANTES Subject Standardized Test (DSST) or from an International Baccalaureate (IB) are not eligible for use toward MTA requirements.
2. If all categories have been completed and at least 30 credits have not been earned, the student must successfully complete one or more classes with a grade of 2.0 or higher in each course from one or more of the categories to attain at least 30 credits.
3. Students seeking the MTA endorsement using transfer credits must successfully complete at least 1 credit-bearing non-developmental course at OCC.
4. The MTA endorsement can be posted to a student’s record when all components have been met, even though the student may not have completed OCC degree requirements.
5. An OCC student must be admissible to a receiving Michigan institution in order to benefit from the MTA endorsement.
6. The MTA applies to 30 credits of core college coursework mostly consistent among Michigan institutions and does not excuse OCC students from meeting specific course requirements for an area of study while enrolled at OCC.

Students may request an OCC counselor to review if MTA requirements have been completed. A review of MTA eligibility may also be requested when a transcript or an e Transcript is ordered.
Courses that Satisfy Michigan Transfer Agreement Requirements

### English Composition

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 1510</td>
<td>Composition I</td>
<td>3</td>
</tr>
<tr>
<td>ENG 1520</td>
<td>Composition II</td>
<td>3</td>
</tr>
</tbody>
</table>

### Communications

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>COM 1290</td>
<td>Interpersonal Communication</td>
<td>3</td>
</tr>
<tr>
<td>COM 1600</td>
<td>Fundamentals of Speech</td>
<td>3</td>
</tr>
<tr>
<td>COM 2290</td>
<td>Intercultural Communication</td>
<td>3</td>
</tr>
<tr>
<td>COM 2610</td>
<td>Persuasion and Argumentation</td>
<td>3</td>
</tr>
<tr>
<td>COM 2620</td>
<td>Oral Interpretation of Literature</td>
<td>3</td>
</tr>
<tr>
<td>ENG 1510</td>
<td>Composition I</td>
<td>3</td>
</tr>
<tr>
<td>ENG 1520</td>
<td>Composition II</td>
<td>3</td>
</tr>
<tr>
<td>ENG 2200</td>
<td>Professional Communication</td>
<td>4</td>
</tr>
</tbody>
</table>

### Mathematics

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAT 1500</td>
<td>Finite Mathematics</td>
<td>4</td>
</tr>
<tr>
<td>MAT 1525</td>
<td>Quantitative Reasoning</td>
<td>4</td>
</tr>
<tr>
<td>MAT 1540</td>
<td>College Algebra</td>
<td>4</td>
</tr>
<tr>
<td>MAT 1560</td>
<td>Trigonometry</td>
<td>3</td>
</tr>
<tr>
<td>MAT 1580</td>
<td>Statistics</td>
<td>4</td>
</tr>
<tr>
<td>MAT 1600</td>
<td>Applied Calculus</td>
<td>4</td>
</tr>
<tr>
<td>MAT 1630</td>
<td>Precalculus</td>
<td>5</td>
</tr>
<tr>
<td>MAT 1730</td>
<td>Calculus I</td>
<td>4</td>
</tr>
<tr>
<td>MAT 1740</td>
<td>Calculus II</td>
<td>4</td>
</tr>
<tr>
<td>MAT 2740</td>
<td>Calculus III</td>
<td>4</td>
</tr>
<tr>
<td>MAT 2810</td>
<td>Differential Equations</td>
<td>4</td>
</tr>
<tr>
<td>MAT 2880</td>
<td>Linear Algebra</td>
<td>4</td>
</tr>
</tbody>
</table>

### Social Sciences

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANT 1520</td>
<td>Physical and Archaeology Anthropology</td>
<td>3</td>
</tr>
<tr>
<td>ANT 1540</td>
<td>Introduction to Cultural Anthropology</td>
<td>3</td>
</tr>
<tr>
<td>ANT 2750</td>
<td>Myth, Magic and Folk Religion</td>
<td>3</td>
</tr>
<tr>
<td>ECO 2610</td>
<td>Economics I</td>
<td>3</td>
</tr>
<tr>
<td>ECO 2620</td>
<td>Economics II</td>
<td>3</td>
</tr>
<tr>
<td>GEO 1510</td>
<td>Physical Geography</td>
<td>3</td>
</tr>
<tr>
<td>GEO 1520</td>
<td>World Geography</td>
<td>3</td>
</tr>
<tr>
<td>HIS 1510</td>
<td>World Civilizations to the Beginning of the Modern Era</td>
<td>4</td>
</tr>
</tbody>
</table>

### Fine Arts/Humanities

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARB 1510</td>
<td>Beginning Arabic I</td>
<td>4</td>
</tr>
<tr>
<td>ARB 1530</td>
<td>Beginning Arabic II</td>
<td>4</td>
</tr>
<tr>
<td>ART 1560</td>
<td>Art Appreciation</td>
<td>3</td>
</tr>
<tr>
<td>CHI 1510</td>
<td>Beginning Chinese I</td>
<td>4</td>
</tr>
<tr>
<td>ENG 1610</td>
<td>Women in Literature</td>
<td>3</td>
</tr>
<tr>
<td>ENG 1710</td>
<td>Introduction to Literature: Short Story and Novel</td>
<td>3</td>
</tr>
<tr>
<td>ENG 1720</td>
<td>Introduction to Literature: Poetry and Drama</td>
<td>3</td>
</tr>
<tr>
<td>ENG 2300</td>
<td>Science Fiction and Fantasy</td>
<td>3</td>
</tr>
<tr>
<td>ENG 2510</td>
<td>American Literature Before the Civil War</td>
<td>3</td>
</tr>
<tr>
<td>ENG 2520</td>
<td>American Literature Since the Civil War</td>
<td>3</td>
</tr>
<tr>
<td>ENG 2540</td>
<td>World Literature II</td>
<td>3</td>
</tr>
<tr>
<td>ENG 2550</td>
<td>British Literature Before 1700</td>
<td>3</td>
</tr>
<tr>
<td>ENG 2560</td>
<td>British Literature After 1700</td>
<td>3</td>
</tr>
<tr>
<td>ENG 2570</td>
<td>Survey of African American Literature</td>
<td>3</td>
</tr>
<tr>
<td>ENG 2650</td>
<td>Children's Literature</td>
<td>3</td>
</tr>
<tr>
<td>ENG 2750</td>
<td>William Shakespeare: Comedies, Histories and Sonnets</td>
<td>3</td>
</tr>
<tr>
<td>ENG 2760</td>
<td>William Shakespeare: Tragedies, Romances and Selected Poems</td>
<td>3</td>
</tr>
<tr>
<td>ENG 2770</td>
<td>Contemporary Literature</td>
<td>3</td>
</tr>
<tr>
<td>ENG 2780</td>
<td>Introduction to Playwriting and Screenwriting</td>
<td>3</td>
</tr>
<tr>
<td>ENG 2800</td>
<td>Creative Writing</td>
<td>3</td>
</tr>
<tr>
<td>FRE 1510</td>
<td>Beginning French I</td>
<td>4</td>
</tr>
<tr>
<td>FRE 1530</td>
<td>Beginning French II</td>
<td>4</td>
</tr>
<tr>
<td>FRE 2610</td>
<td>Intermediate French I</td>
<td>4</td>
</tr>
<tr>
<td>FRE 2620</td>
<td>Intermediate French II</td>
<td>4</td>
</tr>
<tr>
<td>FSH 1500</td>
<td>Foundations of Humanities</td>
<td>4</td>
</tr>
<tr>
<td>GER 1510</td>
<td>Beginning German I</td>
<td>4</td>
</tr>
</tbody>
</table>
### Natural Sciences

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>GER 1530</td>
<td>Beginning German II</td>
<td>4</td>
</tr>
<tr>
<td>HIS 1510</td>
<td>World Civilizations to the Beginning of the Modern Era</td>
<td>4</td>
</tr>
<tr>
<td>HIS 1520</td>
<td>World Civilizations from the Modern Era</td>
<td>4</td>
</tr>
<tr>
<td>HUM 1510</td>
<td>Arts and Literature: Origins of Western Traditions</td>
<td>3</td>
</tr>
<tr>
<td>HUM 1520</td>
<td>Arts and Literature: Renaissance Through Modern</td>
<td>3</td>
</tr>
<tr>
<td>HUM 1710</td>
<td>World Religions</td>
<td>3</td>
</tr>
<tr>
<td>HUM 1900</td>
<td>Introduction to Film</td>
<td>3</td>
</tr>
<tr>
<td>HUM 2720</td>
<td>Bible</td>
<td>3</td>
</tr>
<tr>
<td>ITA 1510</td>
<td>Beginning Italian I</td>
<td>4</td>
</tr>
<tr>
<td>ITA 1530</td>
<td>Beginning Italian II</td>
<td>4</td>
</tr>
<tr>
<td>JPN 1510</td>
<td>Beginning Japanese I</td>
<td>4</td>
</tr>
<tr>
<td>JPN 1530</td>
<td>Beginning Japanese II</td>
<td>4</td>
</tr>
<tr>
<td>JPN 2610</td>
<td>Intermediate Japanese I</td>
<td>4</td>
</tr>
<tr>
<td>JPN 2620</td>
<td>Intermediate Japanese II</td>
<td>4</td>
</tr>
<tr>
<td>MUS 1530</td>
<td>Fundamentals of Music</td>
<td>2</td>
</tr>
<tr>
<td>MUS 1560</td>
<td>Listening to Music: ‘Classical’ to Jazz</td>
<td>3</td>
</tr>
<tr>
<td>MUS 1585</td>
<td>Listening to Music: World Music</td>
<td>3</td>
</tr>
<tr>
<td>MUS 1590</td>
<td>Listening to Music: Rock to Hip-Hop</td>
<td>3</td>
</tr>
<tr>
<td>PHI 1510</td>
<td>Introduction to Philosophy</td>
<td>3</td>
</tr>
<tr>
<td>PHI 1610</td>
<td>Ethics</td>
<td>3</td>
</tr>
<tr>
<td>PHI 1710</td>
<td>Introduction to Informal Logic</td>
<td>3</td>
</tr>
<tr>
<td>PHI 2710</td>
<td>Introduction to Formal Logic</td>
<td>3</td>
</tr>
<tr>
<td>SLI 1000</td>
<td>American Sign Language (ASL) I</td>
<td>3</td>
</tr>
<tr>
<td>SLI 1010</td>
<td>American Sign Language (ASL) II</td>
<td>3</td>
</tr>
<tr>
<td>SLI 1030</td>
<td>American Sign Language (ASL) IV</td>
<td>3</td>
</tr>
<tr>
<td>SPA 1510</td>
<td>Beginning Spanish I</td>
<td>4</td>
</tr>
<tr>
<td>SPA 1530</td>
<td>Beginning Spanish II</td>
<td>4</td>
</tr>
<tr>
<td>SPA 2610</td>
<td>Intermediate Spanish I</td>
<td>4</td>
</tr>
<tr>
<td>SPA 2620</td>
<td>Intermediate Spanish II</td>
<td>4</td>
</tr>
<tr>
<td>THE 1561</td>
<td>Introduction to Theatre</td>
<td>3</td>
</tr>
</tbody>
</table>

Select two of the following - must be from different disciplines - one course must include a laboratory component:

- **BIO 1500**<sup>3</sup> Environmental Science (4)
- **BIO 1511**<sup>3</sup> Life Science (4)
- **BIO 1530**<sup>3</sup> Molecular and Cellular Biology (4)
- **BIO 1560**<sup>3</sup> Organismal Biology - Biodiversity, Ecology and Evolution (4)
- **BIO 1570** Microbiology of Health and Disease (3)
- **BIO 1600** Human Structure and Function (3)
- **BIO 2540**<sup>3</sup> General Zoology (4)
- **BIO 2630**<sup>3</sup> Human Anatomy and Physiology I (4)
- **BIO 2640**<sup>3</sup> Human Anatomy and Physiology II (4)
- **CHE 1000**<sup>3</sup> Introductory Chemistry (4)
- **CHE 1320**<sup>3</sup> Survey of Organic and Biochemistry (4)
- **CHE 1510**<sup>3</sup> General Chemistry I (4)
- **CHE 1520**<sup>3</sup> General Chemistry II (4)
- **CHE 2610** Organic Chemistry I (4)
- **FSN 1500** Foundations of Natural and Life Sciences (4)
- **GSC 1530**<sup>3</sup> Introductory Geology (4)
- **GSC 1580**<sup>3</sup> Astronomy (4)
- **GSC 1590** Cosmology (4)
- **GSC 1620**<sup>3</sup> Introduction to Environmental Geology (4)
- **PHY 1031**<sup>3</sup> Concepts in Physics (4)
- **PHY 1610**<sup>3</sup> College Physics I (4)
- **PHY 1620**<sup>3</sup> College Physics II (4)
- **PHY 2400**<sup>3</sup> Engineering Physics I (5)
- **PHY 2500**<sup>3</sup> Engineering Physics II (5)
- **PSC 1560**<sup>3</sup> Physical Science I (4)

1. ENG 1510 and ENG 1520 may apply for English Composition or Communications, but not both.
2. HIS 1510 and HIS 1520 may apply for Social Sciences or Fine Arts/Humanities, but not both.
3. Course includes a laboratory component.

### General Education Distribution Requirements

In order to provide a broad exposure in the General Education experience, students are encouraged to involve themselves in factual, creative and intuitive discovery in various fields. Distribution requirements expose the student to a breadth of disciplines.

### Courses that Satisfy General Education Distribution Requirements

#### Communication/English

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>COM 1290</td>
<td>Interpersonal Communication</td>
<td>3</td>
</tr>
<tr>
<td>COM 1600</td>
<td>Fundamentals of Speech</td>
<td>3</td>
</tr>
<tr>
<td>COM 2290</td>
<td>Intercultural Communication</td>
<td>3</td>
</tr>
<tr>
<td>COM 2610</td>
<td>Persuasion and Argumentation</td>
<td>3</td>
</tr>
<tr>
<td>COM 2620</td>
<td>Oral Interpretation of Literature</td>
<td>3</td>
</tr>
<tr>
<td>ENG 1450&lt;sup&gt;1&lt;/sup&gt;</td>
<td>Writing and Reading for Problem Solving</td>
<td>3</td>
</tr>
<tr>
<td>ENG 1510&lt;sup&gt;1&lt;/sup&gt;</td>
<td>Composition I</td>
<td>3</td>
</tr>
<tr>
<td>ENG 1520&lt;sup&gt;1&lt;/sup&gt;</td>
<td>Composition II</td>
<td>3</td>
</tr>
</tbody>
</table>

#### Fine Arts/Humanities

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARB 1510</td>
<td>Beginning Arabic I</td>
<td>4</td>
</tr>
<tr>
<td>ARB 1530</td>
<td>Beginning Arabic II</td>
<td>4</td>
</tr>
<tr>
<td>ART 1510</td>
<td>Basic Drawing</td>
<td>3</td>
</tr>
<tr>
<td>ART 1520</td>
<td>Basic Design</td>
<td>3</td>
</tr>
<tr>
<td>ART 1530</td>
<td>Acrylic Painting</td>
<td>3</td>
</tr>
<tr>
<td>ART 1540</td>
<td>Introduction to Ceramics</td>
<td>3</td>
</tr>
<tr>
<td>ART 1550</td>
<td>Sculpture</td>
<td>3</td>
</tr>
<tr>
<td>ART 1560</td>
<td>Art Appreciation</td>
<td>3</td>
</tr>
<tr>
<td>ART 1570</td>
<td>Oil Painting</td>
<td>3</td>
</tr>
<tr>
<td>ART 1600</td>
<td>Watercolor Painting</td>
<td>3</td>
</tr>
<tr>
<td>ART 1610</td>
<td>Jewelry</td>
<td>3</td>
</tr>
</tbody>
</table>
### Departmental Courses

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHI 1710</td>
<td>Introduction to Informal Logic</td>
<td>3</td>
</tr>
<tr>
<td>PHI 2710</td>
<td>Introduction to Formal Logic</td>
<td>3</td>
</tr>
<tr>
<td>PHI 1610</td>
<td>Ethics</td>
<td>3</td>
</tr>
<tr>
<td>PHI 1520</td>
<td>Introduction to Philosophy</td>
<td>3</td>
</tr>
<tr>
<td>PHI 1510</td>
<td>History of Modern Philosophy</td>
<td>3</td>
</tr>
<tr>
<td>COM 2620</td>
<td>Oral Interpretation of Literature</td>
<td>3</td>
</tr>
<tr>
<td>ENG 1610</td>
<td>Women in Literature</td>
<td>3</td>
</tr>
<tr>
<td>ENG 1710</td>
<td>Introduction to Literature: Short Story and Novel</td>
<td>3</td>
</tr>
<tr>
<td>ENG 1720</td>
<td>Introduction to Literature: Poetry and Drama</td>
<td>3</td>
</tr>
<tr>
<td>ENG 2300</td>
<td>Science Fiction and Fantasy</td>
<td>3</td>
</tr>
<tr>
<td>ENG 2510</td>
<td>American Literature Before the Civil War</td>
<td>3</td>
</tr>
<tr>
<td>ENG 2520</td>
<td>American Literature Since the Civil War</td>
<td>3</td>
</tr>
<tr>
<td>ENG 2540</td>
<td>World Literature II</td>
<td>3</td>
</tr>
<tr>
<td>ENG 2550</td>
<td>British Literature Before 1700</td>
<td>3</td>
</tr>
<tr>
<td>ENG 2560</td>
<td>British Literature After 1700</td>
<td>3</td>
</tr>
<tr>
<td>ENG 2570</td>
<td>Survey of African American Literature</td>
<td>3</td>
</tr>
<tr>
<td>ENG 2650</td>
<td>Children's Literature</td>
<td>3</td>
</tr>
<tr>
<td>ENG 2750</td>
<td>William Shakespeare: Comedies, Histories and Sonnets</td>
<td>3</td>
</tr>
<tr>
<td>ENG 2760</td>
<td>William Shakespeare: Tragedies, Romances and Selected Poems</td>
<td>3</td>
</tr>
<tr>
<td>ENG 2770</td>
<td>Contemporary Literature</td>
<td>3</td>
</tr>
<tr>
<td>ENG 2780</td>
<td>Introduction to Playwriting and Screenwriting</td>
<td>3</td>
</tr>
<tr>
<td>ENG 2800</td>
<td>Creative Writing</td>
<td>3</td>
</tr>
<tr>
<td>FRE 1510</td>
<td>Beginning French I</td>
<td>4</td>
</tr>
<tr>
<td>FRE 1530</td>
<td>Beginning French II</td>
<td>4</td>
</tr>
<tr>
<td>FSH 1500</td>
<td>Foundations of Humanities</td>
<td>4</td>
</tr>
<tr>
<td>GER 1510</td>
<td>Beginning German I</td>
<td>4</td>
</tr>
<tr>
<td>GER 1530</td>
<td>Beginning German II</td>
<td>4</td>
</tr>
<tr>
<td>GLS 2510</td>
<td>Introduction to Global Studies</td>
<td>3</td>
</tr>
<tr>
<td>GLS 2520</td>
<td>Global Issues and Challenges</td>
<td>3</td>
</tr>
<tr>
<td>HIS 1510</td>
<td>World Civilizations to the Beginning of the Modern Era</td>
<td>4</td>
</tr>
<tr>
<td>HIS 1520</td>
<td>World Civilizations to the Modern Era</td>
<td>4</td>
</tr>
<tr>
<td>HUM 1510</td>
<td>Arts and Literature: Origins of Western Traditions</td>
<td>3</td>
</tr>
<tr>
<td>HUM 1520</td>
<td>Arts and Literature: Renaissance Through Modern</td>
<td>3</td>
</tr>
<tr>
<td>HUM 1710</td>
<td>World Religions</td>
<td>3</td>
</tr>
<tr>
<td>HUM 1900</td>
<td>Introduction to Film</td>
<td>3</td>
</tr>
<tr>
<td>HUM 2720</td>
<td>Bible</td>
<td>3</td>
</tr>
<tr>
<td>ITA 1510</td>
<td>Beginning Italian I</td>
<td>4</td>
</tr>
<tr>
<td>ITA 1530</td>
<td>Beginning Italian II</td>
<td>4</td>
</tr>
<tr>
<td>JPN 1510</td>
<td>Beginning Japanese I</td>
<td>4</td>
</tr>
<tr>
<td>JPN 1530</td>
<td>Beginning Japanese II</td>
<td>4</td>
</tr>
<tr>
<td>MUS 1500</td>
<td>Voice I</td>
<td>2</td>
</tr>
<tr>
<td>MUS 1510</td>
<td>Piano I</td>
<td>2</td>
</tr>
<tr>
<td>MUS 1530</td>
<td>Fundamentals of Music</td>
<td>2</td>
</tr>
<tr>
<td>MUS 1560</td>
<td>Listening to Music: ‘Classical’ to Jazz</td>
<td>3</td>
</tr>
<tr>
<td>MUS 1570</td>
<td>Guitar I</td>
<td>2</td>
</tr>
<tr>
<td>MUS 1585</td>
<td>Listening to Music: World Music</td>
<td>3</td>
</tr>
<tr>
<td>MUS 1590</td>
<td>Listening to Music: Rock to Hip-Hop</td>
<td>3</td>
</tr>
<tr>
<td>MUS 1601</td>
<td>Voice II</td>
<td>2</td>
</tr>
<tr>
<td>MUS 1611</td>
<td>Piano II</td>
<td>2</td>
</tr>
<tr>
<td>MUS 1671</td>
<td>Guitar II</td>
<td>2</td>
</tr>
<tr>
<td>PER 1683</td>
<td>Dance - Modern</td>
<td>1</td>
</tr>
<tr>
<td>PHI 1610</td>
<td>Ethics</td>
<td>3</td>
</tr>
<tr>
<td>PHI 1510</td>
<td>Introduction to Philosophy</td>
<td>3</td>
</tr>
<tr>
<td>PHI 1520</td>
<td>History of Modern Philosophy</td>
<td>3</td>
</tr>
<tr>
<td>SCI 1510</td>
<td>Physical Science I</td>
<td>3</td>
</tr>
</tbody>
</table>

### Mathematics/Science

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 1500</td>
<td>Environmental Science</td>
<td>4</td>
</tr>
<tr>
<td>BIO 1511</td>
<td>Life Science</td>
<td>4</td>
</tr>
<tr>
<td>BIO 1530</td>
<td>Molecular and Cellular Biology</td>
<td>4</td>
</tr>
<tr>
<td>BIO 1560</td>
<td>Organismal Biology - Biodiversity, Ecology and Evolution</td>
<td>4</td>
</tr>
<tr>
<td>BIO 1570</td>
<td>Microbiology of Health and Disease</td>
<td>3</td>
</tr>
<tr>
<td>BIO 1600</td>
<td>Human Structure and Function</td>
<td>3</td>
</tr>
<tr>
<td>BIO 2540</td>
<td>General Zoology</td>
<td>4</td>
</tr>
<tr>
<td>CHE 1000</td>
<td>Introductory Chemistry</td>
<td>4</td>
</tr>
<tr>
<td>CHE 1320</td>
<td>Survey of Organic and Biochemistry</td>
<td>4</td>
</tr>
<tr>
<td>CHE 1510</td>
<td>General Chemistry I</td>
<td>4</td>
</tr>
<tr>
<td>CHE 1520</td>
<td>General Chemistry II</td>
<td>4</td>
</tr>
<tr>
<td>FSN 1500</td>
<td>Foundations of Natural and Life Sciences</td>
<td>4</td>
</tr>
<tr>
<td>GSC 1530</td>
<td>Introductory Geology</td>
<td>4</td>
</tr>
<tr>
<td>GSC 1580</td>
<td>Astronomy</td>
<td>4</td>
</tr>
<tr>
<td>GSC 1590</td>
<td>Cosmology</td>
<td>4</td>
</tr>
<tr>
<td>GSC 1620</td>
<td>Introduction to Environmental Geology</td>
<td>4</td>
</tr>
<tr>
<td>MAT 1150</td>
<td>Intermediate Algebra</td>
<td>4</td>
</tr>
<tr>
<td>MAT 1500</td>
<td>Finite Mathematics</td>
<td>4</td>
</tr>
<tr>
<td>MAT 1525</td>
<td>Quantitative Reasoning</td>
<td>4</td>
</tr>
<tr>
<td>MAT 1540</td>
<td>College Algebra</td>
<td>4</td>
</tr>
<tr>
<td>MAT 1560</td>
<td>Trigonometry</td>
<td>3</td>
</tr>
<tr>
<td>MAT 1580</td>
<td>Statistics</td>
<td>4</td>
</tr>
<tr>
<td>MAT 1600</td>
<td>Applied Calculus</td>
<td>4</td>
</tr>
<tr>
<td>MAT 1630</td>
<td>Precalculus</td>
<td>5</td>
</tr>
<tr>
<td>MAT 1730</td>
<td>Calculus I</td>
<td>4</td>
</tr>
<tr>
<td>MAT 2530</td>
<td>Mathematics for Elementary Teachers</td>
<td>4</td>
</tr>
<tr>
<td>PHY 1031</td>
<td>Concepts in Physics</td>
<td>4</td>
</tr>
<tr>
<td>PHY 1610</td>
<td>College Physics I</td>
<td>4</td>
</tr>
<tr>
<td>PHY 1620</td>
<td>College Physics II</td>
<td>4</td>
</tr>
<tr>
<td>PHY 2400</td>
<td>Engineering Physics I</td>
<td>5</td>
</tr>
<tr>
<td>PHY 2500</td>
<td>Engineering Physics II</td>
<td>5</td>
</tr>
<tr>
<td>PSC 1560</td>
<td>Physical Science I</td>
<td>4</td>
</tr>
</tbody>
</table>
## Social Science

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANT 1520</td>
<td>Physical and Archaeology Anthropology</td>
<td>3</td>
</tr>
<tr>
<td>ANT 1540</td>
<td>Introduction to Cultural Anthropology</td>
<td>3</td>
</tr>
<tr>
<td>ANT 2750</td>
<td>Myth, Magic and Folk Religion</td>
<td>3</td>
</tr>
<tr>
<td>ECO 2610</td>
<td>Economics I</td>
<td>3</td>
</tr>
<tr>
<td>ECO 2620</td>
<td>Economics II</td>
<td>3</td>
</tr>
<tr>
<td>GEO 1510</td>
<td>Physical Geography</td>
<td>3</td>
</tr>
<tr>
<td>GEO 1520</td>
<td>World Geography</td>
<td>3</td>
</tr>
<tr>
<td>GLS 2510</td>
<td>Introduction to Global Studies</td>
<td>3</td>
</tr>
<tr>
<td>GLS 2520</td>
<td>Global Issues and Challenges</td>
<td>3</td>
</tr>
<tr>
<td>HIS 1510</td>
<td>World Civilizations to the Beginning of the Modern Era</td>
<td>4</td>
</tr>
<tr>
<td>HIS 1520</td>
<td>World Civilizations from the Modern Era</td>
<td>4</td>
</tr>
<tr>
<td>HIS 1550</td>
<td>Contemporary World</td>
<td>3</td>
</tr>
<tr>
<td>HIS 1700</td>
<td>Michigan History</td>
<td>3</td>
</tr>
<tr>
<td>HIS 2510</td>
<td>United States History to 1877</td>
<td>3</td>
</tr>
<tr>
<td>HIS 2520</td>
<td>United States History from 1877 to the Present</td>
<td>3</td>
</tr>
<tr>
<td>HIS 2610</td>
<td>African American History to 1877</td>
<td>3</td>
</tr>
<tr>
<td>HIS 2620</td>
<td>African American History From 1877 to The Present</td>
<td>3</td>
</tr>
<tr>
<td>POL 1510</td>
<td>American Government</td>
<td>3</td>
</tr>
<tr>
<td>POL 2520</td>
<td>Urban and State Politics</td>
<td>3</td>
</tr>
<tr>
<td>POL 2530</td>
<td>International Relations</td>
<td>3</td>
</tr>
<tr>
<td>POL 2610</td>
<td>Comparative World Politics</td>
<td>3</td>
</tr>
<tr>
<td>PSY 2510</td>
<td>Introduction to Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PSY 2630</td>
<td>Psychology of Organizational Behavior</td>
<td>3</td>
</tr>
<tr>
<td>PSY 2710</td>
<td>Child Development</td>
<td>3</td>
</tr>
<tr>
<td>PSY 2810</td>
<td>Psychology of Adjustment</td>
<td>3</td>
</tr>
<tr>
<td>PSY 2820</td>
<td>Social Psychology</td>
<td>3</td>
</tr>
<tr>
<td>SOC 2510</td>
<td>Sociology</td>
<td>3</td>
</tr>
<tr>
<td>SOC 2570</td>
<td>Marriage and Family in Modern Society</td>
<td>3</td>
</tr>
<tr>
<td>SOC 2620</td>
<td>Sociology of Diversity</td>
<td>3</td>
</tr>
</tbody>
</table>

## Written Communication

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 1350</td>
<td>Business Communications</td>
<td>3</td>
</tr>
<tr>
<td>ENG 1450</td>
<td>Writing and Reading for Problem Solving</td>
<td>3</td>
</tr>
<tr>
<td>ENG 1510</td>
<td>Composition I</td>
<td>3</td>
</tr>
<tr>
<td>ENG 1520</td>
<td>Composition II</td>
<td>3</td>
</tr>
<tr>
<td>ENG 2200</td>
<td>Professional Communication</td>
<td>4</td>
</tr>
</tbody>
</table>

1. This course will apply toward Communication/English or Written Communication, but not both.
2. GLS 2510, GLS 2520, HIS 1510 and HIS 1520 may apply for either Social Science or Fine Arts/Humanities, but not both.
3. This course will apply toward Communication/English or Humanities, but not both.
4. These courses satisfy the Natural Science Lab Science Requirement.
Program Integrity and Guarantees

Oakland Community College guarantees the integrity and quality of its programs and degrees by assuring that graduates will possess those skills and competencies attested to by their certificate or degree.

Transfer Options and Requirements

In the curriculum of the College are many varied programs for students who plan to continue their education at a four-year institution.

These students will do well to examine carefully the professional requirements and the time required to prepare for their field of choice. It is the student’s responsibility, in fact, to be fully aware of course requirements of the college or university to which they intend to transfer. Early selection of the transfer institution facilitates planning while at Oakland Community College.

In addition to studying the current catalog of the transfer institution and discussing requirements with a counselor or faculty advisor, the student should confer with an admissions counselor at his or her selected transfer institution or when university counselors visit the campuses of Oakland Community College. Information concerning the date and time of the visits is available through the counseling office on each campus.

Application to the four-year institution should be made well in advance of the expected transfer date. At the time of application for transfer, the student should request a copy of the official transcript from the Office of the Registrar for the transfer institution.

Though there are many differences in the various kinds of specialization which may enter into a college degree program, most of the specialization takes place during the third and fourth years of advanced study. The first two years, however, are preparatory years when basic courses common to programs and curricula are completed.

The student who plans to take the first two years of work at Oakland Community College and transfer to a four-year college will meet transfer requirements by qualifying for an Associate in Arts, Associate in Science or an Associate in Business Administration if Michigan Transfer Agreement requirements are followed. There are, however, different requirements at the various colleges, and the student should check the requirements of the four-year institution chosen.

Articulation Agreements

Oakland Community College has many articulation agreements with colleges and universities that award baccalaureate degrees. Current articulation agreements are listed on the Articulation (https://www.oaklandcc.edu/Articulation/) website. Any student planning to utilize an articulation agreement to continue education beyond OCC should work closely with a counselor well in advance of transferring to ensure agreement eligibility and the transferability of the course work.
# Degree and Certificate Program Index

<table>
<thead>
<tr>
<th>Program</th>
<th>Program Code</th>
<th>Career Cluster</th>
<th>Program Type</th>
<th>Program Type Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Associate in Applied Science Degrees</td>
<td>AA.AA</td>
<td>Business, Management, Marketing and Technology</td>
<td>Assoc. in Applied Science</td>
<td>CAD - Level II Intermediate Certificate (p. 26)</td>
</tr>
<tr>
<td>Associate in Arts</td>
<td>BUS.ABA</td>
<td>Business, Management, Marketing and Technology</td>
<td>Assoc. in Arts</td>
<td>CAD - Product Design Option (p. 26)</td>
</tr>
<tr>
<td>Associate in Business Administration</td>
<td>GEN.AGS</td>
<td>Business, Management, Marketing and Technology</td>
<td>Assoc. in General Studies</td>
<td>CAD - Vehicle Design Option (p. 26)</td>
</tr>
<tr>
<td>Associate in Science</td>
<td>ASC.ASC</td>
<td>Business, Management, Marketing and Technology</td>
<td>Assoc. in Science</td>
<td>Cinematic Arts (p. 24)</td>
</tr>
<tr>
<td>Automobile Servicing</td>
<td>AUS.AAS</td>
<td>Business, Management, Marketing and Technology</td>
<td>Certificate Program</td>
<td>Cis - Business Systems Analysis Option (p. 31)</td>
</tr>
<tr>
<td>Automobile Servicing Certificate</td>
<td>AUS.CT</td>
<td>Engineering/Manufacturing and Industrial Technology</td>
<td>Certificate Program</td>
<td>Cis - Cis-Cisco Internetworking Certificate of Achievement (p. 31)</td>
</tr>
<tr>
<td>Baking and Pastry Arts Certificate</td>
<td>CUL.BPA.CT</td>
<td>Human Services</td>
<td>Certificate Program</td>
<td>Cis - Cybersecurity Certificate (p. 31)</td>
</tr>
<tr>
<td>Business Administration</td>
<td>BUS.ABA</td>
<td>Business, Management, Marketing and Technology</td>
<td>Assoc. in Business Admin.</td>
<td>Cis - Cybersecurity Option (p. 31)</td>
</tr>
<tr>
<td>Business Administration with a Concentration in Accounting</td>
<td>ACC.ABA</td>
<td>Business, Management, Marketing and Technology</td>
<td>Assoc. in Business Admin.</td>
<td>Cis - Information Technology Support Certificate (p. 31)</td>
</tr>
<tr>
<td>CAD - Architectural Applications Certificate of Achievement</td>
<td>CAD.ARC.CA</td>
<td>Engineering/Manufacturing and Industrial Technology</td>
<td>Certificate of Achievement</td>
<td>Cis - Information Technology Support Option (p. 31)</td>
</tr>
<tr>
<td>CAD - Computer Aided Engineering Option (p. 26)</td>
<td>CAD.CAE.AAS</td>
<td>Engineering/Manufacturing and Industrial Technology</td>
<td>Certificate of Achievement</td>
<td>Cis - Software Engineering Certificate (p. 31)</td>
</tr>
<tr>
<td>CAD - Level I Fundamentals Certificate of Achievement (p. 26)</td>
<td>CAD.LV1.CA</td>
<td>Engineering/Manufacturing and Industrial Technology</td>
<td>Certificate of Achievement</td>
<td>Cis - Web Designer Certificate (p. 31)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Cis - Software Engineering Option (p. 31)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Cis - Web Designer Certificate (p. 31)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Collision Auto Repair Detailer/ Painter Assistant Certificate of Achievement (p. 25)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Engineering/ Manufacturing and Industrial Technology</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Business, Management, Marketing and Technology</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Business, Management, Marketing and Technology</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Business, Management, Marketing and Technology</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Business, Management, Marketing and Technology</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Business, Management, Marketing and Technology</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Business, Management, Marketing and Technology</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Business, Management, Marketing and Technology</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Business, Management, Marketing and Technology</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Business, Management, Marketing and Technology</td>
</tr>
</tbody>
</table>
Sonography
Medical
Diagnostic
p.
Dental Hygiene
p.
Culinary Arts
p.
Technology
Criminal Justice -
Achievement
Police Academy
Criminal Justice -
Law Enforcement
Criminal Justice -
Police Academy
Certificate of
Achievement
State
Criminal Justice -
Police Evidence
Technology
p.
Culinary Arts
p.
Dental Hygiene
p.
Diagnostic
Medical
Sonography
p.
<table>
<thead>
<tr>
<th>Degree and Certificate Program Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>HVAC/R - Building Air and Water Balance/Retro-Commissioning Certificate (p. 55)</td>
</tr>
<tr>
<td>HVAC/R - Heating Certificate (p. 55)</td>
</tr>
<tr>
<td>HVAC/R - Heating, Ventilation, Air Conditioning and Refrigeration Technician Option (p. 55)</td>
</tr>
<tr>
<td>HVAC/R - Refrigeration Certificate (p. 55)</td>
</tr>
<tr>
<td>Industrial Technology Technical Apprentice/Skilled Trades (p. 59)</td>
</tr>
<tr>
<td>Interior Design (p. 60)</td>
</tr>
<tr>
<td>International Commerce (p. 61)</td>
</tr>
<tr>
<td>Library Services and Technology (p. 62)</td>
</tr>
<tr>
<td>Library Services and Technology (p. 62)</td>
</tr>
<tr>
<td>Machine Tool Technology (p. 63)</td>
</tr>
<tr>
<td>Machine Tool Technology Certificate (p. 63)</td>
</tr>
<tr>
<td>Medical Assisting (p. 66)</td>
</tr>
<tr>
<td>Medical Assisting Certificate (p. 66)</td>
</tr>
<tr>
<td>Management Development - Business Management (p. 64)</td>
</tr>
<tr>
<td>Program Name</td>
</tr>
<tr>
<td>------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Physical Therapist Assistant (p. 78)</td>
</tr>
<tr>
<td>Radiologic Technology (p. 79)</td>
</tr>
<tr>
<td>Respiratory Therapy (p. 80)</td>
</tr>
<tr>
<td>Robotics/ Automated Systems Technology (p. 81)</td>
</tr>
<tr>
<td>Robotics/ Automated Systems Technology Certificate (p. 81)</td>
</tr>
<tr>
<td>Robotics/ Automated Systems Technology Programmable Controllers Certificate of Achievement (p. 81)</td>
</tr>
<tr>
<td>Sign Language Interpreter (p. 84)</td>
</tr>
<tr>
<td>Surgical Technology (p. 85)</td>
</tr>
<tr>
<td>Technological Sciences (p. 86)</td>
</tr>
<tr>
<td>Theatre (p. 87)</td>
</tr>
<tr>
<td>Veterinary Technician (p. 88)</td>
</tr>
<tr>
<td>Welding / Fabrication Technology - Level 2 (p. 89)</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>
Career Clusters

Career Clusters for Your Pathway in Education

The Career Pathways pictured here are broad groupings of careers that share similar characteristics. Career Pathways are designed to provide students with a framework for making meaningful connections with the world of work. Here are Oakland Community College's five Career Pathways:

Arts and Communication
Careers related to the humanities and the performing, visual, literary and media arts

- Cinematic Arts
- Digital Media Communications
- Global Studies
- Graphic Design
- Interior Design
- Music
- Photographic Technology
- Theatre

Business, Management, Marketing and Technology
Careers related to all aspects of business including accounting, business administration, finance, information processing and marketing

- Business Administration
  - Concentration in Accounting
- Computer Information Systems
  - Business Systems Analysis Option
  - Cybersecurity Option
  - Information Technology Support Option
  - Software Engineering Option
- International Commerce
- Management Development - Business Management
- Paralegal
Health Sciences
Careers related to the promotion of health as well as the treatment of injuries, conditions and disease
- Dental Hygiene
- Medical Assisting
- Nursing RN Option

Health Administration

Health Services
Medical Technologies
- Diagnostic Medical Sonography
- Respiratory Therapy
- Radiologic Technology
- Surgical Technology

Human Services
Careers related to child care, civil service, education, hospitality and the social services

Education and Human Services
- Early Childhood Education
- Library Services and Technology
- Mental Health/Social Work
- Sign Language Interpreter

Hospitality
- Culinary Arts
- Management Development - Hospitality

Public Services
- Criminal Justice
  - Corrections
  - Generalist
  - Law Enforcement
  - Police Evidence Technology
- Emergency Medical Services
- Fire Fighter Technology
Engineering/Manufacturing and Industrial Technology

Careers related to technologies necessary to design, develop, install or maintain physical systems

- Automobile Servicing
- Collision Auto Repair
- Computer Aided Design and Drafting Technology
  - Engineering Option
  - Product Design Option
  - Vehicle Design Option
- Construction Management
- Construction Management Professional
- Heating, Ventilation, Air Conditioning and Refrigeration Systems Technology
  - HVACR Technician Option
- Machine Tool Technology
- Robotics/Automated Systems Technology
- Technological Sciences
- Welding Technology
Consistent with the concept and philosophy of a comprehensive community college, Oakland Community College offers a curriculum with widely diversified programs of study to meet the varying needs of students and to respond to existing and emerging social and economic trends. The rigors of the programs and the demands placed on the student allow comparison of these curricula to the best in the country.

Should the institution feel obligated for reasons including, but not limited to, low enrollment or financial constraints, the College reserves the right to terminate any courses or programs from its offerings.

**Degree Programs**

Oakland Community College offers programs leading to five degrees:

- Associate in Applied Science
- Associate in Arts
- Associate in Business Administration
- Associate in General Studies
- Associate in Science

The curricula of applied sciences are designed to prepare students for immediate business, technical or semiprofessional employment. A majority of available jobs requires advanced education beyond high school, but does not necessarily require a four-year degree.

The graduates of the applied sciences programs also have a sound base for continuing their formal education toward a bachelor degree. Many four-year institutions are developing options such as Bachelor of Technology degrees that facilitate the transfer of students from technical programs. For information relative to this type of option, students should contact the counseling office on campus. Career selection seminars are available to familiarize the student with the variety of job opportunities that exist and permit the student to make an intelligent selection of a specific occupational field of study. During the seminar, students prepare a personalized plan of study to develop the necessary skills and capabilities for a chosen career. This structure permits students to solidify their interests and test their ability prior to making a final career selection and enables them to switch from one technical major to another with a minimum loss of credit and time.

Applied sciences cooperative work experiences at Oakland Community College include a planned combination of related work experience in business and industry, supplemented by specially designed instructional activities. These internships are part of many occupationally-oriented educational programs and provide special experiences through agreement among the employer, Oakland Community College and the student.

The Associate in Business Administration Degree offers a strong foundation in areas fundamental to business studies, such as accounting, economics and mathematics. Students elect the Associate in Business Degree as a basis for further study toward a bachelor degree. Before taking business courses, students should consult a counselor since the requirements of four-year colleges and universities, both private and public, vary considerably. Students in this program seeking MTA endorsement should work closely with an OCC counselor to identify courses from the MTA List which apply to the endorsement and to degree requirements.

The Associate in General Studies Degree is designed for students choosing to pursue widely varying areas of interest. The degree is not designed for career students, nor is it designed to meet the four-year transfer college requirements of the Michigan Transfer Agreement. Flexibility is provided so the required 60 credit hours can be met as individually appropriate.

The Associate in Science program is a carefully designed collection of coursework linked to demanding requirements found in higher levels of science education and training. The Associate in Science Degree offers a strong foundation in mathematics, physics, chemistry and the environmental sciences. Students elect the Associate in Science Degree as a basis for further study toward a bachelor degree and as pre-professional course work in medicine, dentistry and pharmacy. Students in this program seeking MTA endorsement should work closely with an OCC counselor to identify courses from the MTA List which apply to the endorsement and to degree requirements.

**Extended Degree Programs**

Because this is an institutional requirement that goes beyond the normal 60 credit hours, the College recognizes the efforts of students by designating programs that require 73 or more credits as Extended Degree Programs. Upon completion of an Extended Degree Program, students will receive documentation of the fact that they have completed an Extended Degree Program and appropriate notation will be made on their diplomas. Because of advances in technology and the increasing complexity of various occupational programs, such recognition has become appropriate.

**About the Listing of Programs**

The programs and courses shown are offered as guidelines. Requirements for these programs may be met through appropriate course substitutions. Each student is urged to see a counselor to construct a personal plan of work. Because of the special nature of certain programs, such as those having national or state accreditation standards, additional rules and conditions may apply to these programs as a variance from those that are generally applied to the institution. Such programs conduct an orientation wherein these rules and conditions are explained to students. In such cases, the rules are available for review by prospective students and others by contacting the appropriate department.

**Accounting**

**Degree**

- Business Administration with a Concentration in Accounting (ACC.ABA) (p. 20)

**Certificate**

- General Accounting (ACC.GA.CT) (p. 20)
Business Administration with a Concentration in Accounting (ACC.ABA)

Associate in Business Administration

Business, Management, Marketing and Technology

The Associate Degree in Business Administration Degree with a concentration in accounting offers a cognitive foundation in areas fundamental to business studies such as accounting, economics and mathematics.

Students elect the Associate in Business Administration Degree for various reasons that may include further study toward a bachelor degree or as preparation for CPA certification or MBA programs.

Graduating from this program qualifies the student for the Michigan Transfer Agreement (MTA) endorsement. Students should work closely with an OCC counselor to identify courses from the MTA list which apply to the endorsement and to select courses that will satisfy the intake requirements of the intended transfer institution.

All courses that satisfy MTA requirements must be completed with a grade of ‘C’ (2.0) or higher. All courses comprising the 60 - 63 credits required for the degree must be completed with a cumulative GPA of 2.0 or higher.

Because transferability of credits varies with colleges and universities, programs, and departmental majors, students are urged to discuss their program plans with an OCC counselor and an advisor at the intended transfer institution.

Program Webpage - Click Here (https://www.oaklandcc.edu/programs/acc/default.aspx)

Program Plan Example - Click Here (https://www.oaklandcc.edu/programs/plans/acc.aba.pdf)

Courses that Satisfy Associate in Business Administration Degree with a Concentration in Accounting Requirements

Candidates for the Associate in Business Administration Degree with a concentration in accounting must satisfy the “requirements for an associate degree” as well as the specific minimum requirements:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 1800</td>
<td>Accounting Procedures</td>
<td>2</td>
</tr>
<tr>
<td>or ACC 1500</td>
<td>Accounting for the Small Business Owner</td>
<td>3</td>
</tr>
<tr>
<td>ACC 1810</td>
<td>Principles of Financial Accounting</td>
<td>4</td>
</tr>
<tr>
<td>ACC 1820</td>
<td>Principles of Managerial Accounting</td>
<td>4</td>
</tr>
<tr>
<td>ACC 2070</td>
<td>Cost Accounting</td>
<td>4</td>
</tr>
<tr>
<td>BUS 1100</td>
<td>Introduction to Business</td>
<td>4</td>
</tr>
<tr>
<td>BUS 2030</td>
<td>Business Law I</td>
<td>3</td>
</tr>
<tr>
<td>CIS 1050</td>
<td>Personal Computer Productivity Tools</td>
<td>4</td>
</tr>
<tr>
<td>ECO 2610</td>
<td>Economics I</td>
<td>3</td>
</tr>
<tr>
<td>ECO 2620</td>
<td>Economics II</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credit Hours for Program-Related Courses 41-42

Michigan Transfer Agreement Requirements

English Composition (3-Credits) Satisfied

Communications (3-credits) Satisfied

Fine Arts/Humanities 6-8

- Complete two courses from the Fine Arts/Humanities Michigan Transfer Agreement Distribution list. These courses must be taken in more than one academic discipline and must be completed with a grade of ‘C’ (2.0) or higher. (p. 7)

Mathematics Satisfied

Natural Sciences 7-10

- Complete two courses from the Natural Sciences Michigan Transfer Agreement Distribution list. These courses must be taken in more than one academic discipline and must be completed with a grade of ‘C’ (2.0) or higher. At least one course must include a laboratory component. (p. 8)

Social Science 3-4

- Complete one non-Economics course from the Social Sciences Michigan Transfer Agreement Distribution list. This course must be completed with a grade of ‘C’ (2.0) or higher. (p. 7)

Additional elective credits needed to meet requirements for an Associate in Business Administration degree. Courses must be numbered 1000 through 2999.

Recommended Electives

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 2210</td>
<td>Computerized Accounting</td>
<td>3</td>
</tr>
<tr>
<td>BUS 2040</td>
<td>Business Law II</td>
<td>3</td>
</tr>
<tr>
<td>BUS 2530</td>
<td>Management</td>
<td>3</td>
</tr>
<tr>
<td>MKT 2520</td>
<td>Fundamental of Marketing Theory/Practice</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credit Hours 60-64

A minimum cumulative 2.00 grade point average (GPA) overall is required for graduation.

General Accounting (ACC.GA.CT)

Certificate

Business, Management, Marketing and Technology

This option is intended for individuals who desire entry-level employment in the field of general accounting. Successful completion of this option will result in a Certificate in General Accounting. Eligibility for this certificate is dependent upon the student achieving a ‘C’ or better in each of the required courses. The student may choose to continue and complete an Associate in Business Administration or an Associate in Business Administration with a concentration in Accounting.

Program Webpage - Click Here (https://www.oaklandcc.edu/programs/acc/default.aspx)

Program Plan Example - Click Here (https://www.oaklandcc.edu/programs/plans/acc.ga.ct.pdf)
Gainful Employment Disclosure - Click Here (https://www.oaklandcc.edu/ged/docs/ACC.GA.CT.pdf)

### Required Courses

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 1800</td>
<td>Accounting Procedures</td>
<td>2</td>
</tr>
<tr>
<td>ACC 1810</td>
<td>Principles of Financial Accounting</td>
<td>4</td>
</tr>
<tr>
<td>ACC 1820</td>
<td>Principles of Managerial Accounting</td>
<td>4</td>
</tr>
<tr>
<td>ACC 2210</td>
<td>Computerized Accounting</td>
<td>3</td>
</tr>
<tr>
<td>BUS 1100</td>
<td>Introduction to Business</td>
<td>4</td>
</tr>
<tr>
<td>BUS 2530</td>
<td>Management</td>
<td>3</td>
</tr>
<tr>
<td>CIS 1050</td>
<td>Personal Computer Productivity Tools</td>
<td>4</td>
</tr>
</tbody>
</table>

**Students must also complete two of the following courses:**  

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 1803</td>
<td>Payroll Accounting</td>
<td>2</td>
</tr>
<tr>
<td>ACC 1805</td>
<td>Accounting with Quickbooks</td>
<td>2</td>
</tr>
<tr>
<td>BUS 1210</td>
<td>Small Business Basics</td>
<td>3</td>
</tr>
<tr>
<td>BUS 1410</td>
<td>Personal Finance</td>
<td>3</td>
</tr>
<tr>
<td>BUS 2030</td>
<td>Business Law I</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credit Hours 28-29  

1 One of these selections must be an ACC course.

A minimum cumulative 2.00 grade point average (GPA) overall is required for graduation.

## Applied Science Degree

### Associate Degree Requirements (AAS)

The associate in applied science degree is designed to prepare students for immediate vocational, technical or semi-professional employment.

Students elect this degree to gain entry-level knowledge and skills for employment in a specific field or occupation.

Programs are offered in the areas of health, business, applied and engineering technologies, and human/public services. As in other associate degrees, the equivalent of two-year’s, full-time study is usually required. Extended associate degrees may require one or more semesters of study beyond the normal requirements. Programs are designated “Extended” (AASX) when they require 73 or more credit hours.

High school graduates who completed state-approved career and technical education (CTE) programs may be eligible to receive college credit for work completed while in high school. These programs begin in high school and allow smooth transition for the student into associate degree programs at the college. Detailed information can be obtained by contacting an OCC Counseling Office or by visiting oaklandcc.edu/articulation (http://www.oaklandcc.edu/articulation/).

The associate in applied science degree does **not** meet the requirements of the Michigan Transfer Agreement for general education equivalent transfer.

### Courses that satisfy associate in applied science degree requirements.

In addition to the requirements for an associate degree, candidates for the associate in applied science degree must fulfill major and supportive course requirements of the specific program and satisfy the General Education Distribution requirements.

The student will complete a minimum of 3 credit hours in each of the following areas from specific General Education courses. Courses that satisfy these categories are in the lists of General Education Distribution Requirements (http://catalog.oaklandcc.edu/graduation-requirements/general-education-distribution/).

### Code Title Credit Hours

**Communication/English**  

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Select one course from the Communication/English courses listed in the General Education Distribution list (p. 8)</td>
<td>3</td>
</tr>
</tbody>
</table>

**Fine Arts/Humanities**  

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Select one course from the Fine Arts/Humanities courses listed in the General Education Distribution list (p. 8)</td>
<td>3</td>
</tr>
</tbody>
</table>

**Mathematics/Science**  

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Select one course from the Mathematics/Science courses listed in the General Education Distribution list (p. 9)</td>
<td>3</td>
</tr>
</tbody>
</table>

**Social Science**  

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Select one course from the Social Science courses listed in the General Education Distribution list (p. 10)</td>
<td>3</td>
</tr>
</tbody>
</table>

**Written Communication**  

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Select one course from the Written Communication courses listed in the General Education Distribution list (p. 10)</td>
<td>3</td>
</tr>
</tbody>
</table>

1 Course work used to meet the Communication/English Distribution requirement cannot be used to fulfill the Written Communication Distribution requirement.

2 Course work used to meet the Written Communication Distribution requirement cannot be used to fulfill the Communication/English Distribution requirement.

3 The Written Communication requirement should be completed prior to the completion of 30 credit hours.

A minimum cumulative 2.00 grade point average (GPA) overall is required for graduation.

## Associate in Arts

### Associate in Arts Degree Requirements (AA.AA)

The Associate in Arts degree is intended for students who plan to transfer to a four-year college or university. It provides a breadth of experience in the arts and sciences while also offering the flexibility to satisfy transfer agreements and the intake requirements of other institutions.

Graduating from this program qualifies the student for the Michigan Transfer Agreement (MTA) endorsement. Students should work closely with an OCC counselor to identify courses from the MTA List which apply to the endorsement and to select courses that will satisfy the intake requirements of the intended transfer institution.

All courses that satisfy MTA requirements must be completed with a grade of ‘C’ (2.0) or higher. All courses comprising the 62 credits required for the degree must be completed with a cumulative GPA of 2.0 or higher.

Because transferability of credits varies with colleges and universities, programs, and departmental majors, students are urged to discuss their
program plans with an OCC counselor and an advisor at the intended transfer institution.

Program Plan Example - Click Here (https://www.oaklandcc.edu/programs/plans/aa.aa.pdf)

Courses that satisfy Associate in Arts degree requirements
Candidates for the Associate in Arts degree must satisfy the following specific minimum requirements:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>English Composition</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Complete one course from the English Composition Michigan Transfer Agreement Distribution list. This course must be completed with a grade of ‘C’ (2.0) or higher. (p. 7)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Communications</td>
<td>3-4</td>
</tr>
<tr>
<td></td>
<td>Complete one course from the Communications Michigan Transfer Agreement Distribution list. This course must be completed with a grade of ‘C’ (2.0) or higher. (p. 7)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fine Arts / Humanities</td>
<td>6-8</td>
</tr>
<tr>
<td></td>
<td>Complete two courses from the Fine Arts/Humanities Michigan Transfer Agreement Distribution list. These courses must be taken in more than one academic discipline and must be completed with a grade of ‘C’ (2.0) or higher. (p. 7)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mathematics</td>
<td>3-4</td>
</tr>
<tr>
<td></td>
<td>Complete one course from the Mathematics Michigan Transfer Agreement Distribution list. This course must be completed with a grade of ‘C’ (2.0) or higher. (p. 7)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Natural Sciences</td>
<td>7-10</td>
</tr>
<tr>
<td></td>
<td>Complete two courses from the Natural Sciences Michigan Transfer Agreement Distribution list. These courses must be taken in more than one academic discipline and must be completed with a grade of ‘C’ (2.0) or higher. At least one course must include a laboratory component. (p. 8)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Social Sciences</td>
<td>6-7</td>
</tr>
<tr>
<td></td>
<td>Complete two courses from the Social Sciences Michigan Transfer Agreement Distribution list. These courses must be taken in more than one academic discipline and must be completed with a grade of ‘C’ (2.0) or higher. (p. 7)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total Credit Hours for Program-Related Courses</td>
<td>28-36</td>
</tr>
<tr>
<td></td>
<td>Additional elective credits needed to meet requirements for an Associate in Arts degree. Courses must be numbered 1000 through 2999.</td>
<td>26-34</td>
</tr>
<tr>
<td></td>
<td>Total Credit Hours</td>
<td>62</td>
</tr>
</tbody>
</table>

A minimum cumulative 2.00 grade point average (GPA) overall is required for graduation.

Automobile Servicing

Degrees
- Automobile Servicing (AUS.AAS) (p. 22)

Certificates
- Automobile Servicing (AUS.CT) (p. 23)

Automobile Servicing (AUS.AAS)

Associate in Applied Science

Engineering/Manufacturing and Industrial Technology

Auburn Hills Campus

The Automobile Servicing Associate in applied science degree is designed to prepare students for entry-level servicing operations in the automotive field. This program consists of ten specialized courses designed in accordance with the mandatory Auto Mechanic Certification tests required for state licensure. Completion of the program prepares the student to take the State of Michigan certification exams for licensing in up to eight areas of specialization.

Completion of an internship is required and each class contains a laboratory component, allowing the student to gain work experience in automobile servicing. Safety and employability skills are emphasized. Students will be required to obtain eye protection, ear protection, and appropriate work uniforms at their own expense.

Program Plan Example - Click Here (https://www.oaklandcc.edu/programs/plans/aus.aas.pdf)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Major Requirements</td>
<td></td>
</tr>
<tr>
<td></td>
<td>AUT 1000</td>
<td>Automotive Fundamentals</td>
</tr>
<tr>
<td></td>
<td>AUT 1100</td>
<td>Automotive Brake Systems Service</td>
</tr>
<tr>
<td></td>
<td>AUT 1200</td>
<td>Front Suspension &amp; Steering Service</td>
</tr>
<tr>
<td></td>
<td>AUT 1300</td>
<td>Automotive Electrical Systems Servicing</td>
</tr>
<tr>
<td></td>
<td>AUT 1350</td>
<td>Automotive Advanced Electrical and Electronics</td>
</tr>
<tr>
<td></td>
<td>AUT 1400</td>
<td>Engine Support Systems Servicing</td>
</tr>
<tr>
<td></td>
<td>AUT 1500</td>
<td>Automotive Tune-Up &amp; Emissions Service</td>
</tr>
<tr>
<td></td>
<td>AUT 1600</td>
<td>Automotive Transmission Servicing</td>
</tr>
<tr>
<td></td>
<td>AUT 1700</td>
<td>Manual Transmission and Axle Service</td>
</tr>
<tr>
<td></td>
<td>AUT 1800</td>
<td>Automotive Air Conditioning &amp; Heating Service</td>
</tr>
<tr>
<td></td>
<td>Required Supportive Courses</td>
<td></td>
</tr>
<tr>
<td></td>
<td>AUT 2000</td>
<td>Cooperative Internship</td>
</tr>
<tr>
<td></td>
<td>WEL 1111</td>
<td>Welding for the Non-Career Welder</td>
</tr>
<tr>
<td></td>
<td>Total Credit Hours for Program-Related Courses</td>
<td>46</td>
</tr>
<tr>
<td></td>
<td>General Education Requirements</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Communication / English (3-credits)</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Complete 3 credits from Communication/English courses listed in the General Education Distribution List (p. 8)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fine Arts / Humanities (3-credits)</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Complete 3 credits from Fine Arts/Humanities courses listed in the General Education Distribution List (p. 8)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mathematics / Science (3-credits)</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Complete 3 credits from Mathematics/Science courses listed in the General Education Distribution List (p. 9)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Social Science (3-credits)</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Complete 3 credits from Social Science courses listed in the General Education Distribution List (p. 10)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Written Communication (3-credits)</td>
<td>3</td>
</tr>
</tbody>
</table>
Complete 3 credits from Written Communication courses listed in the General Education Distribution List (p. 10)

Total Credit Hours 61

A minimum cumulative 2.00 grade point average (GPA) overall is required for graduation.

Automobile Servicing (AUS.CT)

Certificate

Engineering/Manufacturing and Industrial Technology

Auburn Hills Campus

The Automotive Servicing certificate program is designed to prepare students for entry-level servicing operations in the automotive field. This program consists of ten specialized courses designed in accordance with the mandatory Auto Mechanic Certification tests required for state licensure. Completion of the program prepares the student to take the State of Michigan certification exams for licensing in up to eight areas of specialization.

A large portion of class time will be spent in the laboratory, allowing the student to gain work experience in automobile servicing. Safety and employability skills are emphasized. Students will be required to obtain eye protection, ear protection, and appropriate work uniforms at their own expense.

Program Plan Example - Click Here (https://www.oaklandcc.edu/programs/plans/aus.ct.pdf)

Gainful Employment Disclosure - Click Here (https://www.oaklandcc.edu/ged/docs/AUS.CT.pdf)

Business Administration

Associate in Business Administration (BUS.ABA)

Business, Management, Marketing and Technology

The Associate in Business Administration Degree offers a cognitive foundation in areas fundamental to business studies such as accounting, economics and mathematics. Students elect the Associate in Business Administration Degree for various reasons that may include further study toward a bachelor degree or as preparation for CPA or MBA programs.

Graduating from this program qualifies the student for the Michigan Transfer Agreement (MTA) endorsement. Students should work closely with an OCC counselor to identify courses from the MTA List which apply to the endorsement and to select courses that will satisfy the intake requirements of the intended transfer institution.

All courses that satisfy MTA requirements must be completed with a grade of ‘C’ (2.0) or higher. All courses comprising the 60 credits required for the degree must be completed with a cumulative GPA of 2.0 or higher.

Because transferability of credits varies with colleges and universities, programs, and departmental majors, students are urged to discuss their program plans with an OCC counselor and an advisor at the intended transfer institution.

Program Plan Example - Click Here (https://www.oaklandcc.edu/programs/plans/bus.aba.pdf)

Courses that Satisfy Associate in Business Administration Degree Requirements

Candidates for the Associate in Business Administration Degree must satisfy the “Requirements for an Associate Degree” as well as the specific minimum requirements:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 1800</td>
<td>Accounting Procedures</td>
<td>2</td>
</tr>
<tr>
<td>or ACC 1500</td>
<td>Accounting for the Small Business Owner</td>
<td>3</td>
</tr>
<tr>
<td>ACC 1810</td>
<td>Principles of Financial Accounting</td>
<td>4</td>
</tr>
<tr>
<td>ACC 1820</td>
<td>Principles of Managerial Accounting</td>
<td>4</td>
</tr>
<tr>
<td>BUS 1100</td>
<td>Introduction to Business</td>
<td>4</td>
</tr>
<tr>
<td>BUS 2030</td>
<td>Business Law I</td>
<td>3</td>
</tr>
<tr>
<td>CIS 1050</td>
<td>Personal Computer Productivity Tools</td>
<td>4</td>
</tr>
<tr>
<td>ECO 2610</td>
<td>Economics I</td>
<td>3</td>
</tr>
<tr>
<td>ECO 2620</td>
<td>Economics II</td>
<td>3</td>
</tr>
<tr>
<td>ENG 1510</td>
<td>Composition I</td>
<td>3</td>
</tr>
<tr>
<td>ENG 1520</td>
<td>Composition II</td>
<td>3</td>
</tr>
<tr>
<td>MAT 1580</td>
<td>Statistics</td>
<td>4</td>
</tr>
</tbody>
</table>

Total Credit Hours for Program-Related Courses 37-38

Michigan Transfer Agreement Requirements

English Composition (3-credits)

Satisfied

Communications (3-credits)

Satisfied

Fine Arts / Humanities 6-8

Complete two courses from the Fine Arts/Humanities Michigan Transfer Agreement Distribution list. These courses must be taken in more than one academic discipline and must be completed with a grade of ‘C’ (2.0) or higher. (p. 7)

Mathematics

Satisfied

Natural Sciences 7-10
Cinematic Arts

Degrees

- Cinematic Arts (CIN.AA) (p. 24)

Cinematic Arts (CIN.AA)

Associate in Arts (CIN.AA)

Arts and Communication

The Cinematic Arts program awards an Associate in Arts degree. This program incorporates a theoretical and practical field of study, providing the student with a multidimensional experience in the study and application of cinematic arts. Subsequent to completion of the program, students will be prepared to enter the film/video industry or pursue a Bachelor degree in film/video production or studies.

Graduating from this program qualifies the student for the Michigan Transfer Agreement (MTA) endorsement. Students should work closely with an OCC counselor to identify courses from the MTA List which apply to the endorsement and to select courses that will satisfy the intake requirements of the intended transfer institution.

All courses that satisfy MTA requirements must be completed with a grade of ‘C’ (2.0) or higher. All courses comprising the 62 credits required for the degree must be completed with a cumulative GPA of 2.0 or higher.

Because transferability of credits varies with colleges and universities, programs, and departmental majors, students are urged to discuss their program plans with an OCC counselor and an advisor at the intended transfer institution.

Program Webpage - Click Here (https://www.oaklandcc.edu/programs/plans/cin.aa.pdf)

Program Plan Example - Click Here (https://www.oaklandcc.edu/programs/plans/cin.aa.pdf)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 2780</td>
<td>Introduction to Playwriting and Screenwriting</td>
<td>3</td>
</tr>
<tr>
<td>HUM 1900</td>
<td>Introduction to Film</td>
<td>3</td>
</tr>
<tr>
<td>PHO 1800</td>
<td>Fundamentals of Digital Video</td>
<td>4</td>
</tr>
<tr>
<td>PHO 2800</td>
<td>Advanced Digital Video</td>
<td>4</td>
</tr>
<tr>
<td>PHO 2803</td>
<td>Special Projects in Digital Video</td>
<td>3</td>
</tr>
<tr>
<td>HUM 2100</td>
<td>HUM 2109 Any Topics in Film Course (See Course List Below)</td>
<td>3</td>
</tr>
</tbody>
</table>

Complete one of the following Humanities options:

- HUM 2900 Literature Into Film 3

Required Elective Courses

Complete 6 credits from the following courses:

- ENG 1710 Introduction to Literature: Short Story and Novel 3
- ENG 2800 Creative Writing 3
- HUM 2900 Literature Into Film 3
- LIB 1200 Introduction to Media Technology 3
- PHO 1220 Fundamentals of Photography 3
- PHO 1700 Beginning Digital Photography 4
- SOC 2580 Mass Media and Society 3
- THE 1585 Acting for Film 3
- THE 1990 Fundamentals of Directing 3
Any Topics in Film Course (See Course List Below) 3

Total Credit Hours for Program-Related Courses 54-62
Additional elective credits needed to meet requirements for an Associate in Arts degree. Must be completed from courses numbered 1000 - 2999.

Total Credit Hours 62

1 Cannot be reused if already selected as a Required Specialty Course.

A minimum cumulative 2.00 grade point average (GPA) overall is required for graduation.

### Topics in Film

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>HUM 2100</td>
<td>Topics in Film: Films of the 60'S</td>
<td>3</td>
</tr>
<tr>
<td>HUM 2101</td>
<td>Topics in Film: World Cinema</td>
<td>3</td>
</tr>
<tr>
<td>HUM 2102</td>
<td>Topics in Film: The Films of Quentin Tarantino</td>
<td>3</td>
</tr>
<tr>
<td>HUM 2103</td>
<td>Topics in Film: Great Directors</td>
<td>3</td>
</tr>
<tr>
<td>HUM 2104</td>
<td>Topics in Film: Documentaries</td>
<td>3</td>
</tr>
<tr>
<td>HUM 2105</td>
<td>Topics in Film: Film Noir</td>
<td>3</td>
</tr>
<tr>
<td>HUM 2106</td>
<td>Topics in Film: Comic Books Into Film</td>
<td>3</td>
</tr>
<tr>
<td>HUM 2107</td>
<td>Topics in Film: Documentaries</td>
<td>3</td>
</tr>
<tr>
<td>HUM 2108</td>
<td>Topics in Film: The Films of Martin Scorsese</td>
<td>3</td>
</tr>
<tr>
<td>HUM 2109</td>
<td>Topics in Film: The Films of Stanley Kubrick</td>
<td>3</td>
</tr>
</tbody>
</table>

### Collision Auto Repair

#### Certificates

- Collision Auto Repair - Non-Structural Repair Technology Option (CAR.NRT.CT) (p. 25)
- Collision Auto Repair - Paint and Refinish Technology Option (CAR.PRT.CT) (p. 25)

#### Certificate of Achievement

- Collision Auto Repair - Body Repair Technician Assistant (CAR.NRT.CA) (p. 26)
- Collision Auto Repair - Detailer/Painter Assistant (CAR.PRT.CA) (p. 26)

### Collision Auto Repair - Non-Structural Repair Technology Option (CAR.NRT.CT)

#### Certificate

Engineering/Manufacturing and Industrial Technology

Auburn Hills Campus

The Collision Auto Repair certificate programs offered at Oakland Community College prepare students to meet the technical skills competency standards required for employment, as identified by the National Automotive Technical Education Foundation (NATEF). In addition to courses designed to prepare students for the Automotive Service Excellence (ASE) national certification test, CAR certificate completion will earn I-CAR ProLevel One Platinum Certification in Non-Structural Repair, which meet or exceed employer expectations.

Internships are an integral part of the technical education experience, supplementing the classroom and laboratory courses with hands-on work alongside local professionals. Oakland Community College offers four Collision Auto Repair certificates which provide foundational and advanced courses in preparation for successful employment as Collision Repair Technicians.

#### Program goals

- Graduates will qualify for employment in the collision repair industry
- Provide specific technical training for industry employers
- Respond to the OCC CAR Advisory Committee recommendations
- Form articulation agreements with area high school collision repair programs

[Program Webpage - Click Here](https://www.oaklandcc.edu/programs/car/default.aspx)

[Program Plan Example - Click Here](https://www.oaklandcc.edu/programs/plans/car.nrt.ct.pdf)

[Gainful Employment Disclosure - Click Here](https://www.oaklandcc.edu/ged/docs/CAR.NRT.CT.pdf)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAR 1000</td>
<td>Damage Analysis, Estimating, and Customer Service</td>
<td>3</td>
</tr>
<tr>
<td>CAR 1200</td>
<td>Auto Body Fundamentals</td>
<td>4</td>
</tr>
<tr>
<td>CAR 1250</td>
<td>Plastic Repair and Refinishing</td>
<td>4</td>
</tr>
<tr>
<td>CAR 1300</td>
<td>Collision Welding</td>
<td>4</td>
</tr>
<tr>
<td>CAR 1350</td>
<td>Bolted-on Panel Replacement</td>
<td>4</td>
</tr>
<tr>
<td>CAR 1380</td>
<td>Aluminum Repair and Welding</td>
<td>4</td>
</tr>
<tr>
<td>CAR 1400</td>
<td>Welded-on Panel Replacement</td>
<td>4</td>
</tr>
<tr>
<td>CAR 1450</td>
<td>Non-Structural Analysis and Damage Repair: Co-Operative Internship</td>
<td>2</td>
</tr>
</tbody>
</table>

Total Credit Hours 29

A minimum cumulative 2.00 grade point average (GPA) overall is required for graduation.

### Collision Auto Repair - Paint and Refinish Technology Option (CAR.PRT.CT)

#### Certificate

Engineering/Manufacturing and Industrial Technology

Auburn Hills Campus

The Collision Auto Repair certificate programs offered at Oakland Community College prepare students to meet the technical skills competency standards required for employment, as identified by the National Automotive Technical Education Foundation (NATEF). In addition
to courses designed to prepare students for the Automotive Service Excellence (ASE) national certification test, CAR certificate completion will earn I-CAR ProLevel One Platinum Certification in Paint & Refinishing, which meet or exceed employer expectations.

Internships are an integral part of the technical education experience, supplementing the classroom and laboratory courses with hands-on work alongside local professionals. Oakland Community College offers four Collision Auto Repair certificates which provide foundational and advanced courses in preparation for successful employment as Collision Repair Technicians.

Program goals

• Graduates will qualify for employment in the collision repair industry
• Provide specific technical training for industry employers
• Respond to the OCC CAR Advisory Committee recommendations
• Form articulation agreements with area high school collision repair programs

Program Webpage - Click Here (https://www.oaklandcc.edu/programs/car/default.aspx)

Program Plan Example - Click Here (https://www.oaklandcc.edu/programs/plans/car.nrt.ca.pdf)

Gainful Employment Disclosure - Click Here (https://www.oaklandcc.edu/ged/docs/CAR.PRT.CT.pdf)

Collision Auto Repair - Body Repair Technician Assistant (CAR.NRT.CA)

Certificate of Achievement

Engineering/Manufacturing and Industrial Technology

Auburn Hills Campus

This program provides entry-level skills in the fundamentals of damaged vehicle part replacement and new panel alignment, metal finishing and body repair techniques, and plastic component repair in preparation for refinishing. A Certificate of Achievement provides documentation of the skills employers seek.

Program Webpage - Click Here (https://www.oaklandcc.edu/programs/car/default.aspx)

Program Plan Example - Click Here (https://www.oaklandcc.edu/programs/plans/car.nrt.ca.pdf)

Gainful Employment Disclosure - Click Here (https://www.oaklandcc.edu/ged/docs/CAR.PRT.CT.pdf)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAR 1000</td>
<td>Damage Analysis, Estimating, and Customer Service</td>
<td>3</td>
</tr>
<tr>
<td>CAR 1100</td>
<td>Automotive Detailing and Prep</td>
<td>4</td>
</tr>
<tr>
<td>CAR 1200</td>
<td>Auto Body Fundamentals</td>
<td>4</td>
</tr>
<tr>
<td>CAR 1250</td>
<td>Plastic Repair and Refinishing</td>
<td>4</td>
</tr>
<tr>
<td>CAR 1600</td>
<td>Paint and Refinish I</td>
<td>4</td>
</tr>
<tr>
<td>CAR 1700</td>
<td>Paint and Refinish II</td>
<td>4</td>
</tr>
<tr>
<td>CAR 1800</td>
<td>Paint and Refinish III</td>
<td>4</td>
</tr>
<tr>
<td>CAR 1900</td>
<td>Paint and Refinish IV: Preparation for Certification</td>
<td>2</td>
</tr>
</tbody>
</table>

Total Credit Hours 29

A minimum cumulative 2.00 grade point average (GPA) overall is required for graduation.

Collision Auto Repair - Detailer/Painter Assistant (CAR.PRT.CA)

Certificate of Achievement

Engineering/Manufacturing and Industrial Technology

Auburn Hills Campus

This program provides entry-level skills in the fundamentals of vehicle detailing, surface preparation, protection and painting. A Certificate of Achievement provides documentation of the skills employers seek.

Program Webpage - Click Here (https://www.oaklandcc.edu/programs/car/default.aspx)

Program Plan Example - Click Here (https://www.oaklandcc.edu/programs/plans/car.prt.ca.pdf)

Gainful Employment Disclosure - Click Here (https://www.oaklandcc.edu/ged/docs/CAR.PRT.CT.pdf)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAR 1100</td>
<td>Automotive Detailing and Prep</td>
<td>4</td>
</tr>
<tr>
<td>CAR 1200</td>
<td>Plastic Repair and Refinishing</td>
<td>4</td>
</tr>
<tr>
<td>CAR 1350</td>
<td>Bolted-on Panel Replacement</td>
<td>4</td>
</tr>
</tbody>
</table>

Total Credit Hours 12

A minimum cumulative 2.00 grade point average (GPA) overall is required for graduation.

Computer Aided Design and Engineering Technology

Degrees

• Computer Aided Design and Engineering Technology - Computer Aided Engineering Option (CAD.CAE.AAS) (p. 27)
• Computer Aided Design and Engineering Technology - CAD Product Design Option (CAD.PDO.AAS) (p. 27)
• Computer Aided Design and Engineering Technology - Computer Aided Vehicle Design Option (CAD.VDO.AAS) (p. 28)

Certificates

• Computer Aided Design and Engineering Technology - Level II Intermediate (CAD.LV2.CT) (p. 29)

Certificates of Achievement

• Computer Aided Design and Engineering Technology - Architectural Applications (CAD.ARC.CA) (p. 29)
• Computer Aided Design and Engineering Technology - Level I Fundamentals (CAD.LV1.CA) (p. 30)

Computer Aided Design and Engineering Technology - Computer Aided Engineering Option (CAD.CAE.AAS)

Associate in Applied Science

Engineering/Manufacturing and Industrial Technology

Auburn Hills Campus

This program leads to an associate in applied science degree with a specialization in CAD Engineering Technology. Program graduates are encouraged to transfer to one of OCC’s four-year university partners and continue their education in Engineering Technology; however, graduates are prepared for occupations and careers in engineering and manufacturing industries. Rapid Prototyping and co-op opportunities enhance their learning experience.

The CAD Engineering option focuses on design with an emphasis on concepts and applications of CAD Engineering Technologies. CAE covers subjects such as: the applications and principles of kinematics in design, concepts and techniques of finite element modeling for stress analysis / non-destructive testing, techniques and applications of solid modeling, and CNC tool path generation for CAD models.

High school graduates who completed state-approved career and technical education (CTE) programs may be eligible to receive college credit for work completed while in high school. Detailed information can be obtained by contacting an OCC Counseling Office or by visiting oaklandcc.edu/articulation. (http://www.oaklandcc.edu/articulation/)

Program Plan Example - Click Here (https://www.oaklandcc.edu/programs/plans/cad.cae.aas.pdf)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAD 1101</td>
<td>Introduction to CAD</td>
<td>4</td>
</tr>
<tr>
<td>CAD 1105</td>
<td>Animation Design</td>
<td>3</td>
</tr>
<tr>
<td>CAD 1201</td>
<td>Introduction to Engineering Graphics</td>
<td>4</td>
</tr>
<tr>
<td>CAD 14501</td>
<td>Drafting and Design Co-op Internship</td>
<td>3</td>
</tr>
<tr>
<td>CAD 2102</td>
<td>Fundamentals of Part Design and Its Applications</td>
<td>4</td>
</tr>
<tr>
<td>CAD 2151</td>
<td>Introduction to Generative Surface Design</td>
<td>4</td>
</tr>
<tr>
<td>DDT 1000</td>
<td>Fundamentals for the Drafting Industry</td>
<td>3</td>
</tr>
<tr>
<td>MAT 11502</td>
<td>Intermediate Algebra (or higher level math except MAT 1525, MAT 2530 or MAT 2540)</td>
<td>3-4</td>
</tr>
<tr>
<td>MTT 1400</td>
<td>Manufacturing Processes</td>
<td>3</td>
</tr>
<tr>
<td>Select one of the following ENG courses:</td>
<td>3-4</td>
<td></td>
</tr>
<tr>
<td>ENG 13502,3</td>
<td>Business Communications</td>
<td>3</td>
</tr>
<tr>
<td>ENG 14502,3</td>
<td>Writing and Reading for Problem Solving</td>
<td>3</td>
</tr>
<tr>
<td>ENG 15102</td>
<td>Composition I</td>
<td>3</td>
</tr>
<tr>
<td>ENG 22002</td>
<td>Professional Communication</td>
<td>4</td>
</tr>
</tbody>
</table>

Required Supportive Courses

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAD 1050</td>
<td>Geometric Dimensioning and Tolerancing (GD&amp;T)</td>
<td>4</td>
</tr>
<tr>
<td>CAD 1501</td>
<td>Special Topics in CAD: Fusion 360 Design</td>
<td>2</td>
</tr>
<tr>
<td>CAD 2131</td>
<td>Product Design</td>
<td>4</td>
</tr>
<tr>
<td>CAD 2141</td>
<td>Kinematics</td>
<td>3</td>
</tr>
<tr>
<td>CAD 2161</td>
<td>Finite Element Modeling and Analysis</td>
<td>3</td>
</tr>
<tr>
<td>Select one of the following:</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>APP 21704</td>
<td>Applied Technology</td>
<td>4</td>
</tr>
<tr>
<td>or PHY 1610College Physics I</td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

Total Credit Hours for Program-Related Courses 54-56

General Education Requirements

Communication / English (3-credits) 3

Select 3 credits from Communication/English courses listed in the General Education Distribution List (p. 8)

Fine Arts / Humanities (3-credits) 3

Select 3 credits from Fine Arts/Humanities courses listed in the General Education Distribution List (p. 8)

Mathematics / Science (3-credits) 3

Select one of the following:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>APP 2170</td>
<td>Applied Technology</td>
<td>4</td>
</tr>
<tr>
<td>or PHY 1610College Physics I</td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

Total Credit Hours for Program-Related Courses 54-56

General Education Distribution List

Complete 3 credits from Social Science courses listed in the General Education Distribution List

Complete 3 credits from Fine Arts/Humanities courses listed in the General Education Distribution List

Complete 3 credits from Communication/English courses listed in the General Education Distribution List

Complete 3 credits from Social Science courses listed in the General Education Distribution List

Written Communication (3-credits)

Satisfied

Social Science (3-credits) 3

Satisfied

Total Credit Hours 63-65

1 One of the following may be used as a co-op substitution: CAD 2000, CAD 2110, CAD 2340, CAD 2602, or CAD 2702.
2 Course may be used to meet General Education requirements.
3 Students transferring to other institutions should select ENG 1510.
4 If taking APP 2170, take MAT 1150. If taking PHY 1610, take MAT 1560.

A minimum cumulative 2.00 grade point average (GPA) overall is required for graduation.

Computer Aided Design and Engineering Technology - Product Design Option (CAD.PDO.AAS)

Associate in Applied Science

Engineering/Manufacturing and Industrial Technology

Auburn Hills Campus
This program leads to an associate in applied science degree with a specialization in CAD Product Design. Program graduates are encouraged to transfer to one of OCC’s four-year university partners and continue their education in Engineering Technology; however, graduates are prepared for occupations and careers in manufacturing industries. Rapid prototyping and co-op opportunities further enhance the learning experience.

The Product Design option focuses on Advanced Part Design for product development, modeling techniques, building parametric models, data organization, and design animation. This option also introduces procedures involved in tool & dies design. Students will apply knowledge of systems, software configurations and design principles in solving increasingly complex product design problems involving various manufacturing materials.

High school graduates who completed state-approved career and technical education (CTE) programs may be eligible to receive college credit for work completed while in high school. Detailed information can be obtained by contacting an OCC Counseling Office or by visiting oaklandcc.edu/articulation. (http://www.oaklandcc.edu/articulation/)

Program Plan Example - Click here (https://www.oaklandcc.edu/programs/plans/cad.pdo.aas.pdf)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAD 1101</td>
<td>Introduction to CAD</td>
<td>4</td>
</tr>
<tr>
<td>CAD 1105</td>
<td>Animation Design</td>
<td>3</td>
</tr>
<tr>
<td>CAD 1201</td>
<td>Introduction to Engineering Graphics</td>
<td>4</td>
</tr>
<tr>
<td>CAD 1450</td>
<td>Drafting and Design Co-op Internship</td>
<td>3</td>
</tr>
<tr>
<td>CAD 2102</td>
<td>Fundamentals of Part Design and Its Applications</td>
<td>4</td>
</tr>
<tr>
<td>CAD 2151</td>
<td>Introduction to Generative Surface Design</td>
<td>4</td>
</tr>
<tr>
<td>DDT 1000</td>
<td>Fundamentals for the Drafting Industry</td>
<td>3</td>
</tr>
<tr>
<td>MAT 1150</td>
<td>Intermediate Algebra (or higher level math except MAT 1525, MAT 2530 or MAT 2540)</td>
<td>3-4</td>
</tr>
</tbody>
</table>

Select one of the following ENG courses: 3-4
- ENG 1350: Business Communications
- ENG 1450: Writing and Reading for Problem Solving
- ENG 1510: Composition I
- ENG 2200: Professional Communication

Required Supportive Courses
- CAD 1501: Special Topics in CAD: Fusion 360 Design
- CAD 2000: Animation Design II
- CAD 2110: NX I
- CAD 2131: Product Design
- CAD 2190: NX II
- CAD 2340: Tool and Die Design
- CAD 2450: Advanced Drafting and Design Co-op Internship

Total Credit Hours for Program-Related Courses 53-55

General Education Requirements
- Communication / English (3-credits)
- Fine Arts / Humanities (3-credits)

Mathematics / Science (3-credits)

Social Science (3-credits) 3

Complete 3 credits from Social Science courses listed in the General Education Distribution List (p. 10)

Written Communication (3-credits)

Satisfied

Total Credit Hours 62-64

1 One of the following may be used as a co-op substitution: CAD 2141, CAD 2161, CAD 2602, or CAD 2702.
2 Course may be used to meet General Education requirements.
3 Students transferring to other institutions should select ENG 1510.

A minimum cumulative 2.00 grade point average (GPA) is required for graduation.

Computer Aided Design and Engineering Technology - Vehicle Design Option (CAD.VDO.AAS)

Associate in Applied Science

Engineering/Manufacturing and Industrial Technology

Auburn Hills Campus

This program leads to an associate in applied science degree with a specialization in CAD Vehicle Design. Program graduates are encouraged to transfer to one of OCC’s four-year university partners and continue their education in Engineering Technology; however, graduates are prepared for occupations and careers in animation design industries. Rapid prototyping and co-op further enhance the learning experience.

The Vehicle Design option focuses on preparation for entry-level vehicle design positions using the computer as a tool in engineering, analysis, design, industrial technology, and manufacturing systems. The VDO specialization covers the principles and concepts of vehicle underbody and upper-body design, creation of assembly structures, advance modeling techniques, building parametric models, data organization, and advance surface development.

High school graduates who completed state-approved career and technical education (CTE) programs may be eligible to receive college credit for work completed while in high school. Detailed information can be obtained by contacting an OCC Counseling Office or by visiting oaklandcc.edu/articulation. (http://www.oaklandcc.edu/articulation/)

Program Plan Example - Click here (https://www.oaklandcc.edu/programs/plans/cad.vdo.aas.pdf)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAD 1101</td>
<td>Introduction to CAD</td>
<td>4</td>
</tr>
<tr>
<td>CAD 1105</td>
<td>Animation Design</td>
<td>3</td>
</tr>
<tr>
<td>CAD 1201</td>
<td>Introduction to Engineering Graphics</td>
<td>4</td>
</tr>
<tr>
<td>CAD 1450</td>
<td>Drafting and Design Co-op Internship</td>
<td>3</td>
</tr>
<tr>
<td>CAD 2102</td>
<td>Fundamentals of Part Design and Its Applications</td>
<td>4</td>
</tr>
</tbody>
</table>

Complete 3 credits from Communication /English courses listed in the General Education Distribution List (p. 8)

Satisfied

Total Credit Hours 53-55

Major Requirements

Communication / English (3-credits)

Fine Arts / Humanities (3-credits)

Complete 3 credits from Fine Arts/Humanities courses listed in the General Education Distribution List (p. 8)
<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAD 2151</td>
<td>Introduction to Generative Surface Design</td>
<td>4</td>
</tr>
<tr>
<td>DDT 1000</td>
<td>Fundamentals for the Drafting Industry</td>
<td>3</td>
</tr>
<tr>
<td>MAT 1150</td>
<td>Intermediate Algebra (or higher level math except MAT 1525, MAT 2530 or MAT 2540)</td>
<td>3-4</td>
</tr>
</tbody>
</table>

Select one of the following: 3-4

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 1350</td>
<td>Business Communications</td>
<td>3</td>
</tr>
<tr>
<td>ENG 1450</td>
<td>Writing and Reading for Problem Solving</td>
<td>3</td>
</tr>
<tr>
<td>ENG 1510</td>
<td>Composition I</td>
<td>3</td>
</tr>
<tr>
<td>ENG 2200</td>
<td>Professional Communication</td>
<td>4</td>
</tr>
</tbody>
</table>

### Required Supportive Courses

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAD 1501</td>
<td>Special Topics in CAD: Fusion 360 Design</td>
<td>2</td>
</tr>
<tr>
<td>CAD 2110</td>
<td>NX I</td>
<td>3</td>
</tr>
<tr>
<td>CAD 2190</td>
<td>NX II</td>
<td>3</td>
</tr>
<tr>
<td>CAD 2201</td>
<td>Unigraphics Product Design and Assembly Layout</td>
<td>3</td>
</tr>
<tr>
<td>CAD 2602</td>
<td>Vehicle Underbody Design and Assembly</td>
<td>4</td>
</tr>
<tr>
<td>CAD 2702</td>
<td>Vehicle Upper Body Surface Design and Assembly</td>
<td>4</td>
</tr>
<tr>
<td>CAD 2450</td>
<td>Advanced Drafting and Design Co-op Internship</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total Credit Hours for Program-Related Courses**: 53-55

### General Education Requirements

- Communication / English (3-credits)
  - Complete 3 credits from Communication/English courses listed in the General Education Distribution List (p. 8)

- Fine Arts / Humanities (3-credits)
  - Complete 3 credits from Fine Arts/Humanities courses listed in the General Education Distribution List (p. 8)

- Mathematics / Science (3-credits)
  - Satisfied

- Social Science (3-credits)
  - Complete 3 credits from Social Science courses listed in the General Education Distribution List (p. 10)

- Written Communication (3-credits)
  - Satisfied

**Total Credit Hours**: 62-64

1. One of the following may be used as a co-op substitution: CAD 2000, CAD 2131, CAD 2141, CAD 2161, or CAD 2340.
2. Course may be used to meet General Education Requirements.
3. Students transferring to other institutions should select ENG 1510.

A minimum cumulative 2.00 grade point average (GPA) overall is required for graduation.

---

### Computer Aided Design and Engineering Technology - Level II Intermediate (CAD.LV2.CT)

**Certificate**

**Engineering/Manufacturing and Industrial Technology**

Auburn Hills Campus

Certificate further enhances student skills in design and animation.

---

### Program Plan Example - Click Here (https://www.oaklandcc.edu/programs/plans/cad.lv2.ct.pdf)

### Gainful Employment Disclosure - Click Here (https://www.oaklandcc.edu/ged/docs/CAD.LV2.CT.pdf)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARC 1000</td>
<td>Basic Architectural Drawing and Drafting</td>
<td>4</td>
</tr>
<tr>
<td>ARC 1040</td>
<td>Introduction to Architecture</td>
<td>4</td>
</tr>
<tr>
<td>CAD 1101</td>
<td>Introduction to CAD</td>
<td>4</td>
</tr>
<tr>
<td>CAD 1105</td>
<td>Animation Design</td>
<td>3</td>
</tr>
<tr>
<td>CAD 1151</td>
<td>CAD Architecture / Civil Engineering</td>
<td>3</td>
</tr>
<tr>
<td>CAD 1160</td>
<td>Revit - Advanced Architectural Applications</td>
<td>4</td>
</tr>
</tbody>
</table>

**Total Credit Hours**: 22
A minimum cumulative 2.00 grade point average (GPA) is required for graduation.

**Computer Aided Design and Engineering Technology - Level I Fundamentals (CAD.LV1.CA)**

**Certificate of Achievement**

Engineering/Manufacturing and Industrial Technology

Auburn Hills Campus

These proficiency certificates, awarded for progress made in the CAD program, are available for all students, whether they are working toward an OCC certificate or an associate degree, or if each of these competency milestones are goals in and of themselves. These documents provide validation and some credentialing to show potential employers students' skill levels.

**Program Plan Example** - Click Here (https://www.oaklandcc.edu/programs/plans/cad.lv1.ca.pdf)

**Gainful Employment Disclosure** - Click Here (https://www.oaklandcc.edu/ged/docs/CAD.LV1.CA.pdf)

Four CIS associate degree choices are available:

- Business Systems Analysis Option (CIS.BSA.AAS)
- Cybersecurity Option (CIS.CYS.AAS)
- Information Technology Support Option (CIS.ITS.AAS)
- Software Engineering Option (CIS.SWE.AAS)

**Certificates**

The Computer Information Systems (CIS) certificates are designed for students who need specialty skills in a particular area of information technology that will help satisfy current of future employment requirements. Unlike associate degrees, certificate programs assume that students already have obtained or do not require general education skills and are now looking for education in a specific area of computer technology. Therefore, all of the courses within a certificate program are chosen to develop these specific technical skills in a shorter amount of time than what would be required in an associate degree program.

Five CIS certificate choices are available. Two of the five choices (Software Engineering and Information Technology Support) are fairly broad areas that require multiple types of focus areas within them. The courses within each focus area have been chosen to match with popular employer requirements for that particular skill type.

- Cybersecurity Certificate (CIS.CYS.CT)
- Information Technology Support Certificate (CIS.ITS.CT)
- Database Technology and Administration (focus area)
- Network Technology and Administration (focus area)
- Software Engineering Certificate (CIS.SWE.CT)
- Game Design and Development (focus area)
- General Software Development (focus area)
- Mobile Application Development (focus area)
- Web Application Development (focus area)
- Web Designer Certificate (CIS.WDE.CT)
- Cisco Internetworking Certificate of Achievement (CIS.CIN.CA)

1. A separate certificate is not awarded for each focus area. For the CIS.ITS.CT program, students choose 1 of 3 focus areas. For the CIS.SWE.CT program, students choose 1 of 4 focus areas.

**Other Training Options**

Professional certification preparation courses are offered through the OCC CIS department as well as the Economic and Workforce Development office. Industry exam preparation courses cover material from certifying organizations such as Microsoft, Cisco, Sun, Oracle, Novell, and CompTIA. Several exam preparation courses (e.g., CIS 1305, CIS 1310, CIS 1320, CIS 1330, CIS 1600, CIS 2434, CIS 2515, CIS 2535, CIS 2616, CIS 2980) offered for credit through the CIS department are listed in the OCC course catalog. Custom-designed non-credit courses for local businesses are also available through Workforce Development. CIS course details may be obtained by contacting the CIS department at the Orchard Ridge or Auburn Hills campus. Custom course details and related information may be obtained by contacting the Economic and Workforce Development office at (248) 232-4000 in the M-TEC building on the Auburn Hills Campus.

The M-TEC building also serves as a Pearson VUE Authorized Test Center where students can take official certification exams. Information about testing and related Economic and Workforce Development services
is available within the OCC website at www.oaklandcc.edu (http://
www.oaklandcc.edu/).

Degrees

• Computer Information Systems - Business Systems Analysis Option
  (CIS.BSA.AAS) (p. 31)
• Computer Information Systems - Cybersecurity Option (CIS.CYS.AAS)
  (p. 32)
• Computer Information Systems - Information Technology Support
  Option (CIS.ITS.AAS) (p. 32)
• Computer Information Systems - Software Engineering Option
  (CIS.SWE.AAS) (p. 33)

Certificates

• Computer Information Systems - Cybersecurity Certificate
  (CIS.CYS.CT) (p. 33)
• Computer Information Systems - Information Technology Support
  Certificate (CIS.ITS.CT) (p. 34)
  • Computer and Systems Support Focus Area or
  • Database Technology and Administration Focus Area or
  • Network Technology and Administration Focus Area
• Computer Information Systems - Software Engineering Certificate
  (CIS.SWE.CT) (p. 35)
  • Game Design and Development Focus Area or
  • General Software Development Focus Area or
  • Mobile Application Development Focus Area or
  • Web Application Development Focus Area
• Computer Information Systems - Web Designer Certificate
  (CIS.WDE.CT) (p. 35)

Certificate of Achievement

• Cisco Internetworking Certificate of Achievement (CIS.CIN.CA)

Computer Information Systems
- Business Systems Analysis
Option (CIS.BSA.AAS)

Associate in Applied Science

Business, Management, Marketing and Technology

Auburn Hills Campus

The Computer Information Systems (CIS) associate degrees are designed
for students who need general education (e.g., communication, science,
mathematics, fine arts, social science) combined with a solid foundation in
the fundamental computer skills that are generally required to design, create,
and test software, or analyze business system requirements and design
solutions, or support and protect the operation of technology resources.
These fundamental computer skills are commonly required by most four-
year educational programs that offer the types of bachelor degrees most
employers look for when hiring information technology professionals. All
CIS courses use current computer tools and place an emphasis on practical
application to provide a relevant learning environment.

Program Webpage - Click Here (https://www.oaklandcc.edu/programs/plans/cis.bsa.aas.pdf)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIS 1050</td>
<td>Personal Computer Productivity Tools</td>
<td>4</td>
</tr>
<tr>
<td>CIS 1060</td>
<td>Personal Computer Spreadsheet Concepts</td>
<td>3</td>
</tr>
<tr>
<td>CIS 1070</td>
<td>Personal Computer Presentation Concepts</td>
<td>3</td>
</tr>
<tr>
<td>CIS 1200</td>
<td>Introduction to Database Systems</td>
<td>4</td>
</tr>
<tr>
<td>CIS 1300</td>
<td>Networking Concepts</td>
<td>4</td>
</tr>
<tr>
<td>CIS 2111</td>
<td>Systems Analysis and Design (UML)</td>
<td>4</td>
</tr>
<tr>
<td>CIS 2115</td>
<td>Business Analysis and Processes</td>
<td>4</td>
</tr>
<tr>
<td>CIS 2120</td>
<td>Problem Solving and Information Technology</td>
<td>4</td>
</tr>
<tr>
<td>CIS 2212</td>
<td>Project Management</td>
<td>4</td>
</tr>
<tr>
<td>CIS 2313</td>
<td>E-Business and E-Commerce</td>
<td>4</td>
</tr>
</tbody>
</table>

Required Supportive Courses

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 1500</td>
<td>Accounting for the Small Business Owner</td>
<td>3</td>
</tr>
<tr>
<td>BUS 1100</td>
<td>Introduction to Business</td>
<td>4</td>
</tr>
<tr>
<td>ENG 1510</td>
<td>Composition I</td>
<td>3</td>
</tr>
<tr>
<td>ECO 2610</td>
<td>Economics I</td>
<td>3</td>
</tr>
<tr>
<td>MAT 1580</td>
<td>Statistics</td>
<td>4</td>
</tr>
<tr>
<td>PHI 1710</td>
<td>Introduction to Informal Logic</td>
<td>3</td>
</tr>
</tbody>
</table>

Complete one of the following ENG courses:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 2200</td>
<td>Professional Communication</td>
<td>4</td>
</tr>
<tr>
<td>or</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENG 1520</td>
<td>Composition II</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credit Hours for Program-Related Courses 61-62

General Education Requirements

Communication / English (3-credits)

Satisfied

Fine Arts / Humanities (3-credits)

Satisfied

Mathematics / Science (3-credits)

Satisfied

Social Science (3-credits)

Satisfied

Written Communication (3-credits)

Satisfied

Additional elective credits needed to meet requirements for an Associate in Applied Science degree 0-1

Total Credit Hours 62

1 Course may be used to meet General Education requirements.
2 Or ENG 1520

A minimum cumulative 2.00 grade point average (GPA) overall is required for graduation.
Computer Information Systems - Cybersecurity Option (CIS.CYS.AAS)

Associate in Applied Science

Business, Management, Marketing and Technology

Auburn Hills Campus

The Computer Information Systems (CIS) associate degrees are designed for students who need general education (e.g., communication, science, mathematics, fine arts, social science) combined with a solid foundation in the fundamental computer skills that are generally required to design, create, and test software, or analyze business system requirements and design solutions, or support and protect the operation of technology resources. These fundamental computer skills are commonly required by most four-year educational programs that offer the types of bachelor degrees most employers look for when hiring information technology professionals. All CIS courses use current computer tools and place an emphasis on practical application to provide a relevant learning environment.

Program Webpage - Click Here (https://www.oaklandcc.edu/programs/cis/cybersec.aspx)

Program Plan Example - Click Here (https://www.oaklandcc.edu/programs/plans/cis.cys.aas.pdf)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Major Requirements</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CIS 1200</td>
<td>Introduction to Database Systems</td>
<td>4</td>
</tr>
<tr>
<td>CIS 1300</td>
<td>Networking Concepts</td>
<td>4</td>
</tr>
<tr>
<td>CIS 1550</td>
<td>Introduction to Secure Programming</td>
<td>3</td>
</tr>
<tr>
<td>CIS 1600</td>
<td>Fundamentals of Cybersecurity</td>
<td>4</td>
</tr>
<tr>
<td>CIS 1610</td>
<td>Data Security</td>
<td>4</td>
</tr>
<tr>
<td>CIS 1620</td>
<td>Introduction to Cryptography</td>
<td>4</td>
</tr>
<tr>
<td>CIS 1630</td>
<td>Security Policy, Legal, Ethics and Compliance</td>
<td>3</td>
</tr>
<tr>
<td>CIS 2111</td>
<td>Systems Analysis and Design (UML)</td>
<td>4</td>
</tr>
<tr>
<td>CIS 2434</td>
<td>Introduction to Linux and Unix Administration</td>
<td>3</td>
</tr>
<tr>
<td>CIS 2535</td>
<td>Microsoft Windows Server Administration</td>
<td>3</td>
</tr>
<tr>
<td>CIS 2838</td>
<td>System Security</td>
<td>4</td>
</tr>
<tr>
<td>CIS 2845</td>
<td>Computer Forensics</td>
<td>4</td>
</tr>
<tr>
<td><strong>Required Supportive Courses</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>COM 1290</td>
<td>Interpersonal Communication</td>
<td>3</td>
</tr>
<tr>
<td>ENG 1510</td>
<td>Composition I</td>
<td>3</td>
</tr>
<tr>
<td>MAT 1150</td>
<td>Intermediate Algebra (or higher level except</td>
<td>(3-4)</td>
</tr>
<tr>
<td></td>
<td>MAT 1525, MAT 2530 or MAT 2540)</td>
<td></td>
</tr>
<tr>
<td>PER 1300</td>
<td>Stress Management: Neuromuscular Relaxation</td>
<td>2</td>
</tr>
<tr>
<td>PHI 1710</td>
<td>Introduction to Informal Logic</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total Credit Hours for Program-Related Courses</strong></td>
<td>58-59</td>
<td></td>
</tr>
</tbody>
</table>

General Education Requirements

<table>
<thead>
<tr>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication / English (3-credits)</td>
<td></td>
</tr>
<tr>
<td>Satisfied</td>
<td></td>
</tr>
<tr>
<td>Fine Arts / Humanities (3-credits)</td>
<td></td>
</tr>
<tr>
<td>Satisfied</td>
<td></td>
</tr>
<tr>
<td>Mathematics / Science (3-credits)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Satisfied</td>
<td></td>
</tr>
</tbody>
</table>

A minimum cumulative 2.00 grade point average (GPA) overall is required for graduation.

Computer Information Systems - Information Technology Support Option (CIS.ITS.AAS)

Associate in Applied Science

Business, Management, Marketing and Technology

Auburn Hills Campus

The Computer Information Systems (CIS) associate degrees are designed for students who need general education (e.g., communication, science, mathematics, fine arts, social science) combined with a solid foundation in the fundamental computer skills that are generally required to design, create, and test software, or analyze business system requirements and design solutions, or support and protect the operation of technology resources. These fundamental computer skills are commonly required by most four-year educational programs that offer the types of bachelor degrees most employers look for when hiring information technology professionals. All CIS courses use current computer tools and place an emphasis on practical application to provide a relevant learning environment.

Program Webpage - Click Here (https://www.oaklandcc.edu/programs/cis/infotechsupport.aspx)

Program Plan Example - Click Here (https://www.oaklandcc.edu/programs/plans/cis.its.aas.pdf)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Satisfied</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Major Requirements</strong></td>
<td></td>
</tr>
<tr>
<td>CIS 1200</td>
<td>Introduction to Database Systems</td>
<td>4</td>
</tr>
<tr>
<td>CIS 1300</td>
<td>Networking Concepts</td>
<td>4</td>
</tr>
<tr>
<td>CIS 1550</td>
<td>Introduction to Programming</td>
<td>4</td>
</tr>
<tr>
<td>CIS 1600</td>
<td>Fundamentals of Cybersecurity</td>
<td>4</td>
</tr>
<tr>
<td>CIS 2111</td>
<td>Systems Analysis and Design (UML)</td>
<td>4</td>
</tr>
<tr>
<td>CIS 2232</td>
<td>Fundamentals of System Support</td>
<td>4</td>
</tr>
<tr>
<td>CIS 2434</td>
<td>Introduction to Linux and Unix Administration</td>
<td>3</td>
</tr>
<tr>
<td>CIS 2535</td>
<td>Microsoft Windows Server Administration</td>
<td>3</td>
</tr>
<tr>
<td>CIS 2838</td>
<td>System Security</td>
<td>4</td>
</tr>
<tr>
<td>CIS 2980</td>
<td>Computer Service Technologies &amp; Techniques A+</td>
<td>4</td>
</tr>
<tr>
<td><strong>Required Supportive Courses</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>COM 1290</td>
<td>Interpersonal Communication</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Satisfied</td>
<td></td>
</tr>
</tbody>
</table>
**Computer Information Systems**

- **Software Engineering Option (CIS.SWE.AAS)**

  **Associate in Applied Science**

  **Business, Management, Marketing and Technology**

  **Orchard Ridge Campus**

  The Computer Information Systems (CIS) associate degrees are designed for students who need general education (e.g., communication, science, mathematics, fine arts, social science) combined with a solid foundation in the fundamental computer skills that are generally required to design, create, and test software, or analyze business system requirements and design solutions, or support and protect the operation of technology resources. These fundamental computer skills are commonly required by most four-year educational programs that offer the types of bachelor degrees most employers look for when hiring information technology professionals. All CIS courses use current computer tools and place an emphasis on practical application to provide a relevant learning environment.

  **Program Webpage** - Click Here (https://www.oaklandcc.edu/programs/cis/softwareeng.aspx)

  **Program Plan Example** - Click Here (https://www.oaklandcc.edu/programs/plans/cis.swe.aas.pdf)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 1510</td>
<td>Composition I</td>
<td>3</td>
</tr>
<tr>
<td>MAT 1150</td>
<td>Intermediate Algebra (or higher level except MAT 1525, MAT 2530 or MAT 2540)</td>
<td>(3-4)</td>
</tr>
<tr>
<td>PHI 1710</td>
<td>Introduction to Informal Logic</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total Credit Hours for Program-Related Courses** 58-59

**General Education Requirements**

- **Communication / English (3-credits)**
  - Satisfied
- **Fine Arts / Humanities (3-credits)**
  - Satisfied
- **Mathematics / Science (3-credits)**
  - Satisfied
- **Social Science (3-credits)**
  - Complete 3 credits from Social Science courses listed in the General Education Distribution List (p. 10)
  - Satisfied

**Additional elective credits needed to meet requirements for an Associate in Applied Science degree** 0-1

**Total Credit Hours** 62

1 Course may be used to meet General Education requirements.

A minimum cumulative 2.00 grade point average (GPA) overall is required for graduation.

**Computer Information Systems - Cybersecurity Certificate (CIS.CYS.CT)**

**Certificate**

**Business, Management, Marketing and Technology**

**Auburn Hills Campus**

The Computer Information Systems (CIS) certificates are designed for students who need specialty skills in a particular area of information technology that will help satisfy current of future employment requirements. Unlike associate degrees, certificate programs assume that students already have obtained or do not require general education skills and are now looking for education in a specific area of computer technology. Therefore, all of the courses within a certificate program are chosen to develop these...
specific technical skills in a shorter amount of time than what would be required in an associate degree program. All CIS courses use current computer tools and place an emphasis on practical application to provide a relevant learning environment.

Program Plan Example - Click Here (https://www.oaklandcc.edu/programs/plans/cis.its.ct.pdf)

Gainful Employment Disclosure - Click Here (https://www.oaklandcc.edu/ged/docs/CIS.CYS.CT.pdf)

![Program Plan Example](https://www.oaklandcc.edu/programs/plans/cis.its.ct.pdf)

**Certificate**

**Computer Information Systems - Information Technology Support Certificate (CIS.ITS.CT)**

**Certificate**

**Business, Management, Marketing and Technology**

Auburn Hills Campus

The Computer Information Systems (CIS) certificates are designed for students who need specialty skills in a particular area of information technology that will help satisfy current or future employment requirements. Unlike associate degrees, certificate programs assume that students already have obtained or do not require general education skills and are now looking for education in a specific area of computer technology. Therefore, all of the courses within a certificate program are chosen to develop those specific technical skills in a shorter amount of time than what would be required in an associate degree program. All CIS courses use current computer tools and place an emphasis on practical application to provide a relevant learning environment.

This certificate is awarded to students who successfully complete all core requirements plus the list of courses for at least one focus area.

A separate certificate is not awarded for each focus area. One certificate may be awarded from 1 to 3 types of focus areas.

Program Webpage - Click Here (https://www.oaklandcc.edu/programs/cis/infotechsupport.aspx)

A minimum cumulative 2.00 grade point average (GPA) overall is required for graduation.
Computer Information Systems - Software Engineering Certificate (CIS.SWE.CT)

Certificate

Business, Management, Marketing and Technology

Orchard Ridge Campus

The Computer Information Systems (CIS) certificates are designed for students who need specialty skills in a particular area of information technology that will help satisfy current of future employment requirements. Unlike associate degrees, certificate programs assume that students already have obtained or do not require general education skills and are now looking for education in a specific area of computer technology. Therefore, all of the courses within a certificate program are chosen to develop these specific technical skills in a shorter amount of time than what would be required in an associate degree program. All CIS courses use current computer tools and place an emphasis on practical application to provide a relevant learning environment.

This certificate is awarded to students who successfully complete all core requirements plus the list of courses for at least one focus area.

A separate certificate is not awarded for each focus area. One certificate may be awarded from 1 to 4 types of focus areas.

Program Webpage - Click Here (https://www.oaklandcc.edu/programs/cis/softwareeng.aspx)

Program Webpage - Web Application Development Focus Area - Game Design and Development Focus Area: Click Here (https://www.oaklandcc.edu/programs/plans/cis.swe.ct.Gaming.pdf)

Program Plan Example - General Software Development Focus Area - Not Available

Program Plan Example - Mobile Application Development Focus Area - Click Here (https://www.oaklandcc.edu/programs/plans/cis.swe.ct.MobileApps.pdf)

Program Plan Example - Web Application Development Focus Area - Click Here (https://www.oaklandcc.edu/programs/plans/cis.swe.ct.WebApplication.pdf)

Gainful Employment Disclosure - Click Here (https://www.oaklandcc.edu/ged/docs/CIS.SWE.CT.pdf)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIS 1200</td>
<td>Introduction to Database Systems</td>
<td>4</td>
</tr>
<tr>
<td>CIS 1500</td>
<td>Introduction to Programming (Java)</td>
<td>4</td>
</tr>
<tr>
<td>CIS 1512</td>
<td>Principles of Software Engineering</td>
<td>3</td>
</tr>
<tr>
<td>CIS 2353</td>
<td>Data Structures</td>
<td>4</td>
</tr>
<tr>
<td>CIS 2991</td>
<td>Special Project in Software Engineering</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Choose one or more of the following focus areas:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Game Design and Development Focus Area:</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>CAD 1101 Introduction to CAD</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>CIS 2252 Object-Oriented Programming (C++)</td>
<td>4</td>
</tr>
</tbody>
</table>

Total Credit Hours - Game Design and Development 33

General Software Development Focus Area: 16

- CIS 2151 Object-Oriented Programming (Java) 4
- CIS 2454 Web System Development (PHP, Java) 4
- CIS 2616 Database Application Design and Development with Oracle PL/SQL 4
- CIS 2818 Mobile Application Development (Android) 4

Total Credit Hours - General Software Development 34

Mobile Application Development Focus Area: 15

- CIS 1420 HTML5 Programming 3
- CIS 1440 JavaScript Programming for Websites 4
- CIS 2818 Mobile Application Development (Android) 4
- CIS 2819 Mobile Application Development (iOS) 4

Total Credit Hours - Mobile Application Development 34

Web Application Development Focus Area: 16

- CIS 1400 Web Design I 4
- CIS 2151 Object-Oriented Programming (Java) 4
- CIS 2454 Web System Development (PHP, Java) 4
- CIS 2858 Web System Integration and Service Development 4

Total Credit Hours - Web Application Development 34

A minimum cumulative 2.00 grade point average (GPA) overall is required for graduation.

Computer Information Systems - Web Designer Certificate (CIS.WDE.CT)

Certificate

Business, Management, Marketing and Technology

Orchard Ridge Campus

The Web Designer Certificate is designed to provide a strong foundation for the design and format of client-side Web content. The creation of Web content for presentation and user interaction requires visual communication skills that incorporate a wide variety of media content types as well as expertise with markup languages, scripting languages, and the functional capabilities of various user devices. Content created by the Web designer must effectively engage all types of users and provide a rich canvas on which all Internet content is displayed.

Program Webpage - Click Here (https://www.oaklandcc.edu/programs/cis/webdesigner.aspx)

Program Plan Example - Click Here (https://www.oaklandcc.edu/programs/plans/cis.wde.ct.pdf)

Gainful Employment Disclosure - Click Here (https://www.oaklandcc.edu/ged/docs/CIS.WDE.CT.pdf)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Core Requirements</td>
<td>18</td>
</tr>
<tr>
<td>CIS 1200</td>
<td>Introduction to Database Systems</td>
<td>4</td>
</tr>
<tr>
<td>CIS 1500</td>
<td>Introduction to Programming (Java)</td>
<td>4</td>
</tr>
<tr>
<td>CIS 1512</td>
<td>Principles of Software Engineering</td>
<td>3</td>
</tr>
<tr>
<td>CIS 2353</td>
<td>Data Structures</td>
<td>4</td>
</tr>
<tr>
<td>CIS 2991</td>
<td>Special Project in Software Engineering</td>
<td>3</td>
</tr>
</tbody>
</table>

Choose one or more of the following focus areas:

Game Design and Development Focus Area: 15

- CAD 1101 Introduction to CAD 4
- CIS 2252 Object-Oriented Programming (C++) 4

Total Credit Hours - Game Design and Development 33

General Software Development Focus Area: 16

- CIS 2151 Object-Oriented Programming (Java) 4
- CIS 2454 Web System Development (PHP, Java) 4
- CIS 2616 Database Application Design and Development with Oracle PL/SQL 4
- CIS 2818 Mobile Application Development (Android) 4

Total Credit Hours - General Software Development 34

Mobile Application Development Focus Area: 15

- CIS 1420 HTML5 Programming 3
- CIS 1440 JavaScript Programming for Websites 4
- CIS 2818 Mobile Application Development (Android) 4
- CIS 2819 Mobile Application Development (iOS) 4

Total Credit Hours - Mobile Application Development 34

Web Application Development Focus Area: 16

- CIS 1400 Web Design I 4
- CIS 2151 Object-Oriented Programming (Java) 4
- CIS 2454 Web System Development (PHP, Java) 4
- CIS 2858 Web System Integration and Service Development 4

Total Credit Hours - Web Application Development 34
Computer Information Systems - Cisco Internetworking Certificate of Achievement (CIS.CIN.CA)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIS 1400</td>
<td>Web Design I</td>
<td>4</td>
</tr>
<tr>
<td>CIS 1420</td>
<td>HTML5 Programming</td>
<td>3</td>
</tr>
<tr>
<td>CIS 1440</td>
<td>JavaScript Programming for Websites</td>
<td>4</td>
</tr>
<tr>
<td>CIS 1720</td>
<td>Multimedia Data Management</td>
<td>4</td>
</tr>
<tr>
<td>CIS 1721</td>
<td>Web Design II</td>
<td>3</td>
</tr>
<tr>
<td>CIS 1722</td>
<td>Web Animation</td>
<td>3</td>
</tr>
<tr>
<td>GRD 1100</td>
<td>Graphic Design</td>
<td>3</td>
</tr>
<tr>
<td>PHO 1700</td>
<td>Beginning Digital Photography</td>
<td>4</td>
</tr>
</tbody>
</table>

Total Credit Hours 31

A minimum cumulative 2.00 grade point average (GPA) overall is required for graduation.

Construction Management

Degree

- Construction Management (CMN.AAS) (p. 36)

Certificate

- Construction Management (CMN.CT) (p. 37)

Construction Management (CMN.AAS)

Associate in Applied Science

Engineering/Manufacturing and Industrial Technology

Auburn Hills Campus

The Construction Management program is designed to prepare men and women to work at entry- and middle-level management for general contractors, construction managers and design-build contractors in all industry sectors. The program focuses on management practices found throughout construction that include (but are not limited to) industry terminology, building materials and systems, construction surveying, construction safety, interpretation of construction drawings, management techniques, administration, and project estimating.

Through cooperation with and guidance from the construction industry, the program remains current with industry technology, standards and guidelines. Graduates of this program will have gained knowledge in both the technical and business management areas of the construction industry. This degree will position graduates to obtain potential employment in construction or continue their education through several articulation agreements with other colleges and universities.

Program Plan Example - Click Here (https://www.oaklandcc.edu/programs/plans/cmn.aas.pdf)

Code    | Title                                               | Credit Hours |
---------|-----------------------------------------------------|--------------|
CMN 1100 | Introduction to Construction Management             | 3            |
CMN 1200 | Construction Building Systems and Materials          | 3            |
CMN 1250 | Construction Applications                           | 3            |
CMN 1300 | Construction Surveying                              | 3            |
CMN 1400 | Construction Safety                                 | 3            |
CMN 1500 | Construction Drawings                               | 3            |
CMN 1700 | Quantitative Analysis of Construction Drawings       | 3            |
CMN 2100 | Construction Contracts and Administration            | 3            |
CMN 2300 | Construction Law                                    | 3            |
CMN 2400 | Construction Planning and Scheduling                | 3            |
CMN 2500 | Construction Estimating and Bidding Techniques       | 3            |

Required Supportive Courses

- ACC 1800 Accounting Procedures 2
- BUS 1100 Introduction to Business 4
- CIS 1050 Personal Computer Productivity Tools 4
- ECO 2610 Economics I 3
- Complete one of the following COM courses: (3)
  - COM 1290 Interpersonal Communication 3
  - or

Gainful Employment Disclosure - Click Here (https://www.oaklandcc.edu/ged/docs/CIS.CIN.CA.pdf)
COM 1600 Fundamentals of Speech 3
Complete one of the following ENG courses: (3)
ENG 1350 Business Communications 3
or
ENG 1510 Composition I 3
Complete one of the following MAT courses: (3-4)
MAT 1540 College Algebra 4
or
MAT 1560 Trigonometry 3
or
MAT 1580 Statistics 4
Complete one of the following courses: (4)
CHE 1000 Introductory Chemistry 4
or
PHY 1610 College Physics I 4
Total Credit Hours for Program-Related Courses 59-60

General Education Requirements
Communication/English (3-credits)
Satisfied
Fine Arts/Humanities (3-credits)
Complete 3 credits from Fine Arts/Humanities courses listed in the General Education Distribution List (p. 8)
Satisfied
Mathematics/Science (3-credits)
Satisfied
Social Science (3-credits)
Satisfied
Written Communication (3-credits)
Satisfied
Total Credit Hours 62-63

Course may be used to meet General Education requirements.

A minimum cumulative 2.00 grade point average (GPA) overall is required for graduation.

Construction Management (CMN.CT)

Certificate
Engineering/Manufacturing and Industrial Technology
Auburn Hills Campus
The Construction Management Certificate Program is designed for men and women employed by general contractors, construction managers, design-build contractors, specialty contractors/vendors and supporting services in all industry sectors. The focus is to enhance and further develop a better interpretation of industry terminology, building materials and systems, construction surveying, construction safety, interpretation of construction drawings, management techniques, administration, and project estimating. The certificate option may also complement related OCC programs in Business Administration (BUS.ABA), CAD Architectural Applications (CAD.ARC.CA), Heating, Ventilation, Air Conditioning and Refrigeration Technician Option (HVA.HVT.AAS), Alternative Thermal Energy Systems (HVA.TES.CA), Technical Apprentice / Skilled Trades (IND.AAS) (IND.CT), Interior Design (INT.AAS), and Business Management Option (MGT.BUS.AAS).

Through cooperation and guidance of the construction industry, the program remains current with industry technology, standards and guidelines. Completion of this certificate may lead to promotions and further potential employment in construction or related fields. A student may also choose to further his or her education by completing the Construction Management Associate degree (CMN.AAS) and take advantage of several articulation agreements with other colleges and universities.

Program Plan Example - Click Here (http://catalog.oaklandcc.edu/programs/construction-management/construction-management-certificate/
%20https://www.oaklandcc.edu/programs/plans/cmn.ct.pdf)
Gainful Employment Disclosure - Click Here (https://www.oaklandcc.edu/ged/docs/CMN.CT.pdf)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMN 1100</td>
<td>Introduction to Construction Management</td>
<td>3</td>
</tr>
<tr>
<td>CMN 1200</td>
<td>Construction Building Systems and Materials</td>
<td>3</td>
</tr>
<tr>
<td>CMN 1250</td>
<td>Construction Applications</td>
<td>3</td>
</tr>
<tr>
<td>CMN 1300</td>
<td>Construction Surveying</td>
<td>3</td>
</tr>
<tr>
<td>CMN 1400</td>
<td>Construction Safety</td>
<td>3</td>
</tr>
<tr>
<td>CMN 1500</td>
<td>Construction Drawings</td>
<td>3</td>
</tr>
<tr>
<td>CMN 1700</td>
<td>Quantitative Analysis of Construction Drawings</td>
<td>3</td>
</tr>
<tr>
<td>CMN 2100</td>
<td>Construction Contracts and Administration</td>
<td>3</td>
</tr>
<tr>
<td>CMN 2300</td>
<td>Construction Law</td>
<td>3</td>
</tr>
<tr>
<td>CMN 2400</td>
<td>Construction Planning and Scheduling</td>
<td>3</td>
</tr>
<tr>
<td>CMN 2500</td>
<td>Construction Estimating and Bidding Techniques</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credit Hours 33

A minimum cumulative 2.00 grade point average (GPA) overall is required for graduation.

Construction Management Professional

Degree
- Construction Management Professional (CMP.AAS) (p. 37)

Construction Management Professional (CMP.AAS)

Associate in Applied Science
Engineering/Manufacturing and Industrial Technology
Auburn Hills Campus
The Associate in Applied Science Degree in Construction Management Professional Program is designed for skilled trade workers that desire to advance their careers or obtain further construction management skills. This degree is optimal for those expecting to take their career to the supervisory level. Through this program, students will be exposed to basic business principles, as well as basic construction business principles.
Skilled workers who have achieved Journeyman status through the guidelines set by the Office of Apprenticeship Training (OAT) or have achieved a recognized state certified license in their specific skilled trade within any of the following categories, but not limited to Bricklayers, Carpenters, Glaziers, Iron Workers, Operating Engineers, Plumbers/Pipe Fitters/HVAC Technicians/Gas Distribution, Sprinkler Fitters, Sheet Metal, Electricians, Asbestos Workers, Elevator Constructors, and Roofers will be granted, by Oakland Community College, a block of 20 credit hours (applicable to an Associate in Applied Science-Construction Management Professional option only). Students who have successfully completed an apprentice training program, reached Journeyman status and/or have a state certified license in the categories previously listed must provide proof to the OCC Registrar Office for approval. Those with a Michigan Builder's License and/or equivalent, without completing a skilled trade apprenticeship program and reaching journeyman status, are not qualified for the block of 20 credits.

In addition to the 20 credit hours, students must take the required courses listed below, as well as meet the OCC requirements for an Associate in Applied Science Degree in Construction Management Professional. Students must also attend a mandatory Construction Management orientation session prior to enrolling in CMN 1700.

Skilled Trades (See aforementioned list description)

Program Plan Example - Click Here (https://www.oaklandcc.edu/programs/plans/cmp.aas.pdf)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Major Requirements</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Credits approved by OCC Registrar with documented proof of completion of a certified apprenticeship training program</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Required Courses</td>
<td></td>
</tr>
<tr>
<td>CMN 1700</td>
<td>Quantitative Analysis of Construction Drawings</td>
<td>3</td>
</tr>
<tr>
<td>CMN 2100</td>
<td>Construction Contracts and Administration</td>
<td>3</td>
</tr>
<tr>
<td>CMN 2300</td>
<td>Construction Law</td>
<td>3</td>
</tr>
<tr>
<td>CMN 2400</td>
<td>Construction Planning and Scheduling</td>
<td>3</td>
</tr>
<tr>
<td>CMN 2500</td>
<td>Construction Estimating and Bidding Techniques</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Required Supportive Courses</td>
<td></td>
</tr>
<tr>
<td>ACC 1800</td>
<td>Accounting Procedures</td>
<td>2</td>
</tr>
<tr>
<td>BUS 1100</td>
<td>Introduction to Business</td>
<td>4</td>
</tr>
<tr>
<td>CIS 1050</td>
<td>Personal Computer Productivity Tools</td>
<td>4</td>
</tr>
<tr>
<td>ECO 2610</td>
<td>Economics I</td>
<td>3</td>
</tr>
<tr>
<td>ENG 1350</td>
<td>Business Communications</td>
<td>3</td>
</tr>
<tr>
<td>MAT 1150</td>
<td>Intermediate Algebra</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Complete one of the following COM courses:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>COM 1290</td>
<td>Interpersonal Communication</td>
</tr>
<tr>
<td></td>
<td>or</td>
<td>or</td>
</tr>
<tr>
<td></td>
<td>COM 1600</td>
<td>Fundamentals of Speech</td>
</tr>
<tr>
<td></td>
<td>Total Credit Hours for Program-Related Courses</td>
<td>58</td>
</tr>
<tr>
<td></td>
<td>General Education Requirements</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Communication/English (3-credits)</td>
<td>Satisfied</td>
</tr>
<tr>
<td></td>
<td>Fine Arts/Humanities (3-credits)</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Complete 3 credits from Fine Arts/Humanities courses listed in the General Education Distribution List (p. 8)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mathematics/Science (3-credits)</td>
<td></td>
</tr>
</tbody>
</table>

Satisfied
Social Science (3-credits)
Satisfied
Written Communication (3-credits)
Satisfied

Total Credit Hours 61

1. The prerequisites for this course will be waived for Journeymen in the construction trades.
2. Course may be used to meet General Education requirements.

A minimum cumulative 2.00 grade point average (GPA) overall is required for graduation.

Criminal Justice

Degrees

- Criminal Justice - Corrections (CRJ.CRO.AAS) (p. 38)
- Criminal Justice - Generalist (CRJ.GEN.AAS) (p. 39) - Traditional or online program available
- Criminal Justice - Law Enforcement (CRJ.LAW.AAS) (p. 40)
- Criminal Justice - Police Evidence Technology (CRJ.PET.AAS) (p. 41)

Certificate of Achievement

- Criminal Justice - Homeland Security (CRJ.HLS.CA) (p. 41)
- Criminal Justice - Police Academy (CRJ.OPA.CA) (p. 42)

Criminal Justice - Corrections (CRJ.CRO.AAS)

Associate in Applied Science

Human Services

Auburn Hills Campus

The Corrections program provides students with an educational background in: police administration and procedures, criminal investigations, and law. Graduation fulfills the entrance requirements for the Police Academy at OCC.

NOTE: Completion of an academy is required to become a sworn officer in the Criminal Justice field.

Graduates choosing not to pursue sworn police officer status may be employed as civil servants in corrections, private-sector security, or choose to continue their education at the bachelor level.

This program provides an in depth study of the correction process, the function of probation and parole, and administration of confinement facilities at various levels. Graduates may work in federal, state, or county correctional facilities or as assistant probation or case workers in some juvenile and adult correction agencies.

Program Plan Example - Click Here (https://www.oaklandcc.edu/programs/plans/crj.cro.aas.pdf)
A minimum cumulative 2.00 grade point average (GPA) overall is required for graduation.

### Criminal Justice - Generalist (CRJ.GEN.AAS)

**Associate in Applied Science**

**Human Services**

This program provides experiences related to criminology, criminal law, legal procedures, and social values.

The Criminal Justice Generalist program provides students with an educational background in police procedures and administration, plus extensive experience in additional subjects relating to the criminal justice field. Graduation fulfills entrance requirements for the Police Academy at OCC.

Graduates choosing not to pursue sworn police officer status may be employed as civil servants or choose to continue their education at the Bachelor level.

The Criminal Justice Generalist program is designed to provide students with the courses necessary to meet 2 + 2 and 3 + 1 degree requirements for institutions offering Bachelor Degrees in Criminal Justice.

Students selecting this major are strongly advised to meet with an OCC counselor throughout their program of study for courses that might be required at the transfer college you plan to attend.

Graduating from this program does not automatically qualify the student for the Michigan Transfer Agreement (MTA) endorsement. Students in this program seeking MTA endorsement should work closely with an OCC counselor to identify classes from the MTA List which apply to the endorsement and to degree requirements.

**Program Plan Example** - [Click Here](https://www.oaklandcc.edu/programs/plans/crj.gen.aas.pdf)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRJ 1010</td>
<td>Introduction to Criminal Justice</td>
<td>3</td>
</tr>
<tr>
<td>CRJ 1030</td>
<td>Police Communications</td>
<td>3</td>
</tr>
<tr>
<td>CRJ 1060</td>
<td>Introduction to Corrections</td>
<td>3</td>
</tr>
<tr>
<td>CRJ 1120</td>
<td>Criminal Law and Administration of Justice</td>
<td>3</td>
</tr>
<tr>
<td>CRJ 1220</td>
<td>Criminal Evidence and Procedure</td>
<td>3</td>
</tr>
<tr>
<td>CRJ 1720</td>
<td>Correctional Institutions and Facilities</td>
<td>3</td>
</tr>
<tr>
<td>CRJ 1820</td>
<td>Legal Issues in Corrections</td>
<td>3</td>
</tr>
<tr>
<td>CRJ 1830</td>
<td>Probation, Parole, and Community Corrections</td>
<td>3</td>
</tr>
<tr>
<td>CRJ 1840</td>
<td>Correctional Client</td>
<td>3</td>
</tr>
<tr>
<td>CRJ 2220</td>
<td>Juvenile Procedures</td>
<td>3</td>
</tr>
<tr>
<td>CRJ 2310</td>
<td>Interview and Interrogation Techniques</td>
<td>3</td>
</tr>
<tr>
<td>CRJ 2403</td>
<td>Field Project</td>
<td>3</td>
</tr>
<tr>
<td>ENG 1350</td>
<td>Business Communications</td>
<td>3</td>
</tr>
<tr>
<td>PSY 2510</td>
<td>Introduction to Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PSY 2810</td>
<td>Psychology of Adjustment</td>
<td>3</td>
</tr>
<tr>
<td>SOC 2510</td>
<td>Sociology</td>
<td>3</td>
</tr>
<tr>
<td>SOC 2530</td>
<td>Racial and Ethnic Group Relations</td>
<td>3</td>
</tr>
<tr>
<td>SOC 2610</td>
<td>Introduction to Criminology</td>
<td>3</td>
</tr>
<tr>
<td>COM 1290</td>
<td>Interpersonal Communication</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td>COM 1600</td>
<td>Fundamentals of Speech</td>
</tr>
</tbody>
</table>

**Total Credit Hours for Program-Related Courses** 57

**General Education Requirements**

<table>
<thead>
<tr>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication/English (3-credits)</td>
<td>Satisfied</td>
</tr>
<tr>
<td>Fine Arts/Humanities (3-credits)</td>
<td>Satisfied</td>
</tr>
<tr>
<td>Complete 3 credits from Fine Arts/Humanities courses listed in the General Education Distribution List (p. 8)</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics/Science (3-credits)</td>
<td>Satisfied</td>
</tr>
<tr>
<td>Complete 3 credits from Mathematics/Science courses in the General Education Distribution List (p. 9)</td>
<td>3</td>
</tr>
<tr>
<td>Social Science (3-credits)</td>
<td>Satisfied</td>
</tr>
<tr>
<td>Written Communication (3-credits)</td>
<td>Satisfied</td>
</tr>
</tbody>
</table>

**Total Credit Hours** 63

1. Course may be used to meet General Education requirements.
2. Transfer students should select ENG 1510.

Auburn Hills Campus (also available fully online)

**Major Requirements**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRJ 1110</td>
<td>Police Patrol Administration and Procedures</td>
<td>3</td>
</tr>
<tr>
<td>CRJ 1400</td>
<td>Introduction to Homeland Security</td>
<td>3</td>
</tr>
<tr>
<td>CRJ 2154</td>
<td>Firearms, Ballistics and Explosives</td>
<td>4</td>
</tr>
<tr>
<td>CRJ 2200</td>
<td>Criminal Investigation and Case Preparation</td>
<td>4</td>
</tr>
<tr>
<td>CRJ 2220</td>
<td>Juvenile Procedures</td>
<td>3</td>
</tr>
<tr>
<td>CRJ 2254</td>
<td>Fingerprint Classification and Identification</td>
<td>4</td>
</tr>
<tr>
<td>CRJ 2260</td>
<td>Substance Abuse Investigation</td>
<td>3</td>
</tr>
<tr>
<td>CRJ 2310</td>
<td>Interview and Interrogation Techniques</td>
<td>3</td>
</tr>
<tr>
<td>CRJ 2420</td>
<td>Community Relations in Criminal Justice</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total Credit Hours for Program-Related Courses** 36-38
**General Education Requirements**

The General Education Distribution Requirements for this degree differ from most of the other Associate in Applied Science requirements.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 1510</td>
<td>Composition I</td>
<td>3</td>
</tr>
<tr>
<td>ENG 1520</td>
<td>Composition II</td>
<td>3</td>
</tr>
<tr>
<td>Fine Arts / Humanities (6-8 credits) - Must be taken in more than one academic discipline with a grade of 'C' or better</td>
<td>6-8</td>
<td></td>
</tr>
<tr>
<td>Complete 6-8 credits from Fine Arts/Humanities courses listed in the Michigan Transfer Agreement (MTA) list. (p. 7)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mathematics / Science (8-credits) - Must include one approved lab / science course. Complete 8 credits from Mathematics / Science courses listed in the Michigan Transfer Agreement List (or courses with the same prefixes with numbers higher than those listed)</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Complete 8 credits from Mathematics/Science courses listed in the Michigan Transfer Agreement List (or courses with the same prefixes with numbers higher than those listed). (p. 7)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Additional elective credits needed to meet requirements for an Associate in Applied Science degree**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>COM 1290</td>
<td>Interpersonal Communication</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td>COM 1600</td>
<td>Fundamentals of Speech</td>
</tr>
</tbody>
</table>

**Course may be used to meet General Education requirements.**

1. A minimum cumulative 2.00 grade point average (GPA) overall is required for graduation.

2. Transfer students should select ENG 1510.

Note: Completion of a Police Academy is required to become a sworn officer in the Criminal Justice field.

**Criminal Justice - Law Enforcement (CRJ.LAW.AAS)**

**Associate in Applied Science**

Human Services

Auburn Hills Campus

The Law Enforcement program provides students with an educational background in: police administration and procedures, criminal investigations, and law. Graduation fulfills the entrance requirements for the Police Academy at OCC.

Note: Completion of an academy is required to become a sworn officer in the Criminal Justice field.

Graduates choosing not to pursue sworn police officer status may be employed as civil servants in corrections, private-sector security, or choose to continue their education at the bachelor level.

This program provides an in depth study of community law enforcement and police administration. Graduates may be employed by police departments, sheriff departments, state police or federal law enforcement agencies, or seek employment with industrial plant security or private investigation agencies.

**Program Plan Example -** Click Here (https://www.oaklandcc.edu/programs/plans/crj.law.aas.pdf)
Criminal Justice - Police Evidence Technology (CRJ.PET.AAS)

Associate in Applied Science

Human Services

Auburn Hills Campus

The Police Evidence program provides students with an education background in police administration and procedures, plus extensive experience in coursework relating to the criminal justice field such as criminal investigation, law and related criminal justice subjects. Students learn investigative procedures such as crime scene methods, practical techniques for collecting, preserving and handling physical evidence. Students will perform basic laboratory examinations of simulated crime evidence. Graduation fulfills the entrance requirements for the Police Academy at OCC.

Note: Completion of an academy is required to become a sworn officer in the Criminal Justice field.

Graduates choosing not to pursue sworn police officer status may be employed as civil servants or choose to continue their education at the bachelor level.

Program Plan Example - Click Here (https://www.oaklandcc.edu/programs/plans/crj.pet.aas.pdf)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 1600</td>
<td>Human Structure and Function</td>
<td>3</td>
</tr>
<tr>
<td>or CHE 2630</td>
<td>Human Anatomy and Physiology I</td>
<td>4</td>
</tr>
<tr>
<td>CIS 1050</td>
<td>General Chemistry I</td>
<td>4</td>
</tr>
<tr>
<td>CRJ 1010</td>
<td>Introduction to Criminal Justice</td>
<td>3</td>
</tr>
<tr>
<td>CRJ 1030</td>
<td>Police Communications</td>
<td>3</td>
</tr>
<tr>
<td>CRJ 1070</td>
<td>Introduction to Forensic Science</td>
<td>3</td>
</tr>
<tr>
<td>CRJ 1120</td>
<td>Criminal Law and Administration of Justice</td>
<td>3</td>
</tr>
<tr>
<td>CRJ 1220</td>
<td>Criminal Evidence and Procedure</td>
<td>3</td>
</tr>
<tr>
<td>CRJ 2154</td>
<td>Criminal Investigation and Case Preparation</td>
<td>4</td>
</tr>
<tr>
<td>CRJ 2200</td>
<td>Criminal Investigation and Case Preparation</td>
<td>4</td>
</tr>
<tr>
<td>CRJ 2254</td>
<td>Fingerprint Classification and Identification</td>
<td>4</td>
</tr>
<tr>
<td>CRJ 2310</td>
<td>Interview and Interrogation Techniques</td>
<td>3</td>
</tr>
<tr>
<td>CRJ 2320</td>
<td>Police Administration</td>
<td>3</td>
</tr>
<tr>
<td>CRJ 2403</td>
<td>Field Project</td>
<td>3</td>
</tr>
<tr>
<td>SOC 25101</td>
<td>Sociology</td>
<td>3</td>
</tr>
<tr>
<td>SOC 26101</td>
<td>Introduction to Criminology</td>
<td>3</td>
</tr>
<tr>
<td>Complete one of the following COM courses:</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>COM 12901</td>
<td>Interpersonal Communication</td>
</tr>
<tr>
<td>or COM 16001</td>
<td>Fundamentals of Speech</td>
<td>3</td>
</tr>
<tr>
<td>Complete one of the following ENG courses:</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>ENG 13501</td>
<td>Business Communications</td>
</tr>
<tr>
<td>or ENG 15101</td>
<td>Composition I</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credit Hours for Program-Related Courses: 59-60

General Education Requirements

Communication / English (3-credits)
Satisfied

Fine Arts / Humanities (3-credits)
Complete 3 credits from Fine Arts/Humanities courses listed in the General Education Distribution List (p. 8)

Mathematics / Science (3-credits)
Satisfied

Social Science (3-credits)
Satisfied

Written Communication (3-credits)
Satisfied

Total Credit Hours: 62-63

1 Course may be used to meet General Education requirements.

A minimum cumulative 2.00 grade point average (GPA) overall is required for graduation.

Criminal Justice - Homeland Security (CRJ.HLS.CA)

Certificate of Achievement

Public Services

Auburn Hills Campus

The Criminal Justice Homeland Security Certificate of Achievement will introduce students to domestic and international terrorism issues and strategies for countering terrorist threats. Best practices will be identified for successful security planning and threat assessment. The key principles of emergency management and disaster planning will be presented to deal with both man-made and natural threats. Successful students will have the opportunity to earn numerous recognitions from FEMA in Incident Command and from the National Incident Management System (NIMS).

Students selecting this major are strongly advised to meet with an OCC counselor throughout their program of study for courses that might be required at the transfer college you plan to attend.

Program Plan Example - Click Here (https://www.oaklandcc.edu/programs/plans/crj.hls.ca.pdf)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRJ 1400</td>
<td>Introduction to Homeland Security</td>
<td>3</td>
</tr>
<tr>
<td>CRJ 1404</td>
<td>Terrorism Analysis</td>
<td>3</td>
</tr>
<tr>
<td>CRJ 1405</td>
<td>Integrating Emergency Management and Homeland Security</td>
<td>3</td>
</tr>
<tr>
<td>CRJ 1406</td>
<td>International Strategies in Homeland Security</td>
<td>3</td>
</tr>
</tbody>
</table>

Required Supportive Courses

Complete 2 courses from the following: 6

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRJ 1401</td>
<td>School Safety and Homeland Security</td>
<td>3</td>
</tr>
<tr>
<td>CRJ 1402</td>
<td>Homeland Security and First Responders</td>
<td>3</td>
</tr>
</tbody>
</table>
Criminal Justice - Police Academy (CRJ.OPA.CA)

Certificate of Achievement

Human Services

Restricted

Auburn Hills Campus

The Police Academy Certificate is restricted to Police Academy graduates.

The Oakland Police Academy meets all requirements for Michigan Commission on Law Enforcement Standards (MCOLES). Successful completion of the Academy qualifies cadets to take the MCOLES Michigan Police Officer licensing exam.

MCOLES required knowledge and skill tests include, but are not limited to: Criminal Law and Procedures, Firearms, Emergency Vehicle Operations, First Aid, Physical Fitness Exit Exam, and Defensive Tactics.

Program Plan Example - Click Here

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRJ 1010</td>
<td>Introduction to Criminal Justice</td>
<td>3</td>
</tr>
<tr>
<td>CRJ 1120</td>
<td>Criminal Law and Administration of Justice</td>
<td>3</td>
</tr>
<tr>
<td>CRJ 2120</td>
<td>Highway and Traffic Control</td>
<td>3</td>
</tr>
<tr>
<td>CRJ 2403</td>
<td>Field Project</td>
<td>3</td>
</tr>
<tr>
<td>PER 2610</td>
<td>Physical Fitness/Defense Tactics</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credit Hours 18

A minimum cumulative 2.00 grade point average (GPA) overall is required for graduation.

Culinary Arts (CUL.AAS)

Degree - Associate in Applied Science

Human Services

Orchard Ridge Campus

The Culinary Arts program, accredited by the American Culinary Federation, leads to an associate degree in applied science and A.C.F. certification. The A.C.F. certification of C.C. or C.S.C. dependent on students’ work experience at time of graduation. Alumni and students in the program have won prestigious awards for technical skills and industry achievement from nationally recognized associations.

The program curriculum is designed to prepare the student for a career as a culinary professional that may lead to a position as an executive chef or food and beverage manager with professional work experience. The first year emphasizes foundation skills, knowledge, and technical processes of food safety, cookery, baking, and guest services. The second year builds on student's skills to include the study and practice of classical and contemporary cuisines, pastries and skill refinement. Management principles, industry standards, human resources, and financial applications practiced in food and beverage operations will be presented throughout the curriculum.

Culinary competition opportunities are available for students who seek it. OCC competition teams are nationally recognized.

A working internship and successful completion of A.C.F. culinary skills practical exam are required for program completion. Upon graduation students must register their certification to the American Culinary Federation.

Before enrolling in the Culinary Arts program, students should review the Culinary Arts Program standards found on the following web page at www.oaklandcc.edu/culinary.

Prior to the student's enrollment into CUL 1011 the student must:

- Attend Culinary Program Orientation.
- Attain ServeSafe Certification within the last 2 years or complete CUL 1010 Food Standards, Sanitation and Hygiene with a ‘C’ or higher.

Program Webpage - Click Here

Program Plan Example - Click Here

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CUL 1011</td>
<td>Culinary Skills</td>
<td>2</td>
</tr>
<tr>
<td>CUL 1111</td>
<td>Cookery Techniques</td>
<td>4</td>
</tr>
<tr>
<td>CUL 1120</td>
<td>Butchery and Fabrication</td>
<td>2</td>
</tr>
<tr>
<td>CUL 1151</td>
<td>Baking</td>
<td>4</td>
</tr>
<tr>
<td>CUL 1200</td>
<td>Restaurant Cookery</td>
<td>4</td>
</tr>
<tr>
<td>CUL 1250</td>
<td>Pastry I</td>
<td>4</td>
</tr>
<tr>
<td>CUL 1300</td>
<td>Garde Manger</td>
<td>4</td>
</tr>
<tr>
<td>CUL 1400</td>
<td>Front House Operations I</td>
<td>4</td>
</tr>
<tr>
<td>CUL 2020</td>
<td>Food Service Cost Management</td>
<td>3</td>
</tr>
</tbody>
</table>

Completion of the Oakland Police Academy satisfies above requirements.

A minimum cumulative 2.00 grade point average (GPA) overall is required for graduation.

Culinary Arts

Degrees

- Culinary Arts (CUL.AAS) (p. 42)

Certificate

- Culinary Arts - Baking and Pastry Arts (CUL.BPA.CT) (p. 43)
CUL 2030  Food Purchasing and Storage  2
CUL 2200  Modern Buffet Techniques  4
CUL 2400  Classical Restaurant  4
CUL 2410  Front House Operations II  2
CUL 2480  Event and Catering Management  3
CUL 2500  Culinary Internship  2

Required Supportive Courses

HEA 1510  Nutrition  3

Complete a minimum of 2 credits from the following:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>CUL 1050</td>
<td>Beginning Cake Decorating</td>
<td>2</td>
</tr>
<tr>
<td>CUL 2300</td>
<td>Ice Carving</td>
<td>2</td>
</tr>
<tr>
<td>CUL 2311</td>
<td>International Cuisine-Italian</td>
<td>2</td>
</tr>
<tr>
<td>CUL 2312</td>
<td>International Cuisine - Asian</td>
<td>2</td>
</tr>
<tr>
<td>CUL 2320</td>
<td>Wine and Spirits</td>
<td>3</td>
</tr>
<tr>
<td>CUL 2330</td>
<td>Artisan Breads</td>
<td>2</td>
</tr>
<tr>
<td>CUL 2350</td>
<td>Culinary Competition</td>
<td>2</td>
</tr>
<tr>
<td>CUL 2360</td>
<td>Soups and Sauces</td>
<td>2</td>
</tr>
<tr>
<td>CUL 2391</td>
<td>Sugar Artistry</td>
<td>2</td>
</tr>
<tr>
<td>CUL 2392</td>
<td>Chocolate Artistry</td>
<td>2</td>
</tr>
<tr>
<td>CUL 2420</td>
<td>Plated Dessert I</td>
<td>2</td>
</tr>
</tbody>
</table>

Total Credit Hours for Program-Related Courses  52

General Education Requirements

Communication / English (3-credits) *Recommended COM 1290  3
- Complete 3 credits from Communication/English courses listed in the General Education Distribution List (p. 8)

Fine Arts / Humanities (3-credits)  3
- Complete 3 credits from Fine Arts/Humanities courses listed in the General Education Distribution List (p. 8)

Mathematics / Science (3-credits)  3
- Complete 3 credits from Mathematics/Science courses listed in the General Education Distribution List (p. 9)

Social Science (3-credits) *Recommended PSY 2630  3
- Complete 3 credits from Social Science courses listed in the General Education Distribution List (p. 10)

Written Communication (3-credits)  3
- Complete 3 credits from Written Communication courses listed in the General Education Distribution List (p. 10)

Total Credit Hours  68

Course may be used to meet General Education requirements.

A minimum cumulative 2.00 grade point average (GPA) overall is required for graduation.

**Culinary Arts - Baking and Pastry Arts (CUL.BPA.CT)**

**Certificate**

**Human Services**

**Orchard Ridge Campus**

This certificate program provides the student with knowledge and hands on skill development required for a career in baking and pastry arts. It is a unique pastry program in that each hands on course is designed to build on knowledge and further develop technical skills attained from foundation course. Student will experience multiple styles of baking and pastry production, cake decorating and product merchandising to prepare them for career path options required of a pastry arts professional. The choice of specialty electives allows student the opportunity to refine their skills with a technique relevant to their career path desired. When all courses are completed, the student may apply for a certificate.

Program Webpage - Click Here [https://www.oaklandcc.edu/culinary/default.aspx](https://www.oaklandcc.edu/culinary/default.aspx)

Program Plan Example - Click Here [https://www.oaklandcc.edu/programs/plans/cul.bpa.ct.pdf](https://www.oaklandcc.edu/programs/plans/cul.bpa.ct.pdf)

Gainful Employment Disclosure - Click Here [https://www.oaklandcc.edu/ged/docs/CUL.BPA.CT.pdf](https://www.oaklandcc.edu/ged/docs/CUL.BPA.CT.pdf)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>CUL 1011</td>
<td>Culinary Skills</td>
<td>2</td>
</tr>
<tr>
<td>CUL 1050</td>
<td>Beginning Cake Decorating</td>
<td>2</td>
</tr>
<tr>
<td>CUL 1111</td>
<td>Cookery Techniques</td>
<td>4</td>
</tr>
<tr>
<td>CUL 1151</td>
<td>Baking</td>
<td>4</td>
</tr>
<tr>
<td>CUL 1250</td>
<td>Pastry I</td>
<td>4</td>
</tr>
<tr>
<td>CUL 1850</td>
<td>Bakery Sales and Merchandising</td>
<td>4</td>
</tr>
<tr>
<td>CUL 2250</td>
<td>Pastry II</td>
<td>4</td>
</tr>
<tr>
<td>CUL 2330</td>
<td>Artisan Breads</td>
<td>2</td>
</tr>
<tr>
<td>CUL 2420</td>
<td>Plated Dessert I</td>
<td>2</td>
</tr>
<tr>
<td>CUL 2530</td>
<td>Wedding Cake Design</td>
<td>2</td>
</tr>
</tbody>
</table>

Select one 2-credit Culinary elective below:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>CUL 1060</td>
<td>Theme Cakes</td>
<td>2</td>
</tr>
<tr>
<td>CUL 2391</td>
<td>Sugar Artistry</td>
<td>2</td>
</tr>
<tr>
<td>CUL 2392</td>
<td>Chocolate Artistry</td>
<td>2</td>
</tr>
<tr>
<td>CUL 2430</td>
<td>Plated Dessert II</td>
<td>2</td>
</tr>
</tbody>
</table>

Total Credit Hours  32

A minimum cumulative 2.00 grade point average (GPA) overall is required for graduation.

**Dental Hygiene**

**Degrees**

- Dental Hygiene (DHY.APP) (p. 43)

**Dental Hygiene (DHY.APP)**

**Extended Degree - Associate in Applied Science**

**Health Sciences**

**Highland Lakes Campus**

Successful completion of this accredited program leads to an associate in applied science degree and is designated as an extended degree program in which the student must complete a minimum of 73 credit hours. The program prepares selected individuals through theory, clinical and community experiences to assume the responsibility of providing safe, competent care for the dental patient in the prevention of oral disease. In
order to complete the program, a 'C' or better is required for all program courses. Through program completion, students are eligible for the National Board Dental Hygiene Examination (NBDHE), American Board of Dental Examiners - The Commission on Dental Competency Assessments (ADEX-CDCA), CDCA Local Anesthesia Examination, and CDCA Nitrous Oxide Examination.

Dental Hygiene courses involving the clinical and classroom experiences are offered only at the Highland Lakes Campus. An external rotation is required at an external site during the second year of the program. Registration for the dental hygiene courses is possible only after the student is admitted to the dental hygiene program through a selection process. All requirements must be completed by December 15th of the year preceding intended enrollment into the dental hygiene program.

Students must first be admitted to the college and designate dental hygiene (DHY) as their curriculum and Highland Lakes (HL) as their home campus. Admission into the program follows a selection process that is based on the student's grade point average (GPA) in the ten Required Supportive Courses listed under the Basic Admission Requirements below in conjunction with the respective completion date. The prospective student applying to the dental hygiene program must pass a criminal background check.

Basic Admission requirements include:

- High school graduation or GED
- Attendance at a Dental Hygiene Information Session
- Completion of each Required Supportive Course with a grade of 'C' (2.0) or better: BIO 1570 or BIO 2710, BIO 2630 or BIO 2640, CHE 1320 or CHE 21320, COM 1600 or ENG 1510, ENG 201510, PSY 2510 or SOC 202510
- Successful completion of HESI-A2 admission testing with a minimum score of 75th percentile for each section, Reading Comprehension, Math, Anatomy and Physiology, and Learning Styles. One retake is permitted.
- Completion of a dental hygiene final checklist with a counselor at Highland Lakes
- Refer to the Student Brochure for additional admission requirements

For a complete listing of the admission requirements (including HESI-A2 admission testing) and selection procedures, refer to the 'Student Brochure: Prospective Dental Hygiene Candidates,' available during the dental hygiene information sessions, and at the dental hygiene website at www.oaklandcc.edu/health/dental-hygiene. The policies regarding admission, progression and retention in the dental hygiene program as well as certification, licensure qualifications are outlined in the Student Brochure which is provided to each student enrolled in the dental hygiene program. All of these provisions are also explained in the information sessions prior to admission to the program. In addition to the tuition, dental hygiene students incur extra costs such as pre-admission health examinations, uniforms, supplies, pinning ceremony/graduation costs, membership into the student organization of the American Dental Hygienist Association, and licensure application fees.

A licensed dental hygienist, who works under the supervision of a dentist, may find employment in private or specialty offices, in schools, hospitals, clinics, or in the public health arena.

The Dental Hygiene program is accredited by the American Dental Association (ADA). Issues pertaining to compliance with the standards of the Commission of the ADA can be addressed to the Commission on Dental Accreditation, 211 E. Chicago Avenue, Chicago, IL 60611, phone: 800.621.8099. A copy of the standards may be downloaded at www.ada.org (http://www.ada.org/en/).

The Michigan Board of Dentistry may deny dental hygiene licensure to an applicant who has been convicted of a crime or is addicted to drugs or alcohol. A mandatory criminal history check including fingerprints will be conducted on all students selected to the Dental Hygiene program prior to the start of the program, at the student's cost. 1) Conviction of a felony or any attempt to commit a felony within the 15 years immediately preceding the date of the criminal history check; or 2) conviction of a misdemeanor within the 10 years immediately preceding the criminal history check, will preclude eligibility for admission. In addition, all selected students must have a drug screening test prior to the start of the program. A student's full record will be reviewed. For details, contact the Dental Hygiene Department at 248.942.3147.

Program Webpage - Click Here (https://www.oaklandcc.edu/health/dental-hygiene/default.aspx)

Program Plan Example - Click Here (https://www.oaklandcc.edu/programs/plans/dhy.aas.pdf)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>DHY 1140</td>
<td>Dental Office Procedures</td>
<td>3</td>
</tr>
<tr>
<td>DHY 1230</td>
<td>Oral, Head and Neck Anatomy</td>
<td>3</td>
</tr>
<tr>
<td>DHY 1240</td>
<td>Dental Embryology and Histology</td>
<td>3</td>
</tr>
<tr>
<td>DHY 1250</td>
<td>Clinical Techniques</td>
<td>5</td>
</tr>
<tr>
<td>DHY 1260</td>
<td>Dental Radiography</td>
<td>3.5</td>
</tr>
<tr>
<td>DHY 1281</td>
<td>Clinical Dental Hygiene I</td>
<td>4</td>
</tr>
<tr>
<td>DHY 1282</td>
<td>Clinical Dental Hygiene II</td>
<td>2.5</td>
</tr>
<tr>
<td>DHY 1283</td>
<td>Clinical Dental Hygiene III</td>
<td>5</td>
</tr>
<tr>
<td>DHY 1284</td>
<td>Clinical Dental Hygiene IV</td>
<td>5</td>
</tr>
<tr>
<td>DHY 1310</td>
<td>Periodontics</td>
<td>2</td>
</tr>
<tr>
<td>DHY 1330</td>
<td>Therapeutics</td>
<td>2</td>
</tr>
<tr>
<td>DHY 1350</td>
<td>Local Anesthesia</td>
<td>1.5</td>
</tr>
<tr>
<td>DHY 2210</td>
<td>General and Oral Pathology</td>
<td>3</td>
</tr>
<tr>
<td>DHY 2220</td>
<td>Dental Public Health</td>
<td>1</td>
</tr>
<tr>
<td>DHY 2240</td>
<td>Dental Specialties</td>
<td>2</td>
</tr>
<tr>
<td>DHY 2250</td>
<td>Dental Materials</td>
<td>3</td>
</tr>
<tr>
<td>DHY 2280</td>
<td>Dental Health Education</td>
<td>2</td>
</tr>
<tr>
<td>DHY 2320</td>
<td>Dental Law</td>
<td>1</td>
</tr>
</tbody>
</table>

Required Supportive Courses

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 1570</td>
<td>Microbiology of Health and Disease</td>
<td>3</td>
</tr>
<tr>
<td>or BIO 2710</td>
<td>Microbiology</td>
<td>4</td>
</tr>
<tr>
<td>BIO 2630</td>
<td>Human Anatomy and Physiology I</td>
<td>4</td>
</tr>
<tr>
<td>BIO 2640</td>
<td>Human Anatomy and Physiology II</td>
<td>4</td>
</tr>
</tbody>
</table>
the required supportive and general education courses. Registered Sonographers who are already RDMS, but do not have a college practice as a Registered Diagnostic Medical Sonographer, (RDMS). Satisfactory achievement on this examination qualifies the graduate to offer the American Registry of Diagnostic Medical Sonographers. Successful completion of the program requirements qualifies the student to apply to write the national credential examination in health care settings. The Diagnostic Medical Sonography program leads to an Associate in Applied Science Degree and is designated as an Extended Degree Program. The course of study combines general education in the humanities, biological and behavioral sciences with instruction in the theory and practice of sonography.

### Program Admission Procedures

Students must first be admitted to the College and must declare Diagnostic Medical Sonography (DMS) as their curriculum. Admission to the College does not guarantee admission to the Sonography program. Each year a limited number of students are admitted to the program through a selection process.

### Basic admission requirements include

- Filing an application with Southfield Counseling for admission to the Diagnostic Medical Sonography program by the end of Fall semester (December) of the year preceding intended enrollment in the program.
- High school diploma or completion of GED.
- Declaration of Diagnostic Medical Sonography (DMS.APP) as the designated curriculum choice.
- Completion of ALL required supportive courses with a grade of 'B' or higher.
- Completion of General Education requirements with a grade of 'B' or higher.
- HESI admission assessment (A2) exam completed at OCC. Score in the 75th percentile or higher on both the Reading Comprehension and Anatomy exams, achieved in the same testing session. One retake is permitted; fee for each attempt.
- Attendance at a scheduled record review session.

Students who meet the basic eligibility admission requirements and apply by the deadline will be included in the selection process. All requirements must be completed by the end of Fall semester (December) of the year preceding intended enrollment in the Diagnostic Medical Sonography program. Students who are accepted into the program will be notified in writing no later than May 31st.

Students must obtain a grade of 'C' (2.0) or better in all DMS (Sonography) courses for an associate in applied science.

In order to apply to take the national credential exam administered by the American Registry of Diagnostic Medical Sonographers, students must successfully complete all requirements of the program.

The Diagnostic Medical Sonography program is approved by the Commission on Accreditation of Allied Health Education Programs.

### Diagnostic Medical Sonography Degrees

- Diagnostic Medical Sonography (DMS.APP) (p. 45)

### Diagnostic Medical Sonography (DMS.APP)

#### Extended Degree - Associate in Applied Science

Health Sciences

Southfield Campus

The Diagnostic Medical Sonography program leads to an Associate in Applied Science Degree and is designated as an Extended Degree Program in that students must complete a minimum of 89 or more required credit hours. The program prepares selected individuals through theory and clinical experiences to practice as a Diagnostic Medical Sonographer in a variety of health care settings. Successful completion of the program requirements qualifies the student to apply to write the national credential examination offered by the American Registry of Diagnostic Medical Sonographers. Satisfactory achievement on this examination qualifies the graduate to practice as a Registered Diagnostic Medical Sonographer, (RDMS).

Registered Sonographers who are already RDMS, but do not have a college degree, may enroll in the required supportive and general education courses as outlined in the College catalog. Applicants will be granted a degree upon successful completion of the requirements.

In addition to the regular tuition, Sonography students incur extra costs including, but not limited to; liability insurance, health examination, uniforms,
required vaccinations, travel, and certification fees. For details contact (248) 233-2916.

Program Webpage - Click Here ([https://www.oaklandcc.edu/health/diagnostic-medical-sonography/default.aspx](https://www.oaklandcc.edu/health/diagnostic-medical-sonography/default.aspx))

Program Plan Example - Click Here ([https://www.oaklandcc.edu/programs/plans/dms.aas.pdf](https://www.oaklandcc.edu/programs/plans/dms.aas.pdf))

**Requirements**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>DMS 1000</td>
<td>Orientation to Sonography</td>
<td>3</td>
</tr>
<tr>
<td>DMS 1010</td>
<td>Fundamentals of Sonography</td>
<td>4</td>
</tr>
<tr>
<td>DMS 1020</td>
<td>Cross-Sectional Anatomy</td>
<td>4</td>
</tr>
<tr>
<td>DMS 1030</td>
<td>Sonography Lab I</td>
<td>2</td>
</tr>
<tr>
<td>DMS 1040</td>
<td>Sonography Lab II</td>
<td>2</td>
</tr>
<tr>
<td>DMS 1050</td>
<td>Sonography Lab III</td>
<td>1</td>
</tr>
<tr>
<td>DMS 1100</td>
<td>Sonography Principles and Instrumentation I</td>
<td>3</td>
</tr>
<tr>
<td>DMS 1110</td>
<td>Sonography Principles and Instrumentation II</td>
<td>2</td>
</tr>
<tr>
<td>DMS 1200</td>
<td>OB Pathological Imaging</td>
<td>3</td>
</tr>
<tr>
<td>DMS 1220</td>
<td>GYN Pathological Imaging</td>
<td>2</td>
</tr>
<tr>
<td>DMS 1300</td>
<td>Abdominal Pathological Imaging</td>
<td>3</td>
</tr>
<tr>
<td>DMS 1420</td>
<td>Sonography Practicum I</td>
<td>4</td>
</tr>
<tr>
<td>DMS 2200</td>
<td>Advanced Sonography</td>
<td>2</td>
</tr>
<tr>
<td>DMS 2400</td>
<td>Sonography Practicum II</td>
<td>8</td>
</tr>
<tr>
<td>DMS 2420</td>
<td>Sonography Practicum III</td>
<td>8</td>
</tr>
<tr>
<td>DMS 2430</td>
<td>Sonography Practicum IV</td>
<td>4</td>
</tr>
</tbody>
</table>

**Major Requirements**

**Required Supportive Courses**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 2630</td>
<td>Human Anatomy and Physiology I</td>
<td>4</td>
</tr>
<tr>
<td>BIO 2640</td>
<td>Human Anatomy and Physiology II</td>
<td>4</td>
</tr>
<tr>
<td>ENG 1510</td>
<td>Composition I</td>
<td>3</td>
</tr>
<tr>
<td>MAT 1560</td>
<td>Trigonometry</td>
<td>3</td>
</tr>
<tr>
<td>MDA 1103</td>
<td>Medical Terminology</td>
<td>3</td>
</tr>
<tr>
<td>PHY 1610</td>
<td>College Physics I</td>
<td>4</td>
</tr>
<tr>
<td>PSY 2510</td>
<td>Introduction to Psychology</td>
<td>3</td>
</tr>
</tbody>
</table>

**Recommended Electives**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MDA 1350</td>
<td>Medical Law and Ethics</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total Credit Hours for Program-Related Courses** 82-83

**General Education Requirements**

- Communication / English (3-credits)

**Total Credit Hours** 85-86

1. Course may be used to meet General Education requirements.
2. May substitute MAT 1630 or MAT 1730 for MAT 1560.
3. Students taking PHY 1610 should take MAT 1560 or MAT 1630 prior to PHY 1610.

A minimum cumulative 2.00 grade point average (GPA) overall is required for graduation.

**Digital Media Communications (DMC.CT)**

**Certificate**

**Arts and Communication**

Given the changing dynamics of communication in this digital age, this certificate program will introduce students to the new theories surrounding digital persuasion. It offers students instruction in communication, advertising, and the creation of digital images. The program offers professional and technical experiences in persuasion, graphic design, digital imaging, and business concepts to prepare students for careers in digital communication.

Organizations across all realms depend on online visibility and targeted client interactions. New positions requiring focused skills in digital communication are being created within private and public sector organizations. This certificate will offer students experience in these critical aptitudes and is intended for individuals who desire entry-level employment in the field of digital communication and persuasion.

Program Plan Example - Click Here ([https://www.oaklandcc.edu/programs/plans/dmc.ct..pdf](https://www.oaklandcc.edu/programs/plans/dmc.ct..pdf))

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 1100</td>
<td>Introduction to Business</td>
<td>4</td>
</tr>
<tr>
<td>CIS 1090</td>
<td>Web Graphic Concepts</td>
<td>3</td>
</tr>
<tr>
<td>COM 2610</td>
<td>Persuasion and Argumentation</td>
<td>3</td>
</tr>
<tr>
<td>ENG 1510</td>
<td>Composition I</td>
<td>3</td>
</tr>
<tr>
<td>GRD 1100</td>
<td>Graphic Design</td>
<td>3</td>
</tr>
<tr>
<td>GRD 1120</td>
<td>Typography in Design</td>
<td>3</td>
</tr>
<tr>
<td>GRD 1160</td>
<td>Advertising Design</td>
<td>3</td>
</tr>
<tr>
<td>MKT 2010</td>
<td>Advertising</td>
<td>3</td>
</tr>
<tr>
<td>MKT 2520</td>
<td>Fundamental of Marketing Theory/Practice</td>
<td>3</td>
</tr>
<tr>
<td>PHO 1700</td>
<td>Beginning Digital Photography</td>
<td>4</td>
</tr>
<tr>
<td>PHO 1800</td>
<td>Fundamentals of Digital Video</td>
<td>4</td>
</tr>
</tbody>
</table>

**Total Credit Hours** 30

A minimum cumulative 2.00 grade point average (GPA) overall is required for graduation.

**Early Childhood Education**
Degrees

- Early Childhood Education (ECE.AAS) (p. 47)

Early Childhood Education

(ECE.AAS)

Associate in Applied Science (ECE.AAS)

Human Services

Highland Lakes Campus

The Early Childhood Education Associate Degree program is designed to develop effective, caring, competent, high-quality early childhood education professionals. This program provides training for effective work with young children in a variety of areas and increased awareness of the sensitivities, vulnerabilities and potential of every child. The program satisfies Michigan state requirements for licensing as directors of child care centers, lead teachers in child care centers, home-based center providers, and support staff in public school early childhood programs and Head Start agencies. It also prepares students to transfer into a bachelor’s degree program in Early Childhood Education thereby increasing their job potential. The program provides experiential and academic training in early childhood education through course work, fieldwork, and internships. A “C” (2.0) or better grade is required in all program major requirements and required supportive courses to qualify for graduation in the program. To enter the program, candidates must provide documentation that they meet the following requirements:

1. Responsible and suitable character to meet the needs of children (see State of Michigan Child Care licensing requirements);
2. No history of abuse or neglect of children or the elderly (must obtain DHS Central Registry Clearance);
3. Criminal background clearance (see State of Michigan Child Care licensing requirements);
4. Mentally, physically, medically, and cognitively able to care for children.

Program Plan Example - Click Here (https://www.oaklandcc.edu/programs/plans/ece.aas.pdf)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECE 1404</td>
<td>Introduction to Early Childhood Careers</td>
<td>3</td>
</tr>
<tr>
<td>ECE 1414</td>
<td>Early Childhood Activities</td>
<td>4</td>
</tr>
<tr>
<td>ECE 1424</td>
<td>Early Childhood Education Curriculum Content</td>
<td>2</td>
</tr>
<tr>
<td>ECE 1500</td>
<td>Infant and Toddler Curriculum</td>
<td>4</td>
</tr>
<tr>
<td>ECE 1505</td>
<td>Early Childhood Nutrition, Health and Safety</td>
<td>3</td>
</tr>
<tr>
<td>ECE 1515</td>
<td>Family and Community Connections</td>
<td>3</td>
</tr>
<tr>
<td>ECE 1525</td>
<td>School-age Care and Curriculum</td>
<td>4</td>
</tr>
<tr>
<td>ECE 2405</td>
<td>Professional Issues in Early Childhood Education</td>
<td>3</td>
</tr>
<tr>
<td>ECE 2407</td>
<td>Early Childhood Internship Capstone</td>
<td>3</td>
</tr>
<tr>
<td>ECE 2415</td>
<td>Administration of Early Childhood Education Programs</td>
<td>3</td>
</tr>
<tr>
<td>ECE 2450</td>
<td>Educating the ‘at Risk’ Child in an Early Childhood Environment</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 1510</td>
<td>Composition I</td>
<td>3</td>
</tr>
</tbody>
</table>

Suggested Electives

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 1500</td>
<td>Accounting for the Small Business Owner</td>
<td>3</td>
</tr>
<tr>
<td>BUS 1100</td>
<td>Introduction to Business</td>
<td>4</td>
</tr>
<tr>
<td>BUS 1210</td>
<td>Small Business Basics</td>
<td>3</td>
</tr>
<tr>
<td>BUS 2530</td>
<td>Management</td>
<td>3</td>
</tr>
<tr>
<td>CIS 1050</td>
<td>Personal Computer Productivity Tools</td>
<td>4</td>
</tr>
<tr>
<td>COM 1290</td>
<td>Interpersonal Communication</td>
<td>3</td>
</tr>
<tr>
<td>COM 1600</td>
<td>Fundamentals of Speech</td>
<td>3</td>
</tr>
<tr>
<td>ENG 2650</td>
<td>Children’s Literature</td>
<td>3</td>
</tr>
<tr>
<td>PER 2540</td>
<td>Medical First Responder/First Responder</td>
<td>4</td>
</tr>
<tr>
<td>POL 1510</td>
<td>American Government</td>
<td>3</td>
</tr>
<tr>
<td>SLI 1000</td>
<td>American Sign Language (ASL) I</td>
<td>3</td>
</tr>
<tr>
<td>SOC 2510</td>
<td>Sociology</td>
<td>3</td>
</tr>
<tr>
<td>SOC 2530</td>
<td>Racial and Ethnic Group Relations</td>
<td>3</td>
</tr>
<tr>
<td>SOC 2570</td>
<td>Marriage and Family in Modern Society</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credit Hours for Program-Related Courses 48

General Education Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication / English (3-credits)</td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

Satisfied

Fine Arts / Humanities (3-credits) 3

See suggested electives of SLS-1000 or ENG-2560 or complete 3 credits from Fine Arts / Humanities courses listed in the General Education Distribution List (p. 8)

Mathematics / Science (3-credits) 3

Complete 3 credits from Mathematics/Science courses listed in the General Education Distribution List (p. 9)

Social Science (3-credits) 3

Satisfied

Written Communication (3-credits) 3

Satisfied

Additional elective credits needed to meet requirements for an Associate in Applied Science degree 6

Total Credit Hours 60

1 Course may be used to meet General Education requirements.

A minimum cumulative 2.00 grade point average (GPA) overall is required for graduation.

Emergency Medical Services

The Emergency Medical Services Program (EMS) leads to one of two levels of certificates or an Associate in Applied Science in Emergency Medical Services.

These programs are directed toward individuals engaged in the delivery of pre-hospital emergency medical care and to prepare the student to pass the National Registry certification written and practical exams at the EMT and Paramedic levels. Lecture, classroom demonstrations, skills practice, case studies, and actual hands on experience based on State and National standards provide the basis for the instruction. The program will provide a thorough presentation of the role of the Emergency Medical Technician.
or Paramedic, and stresses the recognition of abnormal conditions through analysis of assessment findings and appropriate management for patients with illness or injury at the scene or during transport to a medical facility. The EMS program has options available to meet the student’s individual needs for a career in the Emergency Medical Services field or in the municipal fire service.

Students must first be admitted to the college and designate Emergency Medical Services (EMS.APP) as their program code. Admission to the college does not automatically include admission to the EMS Program. Additionally, all students must attend an EMS orientation session and will then be given the information needed to enroll in the EMS program.

**EMS Program Admission Requirements**

1. Acceptance by the college through OCC application completion
2. High school graduation, GED, or EMS Program Director approval
3. Have accessibility to internet service and printing capabilities
4. Attend an Emergency Medical Services orientation session, fill out an application to the EMS program, and pass a criminal background investigation and drug test.
5. Be at least 18 years of age by completion date for EMT certification or obtain EMS Program Director approval
6. Must be free of any handicaps or disabilities that could affect his/her ability to deliver prompt and efficient care to the sick and injured
7. Provide all required documentation to the EMS Program Director of good physical and mental health signed by a physician, and all other forms and waivers associated with the program.
8. EMS courses have a prerequisite of placement into ENG 1510 or successful completion of ENG 1510 with a GPA of a ‘C’ (2.0) or better.

**Paramedic Program Requirements**

- Have attended and successfully passed an accredited EMT program.
- Students who possess a valid Michigan EMT license and/or initial or current National Registry certification may be granted credit for EMS 1010, EMS 1020, and EMS 1100 by providing a notarized copy of either of these documents or bringing the originals to the EMS office so copies may be sent to the Registrar with the EMS Program Director’s signature.

All provisions of the program will be explained at the orientation session prior to enrollment in the program. In addition to tuition, Emergency Medical Services students incur extra costs such as health examinations, inoculations, uniforms, supplies, and National Registry and licensure applications.

A criminal history check and drug screen are required for all students entering the program. Exclusionary factors will include

1. Conviction of a felony or conviction of an attempt to commit a felony within the last 15 years immediately preceding the date of the criminal history check; or
2. Conviction of a misdemeanor involving abuse, neglect, assault, battery, or criminal sexual conduct, or involving fraud or theft against a vulnerable adult, within 10 years immediately preceding the criminal history check.

For additional information, please contact the EMS Department at (248) 232-4232.

**Degree**

- Emergency Medical Services (EMS.APP) (p. 48)

**Certificate**

- Emergency Medical Services - Paramedic (EMS.PAR.CT) (p. 49)

**Certificate of Achievement**

- Emergency Medical Services - EMT (EMS.EMT.CA) (p. 49)

**Emergency Medical Services (EMS.APP)**

**Associate in Applied Science**

**Human Services**

Auburn Hills Campus

Program Plan Example - Click Here (https://www.oaklandcc.edu/programs/plans/ems.aas.pdf)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMS 1010</td>
<td>EMT I</td>
<td>5</td>
</tr>
<tr>
<td>EMS 1020</td>
<td>EMT II</td>
<td>5</td>
</tr>
<tr>
<td>EMS 1100</td>
<td>Basic EMT Clinical</td>
<td>1</td>
</tr>
<tr>
<td>EMS 1200</td>
<td>Rescue and Extrication</td>
<td>1</td>
</tr>
<tr>
<td>EMS 2001</td>
<td>Basic Skills Competencies for Paramedic</td>
<td>1</td>
</tr>
<tr>
<td>EMS 2005</td>
<td>Paramedic I Clinical</td>
<td>3</td>
</tr>
<tr>
<td>EMS 2010</td>
<td>EMS Communications</td>
<td>2</td>
</tr>
<tr>
<td>EMS 2020</td>
<td>Paramedic I Lecture</td>
<td>4</td>
</tr>
<tr>
<td>EMS 2025</td>
<td>Paramedic I Lab</td>
<td>1</td>
</tr>
<tr>
<td>EMS 2100</td>
<td>Paramedic II Clinical</td>
<td>4</td>
</tr>
<tr>
<td>EMS 2220</td>
<td>Paramedic II Lecture</td>
<td>4</td>
</tr>
<tr>
<td>EMS 2225</td>
<td>Paramedic II Lab</td>
<td>1</td>
</tr>
<tr>
<td>EMS 2320</td>
<td>Paramedic III Lecture</td>
<td>4</td>
</tr>
<tr>
<td>EMS 2325</td>
<td>Paramedic III Lab</td>
<td>1</td>
</tr>
<tr>
<td>EMS 2450</td>
<td>Paramedic Internship</td>
<td>2</td>
</tr>
<tr>
<td>EMS 2600</td>
<td>National Registry Paramedic Exam Prep</td>
<td>2</td>
</tr>
</tbody>
</table>

**Required Supportive Courses**

Courses must be completed with a ‘C’ or better.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 2660</td>
<td>Pathophysiology</td>
<td>3</td>
</tr>
<tr>
<td>ENG 1510</td>
<td>Composition I</td>
<td>3</td>
</tr>
</tbody>
</table>

Complete one of the following BIO options:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 1650</td>
<td>Human Anatomy and Physiology for the Emergency Medical Services Program</td>
<td>5</td>
</tr>
<tr>
<td>or</td>
<td></td>
<td>8</td>
</tr>
<tr>
<td>BIO 2630 &amp; BIO 2640</td>
<td>Human Anatomy and Physiology I and Human Anatomy and Physiology II</td>
<td>8</td>
</tr>
</tbody>
</table>

**Total Credit Hours for Program-Related Courses** 52-55

**General Education Requirements**

Communication / English (3-credits)
Emergency Medical Services - Paramedic (EMS.PAR.CT)

Certificate

Human Services

Auburn Hills Campus

This program is designed for individuals who desire employment on paramedic ambulances, fire department ALS units, or hospital emergency rooms requiring paramedic skills. Students must be accepted into the Paramedic Program and successfully complete all required coursework. Those students who successfully complete the program are eligible to take the National Registry Paramedic certification exam and then apply for a Michigan Paramedic License.

Program Plan Example - Click Here (https://www.oaklandcc.edu/programs/plans/ems.par.ct.pdf)

Gainful Employment Disclosure - Click Here (https://www.oaklandcc.edu/ged/docs/EMS.PAR.CT.pdf)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMS 1010</td>
<td>EMT I</td>
<td>5</td>
</tr>
<tr>
<td>EMS 1020</td>
<td>EMT II</td>
<td>5</td>
</tr>
<tr>
<td>EMS 1100</td>
<td>Basic EMT Clinical</td>
<td>1</td>
</tr>
<tr>
<td>EMS 1200</td>
<td>Rescue and Extrication</td>
<td>1</td>
</tr>
<tr>
<td>EMS 2001</td>
<td>Basic Skills Competencies for Paramedic</td>
<td>1</td>
</tr>
<tr>
<td>EMS 2005</td>
<td>Paramedic I Clinical</td>
<td>3</td>
</tr>
<tr>
<td>EMS 2010</td>
<td>EMS Communications</td>
<td>2</td>
</tr>
<tr>
<td>EMS 2020</td>
<td>Paramedic I Lecture</td>
<td>4</td>
</tr>
<tr>
<td>EMS 2025</td>
<td>Paramedic I Lab</td>
<td>1</td>
</tr>
<tr>
<td>EMS 2100</td>
<td>Paramedic II Clinical</td>
<td>4</td>
</tr>
<tr>
<td>EMS 2220</td>
<td>Paramedic II Lecture</td>
<td>4</td>
</tr>
</tbody>
</table>

Total Credit Hours 64-67

1. Or state extrication certificate.

A minimum cumulative 2.00 grade point average (GPA) overall is required for graduation.

Emergency Medical Services - EMT (EMS.EMT.CA)

Certificate of Achievement

Human Services

Auburn Hills Campus

This program is designed for persons directly involved or intending to become involved in Emergency Care Services (e.g., ambulance employees, fire department Emergency Medical Technicians (EMTs)). It is limited to students who have been accepted into the EMS Program and will certify them in Cardiopulmonary Resuscitation, Hazardous Materials Awareness and Extrication. Successful completion will enable the student to take the National Registry Examination to qualify for state licensing as an EMT. Interested students must attend an EMS orientation session, fill out an application for admission to the program, and pass a criminal background investigation and drug test.

Program Plan Example - Click Here (https://www.oaklandcc.edu/programs/plans/ems.emt.ca.pdf)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMS 1010</td>
<td>EMT I</td>
<td>5</td>
</tr>
<tr>
<td>EMS 1020</td>
<td>EMT II</td>
<td>5</td>
</tr>
<tr>
<td>EMS 1100</td>
<td>Basic EMT Clinical</td>
<td>1</td>
</tr>
<tr>
<td>EMS 1200</td>
<td>Rescue and Extrication</td>
<td>1</td>
</tr>
<tr>
<td>EMS 2001</td>
<td>Basic Skills Competencies for Paramedic</td>
<td>1</td>
</tr>
<tr>
<td>EMS 2005</td>
<td>Paramedic I Clinical</td>
<td>3</td>
</tr>
<tr>
<td>EMS 2010</td>
<td>EMS Communications</td>
<td>2</td>
</tr>
<tr>
<td>EMS 2020</td>
<td>Paramedic I Lecture</td>
<td>4</td>
</tr>
<tr>
<td>EMS 2025</td>
<td>Paramedic I Lab</td>
<td>1</td>
</tr>
<tr>
<td>EMS 2100</td>
<td>Paramedic II Clinical</td>
<td>4</td>
</tr>
<tr>
<td>EMS 2220</td>
<td>Paramedic II Lecture</td>
<td>4</td>
</tr>
</tbody>
</table>

Total Credit Hours 12

1. Or State Extrication certificate.

A minimum cumulative 2.00 grade point average (GPA) overall is required for graduation.

Fine Arts/Visual
Degrees

- Fine Arts/Visual - Concentration in the Arts Degree (FAV.AA) (p. 50)

Associate in Arts with a Concentration in Fine Arts/Visual (FAV.AA)

Associate in Arts

Arts and Communication

This associate degree provides the student with directed experience in a variety of art media and philosophies from which the student will produce a portfolio of work designed to assist in obtaining an art related job and/or provide the basic art foundation that will allow the student to proceed to a four-year institution with a maximum of transferable credits. Art related careers exist in business and industry, such as assisting in display, creating sets, props, backgrounds, models, special effects for movies, television and theater. Activities in the area of self-employment include merchandising one's own work in jewelry, sculpture, painting, and ceramics, preparing work for sale in juried exhibitions, one person exhibitions, art fairs and galleries. The program provides generalized experiences to assist the student to specialize if they so desire.

Graduating from this program qualifies the student for the Michigan Transfer Agreement (MTA) endorsement. Students should work closely with an OCC counselor to identify courses from the MTA List which apply to the endorsement and to select courses that will satisfy the intake requirements of the intended transfer institution.

All courses that satisfy MTA requirements must be completed with a grade of 'C' (2.0) or higher. All courses comprising the 62 credits required for the degree must be completed with a cumulative GPA of 2.0 or higher.

Because transferability of credits varies with colleges and universities, programs, and departmental majors, students are urged to discuss their program plans with an OCC counselor and an advisor at the intended transfer institution.

Program Plan Example - Click Here (https://www.oaklandcc.edu/programs/plans/fav.aa.pdf)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>General Requirements</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>English Composition</strong></td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Complete one course from the English Composition Michigan Transfer Agreement Distribution list. This course must be completed with a grade of 'C' (2.0) or higher. (p. 7)</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Communications</strong></td>
<td>3-4</td>
</tr>
<tr>
<td></td>
<td>Complete one course from the Communications Michigan Transfer Agreement Distribution list. This course must be completed with a grade of 'C' (2.0) or higher. (p. 7)</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Fine Arts / Humanities</strong></td>
<td>3-5</td>
</tr>
<tr>
<td></td>
<td>Complete one non-ART courses from the Fine Arts/ Humanities Michigan Transfer Agreement Distribution list. Must be completed with a grade of 'C' (2.0) or higher. (p. 7)</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Mathematics</strong></td>
<td>3-4</td>
</tr>
<tr>
<td></td>
<td>Complete one course from the Mathematics Michigan Transfer Agreement Distribution list. This course must be completed with a grade of 'C' (2.0) or higher. (p. 7)</td>
<td></td>
</tr>
</tbody>
</table>

Complete one course from the Natural Sciences Michigan Transfer Agreement Distribution list. These courses must be taken in more than one academic discipline and must be completed with a grade of 'C' (2.0) or higher. (p. 7)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 1510</td>
<td>Basic Drawing</td>
<td>3</td>
</tr>
<tr>
<td>ART 1520</td>
<td>Basic Design</td>
<td>3</td>
</tr>
<tr>
<td>ART 1560</td>
<td>Art Appreciation</td>
<td>3</td>
</tr>
<tr>
<td>ART 2510</td>
<td>Fundamentals of Figure Drawing</td>
<td>3</td>
</tr>
<tr>
<td>ART 2520</td>
<td>Advanced Drawing</td>
<td>3</td>
</tr>
<tr>
<td>ART 2570</td>
<td>Advanced Design</td>
<td>3</td>
</tr>
<tr>
<td>ART 2600</td>
<td>American Art</td>
<td>3</td>
</tr>
</tbody>
</table>

**Required Specialty Courses**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 1530</td>
<td>Acrylic Painting</td>
<td>3</td>
</tr>
<tr>
<td>ART 1540</td>
<td>Introduction to Ceramics</td>
<td>3</td>
</tr>
<tr>
<td>ART 1550</td>
<td>Sculpture</td>
<td>3</td>
</tr>
<tr>
<td>ART 1570</td>
<td>Oil Painting</td>
<td>3</td>
</tr>
<tr>
<td>ART 1600</td>
<td>Watercolor Painting</td>
<td>3</td>
</tr>
<tr>
<td>ART 1610</td>
<td>Jewelry</td>
<td>3</td>
</tr>
<tr>
<td>ART 1611</td>
<td>Advanced Jewelry</td>
<td>3</td>
</tr>
<tr>
<td>ART 2110</td>
<td>Wheel Throwing I: Introduction to the Potter's Wheel</td>
<td>3</td>
</tr>
<tr>
<td>ART 2120</td>
<td>Wheel Throwing II</td>
<td>3</td>
</tr>
<tr>
<td>ART 2130</td>
<td>Wheel Throwing III</td>
<td>3</td>
</tr>
<tr>
<td>ART 2140</td>
<td>Wheel Throwing IV</td>
<td>3</td>
</tr>
<tr>
<td>ART 2240</td>
<td>Ceramics: Intermediate Hand-Building</td>
<td>3</td>
</tr>
<tr>
<td>ART 2250</td>
<td>Ceramics: Advanced Hand-Building</td>
<td>3</td>
</tr>
<tr>
<td>ART 2260</td>
<td>Ceramic Field Study</td>
<td>3</td>
</tr>
<tr>
<td>ART 2270</td>
<td>Ceramics: Glaze Formulation</td>
<td>3</td>
</tr>
<tr>
<td>ART 2550</td>
<td>Advanced Sculpture</td>
<td>3</td>
</tr>
<tr>
<td>ART 2600</td>
<td>American Art</td>
<td>3</td>
</tr>
<tr>
<td>ART 2630</td>
<td>Advanced Oil Painting</td>
<td>3</td>
</tr>
<tr>
<td>ART 2640</td>
<td>Advanced Watercolor Painting</td>
<td>3</td>
</tr>
<tr>
<td>ART 2702</td>
<td>Sculpture Welding</td>
<td>3</td>
</tr>
<tr>
<td>ART 2704</td>
<td>Sculpture Casting</td>
<td>3</td>
</tr>
<tr>
<td>ART 2710</td>
<td>Advanced Figure Drawing</td>
<td>3</td>
</tr>
</tbody>
</table>

Complete two courses from the Social Sciences Michigan Transfer Agreement Distribution list. These courses must be taken in more than one academic discipline and must be completed with a grade of 'C' (2.0) or higher. (p. 7)

**Required Elective Courses**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHO 1220</td>
<td>Fundamentals of Photography</td>
<td>3</td>
</tr>
</tbody>
</table>

Complete 6 additional credits from the following ART courses:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 1590</td>
<td>Acrylic Painting</td>
<td>3</td>
</tr>
<tr>
<td>ART 1600</td>
<td>Ceramics: Intermediate Hand-Building</td>
<td>3</td>
</tr>
<tr>
<td>ART 1610</td>
<td>Advanced Sculpture</td>
<td>3</td>
</tr>
<tr>
<td>ART 1611</td>
<td>Advanced Jewelry</td>
<td>3</td>
</tr>
<tr>
<td>ART 2110</td>
<td>Wheel Throwing I: Introduction to the Potter's Wheel</td>
<td>3</td>
</tr>
<tr>
<td>ART 2120</td>
<td>Wheel Throwing II</td>
<td>3</td>
</tr>
<tr>
<td>ART 2130</td>
<td>Wheel Throwing III</td>
<td>3</td>
</tr>
<tr>
<td>ART 2140</td>
<td>Wheel Throwing IV</td>
<td>3</td>
</tr>
<tr>
<td>ART 2240</td>
<td>Ceramics: Intermediate Hand-Building</td>
<td>3</td>
</tr>
<tr>
<td>ART 2250</td>
<td>Ceramics: Advanced Hand-Building</td>
<td>3</td>
</tr>
<tr>
<td>ART 2260</td>
<td>Ceramic Field Study</td>
<td>3</td>
</tr>
<tr>
<td>ART 2270</td>
<td>Ceramics: Glaze Formulation</td>
<td>3</td>
</tr>
<tr>
<td>ART 2550</td>
<td>Advanced Sculpture</td>
<td>3</td>
</tr>
<tr>
<td>ART 2600</td>
<td>American Art</td>
<td>3</td>
</tr>
<tr>
<td>ART 2630</td>
<td>Advanced Oil Painting</td>
<td>3</td>
</tr>
<tr>
<td>ART 2640</td>
<td>Advanced Watercolor Painting</td>
<td>3</td>
</tr>
<tr>
<td>ART 2702</td>
<td>Sculpture Welding</td>
<td>3</td>
</tr>
<tr>
<td>ART 2704</td>
<td>Sculpture Casting</td>
<td>3</td>
</tr>
<tr>
<td>ART 2710</td>
<td>Advanced Figure Drawing</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total Credit Hours for Program-Related Courses**

55-63

Additional elective credits needed to meet requirements for an Associate in Arts degree. Must be completed from courses numbered 1000 - 2999

0-7

Total Credit Hours

62-63
Course may be used to meet MTA Fine Arts/Humanities requirement if completed with a grade of 'C' (2.0) or higher.

A minimum cumulative 2.00 grade point average (GPA) overall is required for graduation.

**Fire Fighter Technology**

**Degree**
- Fire Fighter Technology (FFT.AAS) (p. 51)

**Certificate of Achievement**
- Fire Fighter Technology - Fire Academy (FFT.CA) (p. 51)

**Fire Fighter Technology (FFT.AAS)**

**Associate in Applied Science**

**Human Services**
Auburn Hills Campus

This program leads to an associate in applied science degree that gives the student an educational background for employment in the fire science area and aids persons already employed to obtain credentials for promotional opportunities. Students who satisfactorily complete the program will exhibit competency in fire safety, building construction, fire administration, hydraulics, legal issues in the fire service, and the modern threats and integration of homeland security considerations.

Students who have successfully completed their State of Michigan Firefighter I and II Certifications will be granted credit for FFT 1510, FFT 1520, FFT 1540, EMS 1200, and PER 1590.

**Program Webpage** - Click Here (https://www.oaklandcc.edu/programs/fft/default.aspx)

**Program Plan Example** - Click Here (https://www.oaklandcc.edu/programs/plans/fft.aas.pdf)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRJ 1400</td>
<td>Introduction to Homeland Security</td>
<td>3</td>
</tr>
<tr>
<td>CRJ 1402</td>
<td>Homeland Security and First Responders</td>
<td>3</td>
</tr>
<tr>
<td>CRJ 1405</td>
<td>Integrating Emergency Management and</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Homeland Security</td>
<td></td>
</tr>
<tr>
<td>FFT 1510</td>
<td>Introduction to Fire Protection</td>
<td>3</td>
</tr>
<tr>
<td>FFT 1520</td>
<td>Fundamentals of Fire Prevention</td>
<td>3</td>
</tr>
<tr>
<td>FFT 2510</td>
<td>Fire Service Hydraulics and Water Supply</td>
<td>3</td>
</tr>
<tr>
<td>FFT 2520</td>
<td>Fire Service Administration</td>
<td>3</td>
</tr>
<tr>
<td>FFT 2530</td>
<td>Building Construction for Fire Service</td>
<td>3</td>
</tr>
<tr>
<td>FFT 2540</td>
<td>Fire Fighting Tactics and Strategy</td>
<td>3</td>
</tr>
<tr>
<td>FFT 2560</td>
<td>Legal Considerations for the Fire Service</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Complete one of the following options:</td>
<td>4-11</td>
</tr>
<tr>
<td>PER 2540</td>
<td>Medical First Responder/First Responder</td>
<td>4</td>
</tr>
</tbody>
</table>

**Required Supportive Courses**

Complete a minimum of 8 credits from the following:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRJ 1401</td>
<td>School Safety and Homeland Security</td>
<td>3</td>
</tr>
<tr>
<td>CRJ 1403</td>
<td>Introduction to Intelligence for Homeland Security</td>
<td>3</td>
</tr>
<tr>
<td>CRJ 1406</td>
<td>International Strategies in Homeland Security</td>
<td>3</td>
</tr>
<tr>
<td>FFT 1530</td>
<td>Fire Arson Investigation</td>
<td>3</td>
</tr>
<tr>
<td>FFT 1540</td>
<td>Hazardous Materials</td>
<td>3</td>
</tr>
<tr>
<td>FFT 1550</td>
<td>Fire Protection Systems and Equipment</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total Credit Hours for Program-Related Courses** 42-49

**General Education Requirements**

**Communication / English (3-credits)**

Complete 3 credits from Communication/English courses listed in the General Education Distribution List (p. 8)

**Fine Arts / Humanities (3-credits)**

Complete 3 credits from Fine Arts/Humanities courses listed in the General Education Distribution List (p. 8)

**Mathematics / Science (3-credits)**

Complete 3 credits from Mathematics/Science courses listed in the General Education Distribution List (p. 9)

**Social Science (3-credits)**

Complete 3 credits from Social Science courses listed in the General Education Distribution List (p. 10)

**Written Communication (3-credits)**

Complete 3 credits from Written Communication courses listed in the General Education Distribution List (p. 10)

**Additional elective credits needed to meet requirements for an Associate in Applied Science degree** 0-5

**Total Credit Hours** 62-64

A minimum cumulative 2.00 grade point average (GPA) overall is required for graduation.

**Fire Fighter Technology - Fire Academy (FFT.CA)**

**Certificate of Achievement**

**Human Services**
Auburn Hills Campus

This option is restricted for individuals who have successfully completed the Firefighter I and II Academy and have met the Fire Fighter certification requirements from the State of Michigan.

**Program Webpage** - Click Here (https://www.oaklandcc.edu/programs/fft/default.aspx)

**Program Plan Example** - Click Here (https://www.oaklandcc.edu/programs/plans/fft.ca.pdf)
A minimum cumulative 2.00 grade point average (GPA) is required for graduation.

**General Studies**

### Associate Degree Requirements (GEN.AGS)

The Associate in General Studies degree is designed for students choosing to pursue widely varying areas of interests.

The degree is not designed for career students, nor is it designed to meet the four-year transfer college requirements of the Michigan Transfer Agreement.

Flexibility is provided so that the required 60 credit hours can be met as individually appropriate.

Because transferability of credits varies with colleges and universities, programs and departmental majors, students are urged to discuss their program with an OCC counselor and transfer institution.

### Courses That Satisfy Associate in General Studies Degree Requirements

Candidates for the Associate in General Studies degree must satisfy the requirements for an associate degree (p. 21) as well as the specific minimum requirements:

**Program Plan Example** - Click Here (https://www.oaklandcc.edu/programs/plans/gen.ags.pdf)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>FFT 1510</td>
<td>Introduction to Fire Protection</td>
<td>3</td>
</tr>
<tr>
<td>FFT 1520</td>
<td>Fundamentals of Fire Prevention</td>
<td>3</td>
</tr>
<tr>
<td>FFT 1540</td>
<td>Hazardous Materials</td>
<td>3</td>
</tr>
<tr>
<td>EMS 1200</td>
<td>Rescue and Extrication</td>
<td>1</td>
</tr>
<tr>
<td>PER 1590</td>
<td>Physical Well-Being in a Modern Society</td>
<td>2</td>
</tr>
</tbody>
</table>

**Total Credit Hours** 12

Mathematics/Natural Science

Complete any MAT course

American Government

Complete 3 credits from BIO, CHE, FSN, GSC, PHY, PSC

Social Science

Complete 3 credits from Social Science courses listed in the General Education Distribution list, or any other courses with the same prefix (except POL 1510) (p. 10)

**Physical Education**

Complete 1 credit from the courses listed below:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PER 1300</td>
<td>Stress Management: Neuromuscular Relaxation</td>
<td>2</td>
</tr>
<tr>
<td>PER 1590</td>
<td>Physical Well-Being in a Modern Society</td>
<td>2</td>
</tr>
<tr>
<td>PER 1620</td>
<td>Basketball</td>
<td>1</td>
</tr>
<tr>
<td>PER 1653</td>
<td>Dance - Modern</td>
<td>1</td>
</tr>
<tr>
<td>PER 1681</td>
<td>Golf - Beginning</td>
<td>1</td>
</tr>
<tr>
<td>PER 1740</td>
<td>Physical Fitness</td>
<td>1</td>
</tr>
<tr>
<td>PER 1741</td>
<td>Jogging</td>
<td>1</td>
</tr>
<tr>
<td>PER 1742</td>
<td>Aerobic Dance</td>
<td>1</td>
</tr>
<tr>
<td>PER 1746</td>
<td>Step Aerobics</td>
<td>1</td>
</tr>
<tr>
<td>PER 1748</td>
<td>Group Exercise</td>
<td>1</td>
</tr>
<tr>
<td>PER 1790</td>
<td>Self Defense</td>
<td>1</td>
</tr>
<tr>
<td>PER 1841</td>
<td>Tennis Beginning</td>
<td>1</td>
</tr>
<tr>
<td>PER 1862</td>
<td>Volleyball Co-Ed</td>
<td>1</td>
</tr>
<tr>
<td>PER 1880</td>
<td>Yoga</td>
<td>1</td>
</tr>
<tr>
<td>PER 1890</td>
<td>Bowling</td>
<td>1</td>
</tr>
<tr>
<td>PER 1920</td>
<td>Racquetball</td>
<td>1</td>
</tr>
<tr>
<td>PER 1930</td>
<td>Walleyball</td>
<td>1</td>
</tr>
<tr>
<td>PER 2610</td>
<td>Physical Fitness/Defense Tactics</td>
<td>3</td>
</tr>
</tbody>
</table>

Written Communication

Complete 3 credits from Written Communication courses listed in the General Education Distribution list. The course used to meet this requirement is in addition to the course used for the Communication/English Distribution requirement. (p. 10)

**Total Credit Hours for Program-Related Courses** 26

Additional elective credits needed to meet requirements for an Associate in General Studies degree.

**Total Credit Hours** 60

A minimum cumulative 2.00 grade point average (GPA) overall is required for graduation.

### Global Studies

#### Degrees

- Global Studies (GLS.AA) (p. 52)

### Global Studies (GLS.AA)

**Associate in Arts**

Arts and Communication
Global Studies Associate in Arts is an interdisciplinary program designed to provide a knowledge base for understanding and analyzing the political, economic, social, and cultural aspects of current world problems and issues. It also provides students with the basis for further study towards an undergraduate degree in international studies, international relations, and area studies, and careers in government, international organizations, journalism, international consulting, and community development.

Graduating from the Global Studies Program qualifies the student for the Michigan Transfer Agreement (MTA) endorsement. Students should work closely with an OCC counselor to identify courses from the MTA List, which apply to the endorsement, and to select courses that will satisfy the intake requirements of the intended transfer institution.

All courses that satisfy MTA requirements must be completed with a grade of ‘C’ (2.0) or higher. Courses taken for the GLE must be completed with a ‘C+’ or higher.

Because transferability of credits varies with colleges and universities, students are urged to discuss their program plans with an OCC counselor and the transfer institution.

Program Plan Example - Click Here (https://www.oaklandcc.edu/programs/plans/gls.aas.pdf)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANT 1540</td>
<td>Introduction to Cultural Anthropology</td>
<td>3</td>
</tr>
<tr>
<td>COM 2290</td>
<td>Intercultural Communication</td>
<td>3</td>
</tr>
<tr>
<td>GEO 1520</td>
<td>World Geography</td>
<td>3</td>
</tr>
<tr>
<td>GLS 2510</td>
<td>Introduction to Global Studies</td>
<td>3</td>
</tr>
<tr>
<td>GLS 2520</td>
<td>Global Issues and Challenges</td>
<td>3</td>
</tr>
</tbody>
</table>

Complete one of the following Foreign Language options:

- Option A: (if native speaker of English, 8 credits of the same Foreign Language)
- Option B (if non-native speaker of English, 8 credits of Advanced ESL classes):
  - ESL 2520 Writing and Reading for Academic Purposes IV 4
    and
  - ESL 2011 Advanced Oral Communication 4
    or ESL 2420 English Grammar and Listening Communication Skills IV 4

Complete one HIS and one POL course from the following:

- HIS 1510 World Civilizations to the Beginning of the Modern Era 4
  or
- HIS 1520 World Civilizations from the Modern Era (cannot be selected for Required Supportive Courses if HIS 1520 is chosen)
- HIS 1550 World Religions 3
- HUM 1710 World Religions 3
- MUS 1585 Listening to Music: World Music 3
- POL 2530 International Relations 3
  or
- POL 2610 Comparative World Politics 3
- SOC 2510 Sociology 3

Total Required Supportive Credits 9

English Composition 3

Complete one course from the English Composition Michigan Transfer Agreement Distribution list. For MTA, this course must be completed with a grade of ‘C’ (2.0) or higher.

Communications

Satisfied. For MTA, this course must be completed with a grade of ‘C’ (2.0) or higher.

Fine Arts / Humanities 2-4

May need to complete an additional course from Fine Arts/Humanities Michigan Transfer Agreement Distribution list, if foreign language option in Major Requirements does not meet MTA criteria. A non HIS course from Required Supportive may apply (see footnotes), this course must be completed with a grade of ‘C’ (2.0) or higher.

Mathematics 3-4

Complete one course from the Mathematics Michigan Transfer Agreement Distribution list. For MTA, this course must be completed with a grade of ‘C’ (2.0) or higher.

Natural Sciences 7-10

Complete two courses from the Natural Sciences Michigan Transfer Agreement Distribution list. These courses must be taken in more than one academic discipline, and at least one course must include a laboratory component. For MTA, these courses must be completed with a grade of ‘C’ (2.0) or higher.

Social Sciences 6

Satisfied. For MTA, these courses must be completed with a grade of ‘C’ (2.0) or higher.
Additional elective credits needed to meet requirements for an Associate in Arts degree. Courses must be numbered 1000 through 2999.

**Total Credit Hours** 60-66

1. Course may be used to meet MTA Fine Arts/Humanities requirement.
2. Course may be used to meet MTA Social Science requirement.
3. Course may be used to meet MTA Communication requirement.
4. Course may be used to meet MTA lab/science requirement.
5. Course may be used to meet either MTA Fine Arts/Humanities or Social Sciences requirement, but not both.
6. If taking HIS 1510 or HIS 1520, the first course will complete the major requirement, the second course will count toward the 9 credit hours of required supportive courses.
7. If taking both POL 2530 and POL 2610, the first course will complete the major requirement, the second course will count toward the 9 credit hours of required supportive courses.
8. Special Topics courses (BIO, CHI, HIS, HUM, PHI and POL) with an obvious global theme may be chosen with approval using the College Course Substitution Process.

A minimum cumulative 2.00 grade point average (GPA) overall is required for graduation.

### Topics in Global Studies

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>GLS 2900</td>
<td>Topics in Global Studies: Economic Crisis, Global Consequences</td>
<td>3</td>
</tr>
<tr>
<td>GLS 2901</td>
<td>Topics in Global Studies: The Global Politics of Food</td>
<td>3</td>
</tr>
<tr>
<td>GLS 2902</td>
<td>Topics in Global Studies: The Culture of Terrorism</td>
<td>3</td>
</tr>
<tr>
<td>GLS 2903</td>
<td>Topics in Global Studies: History of Science</td>
<td>3</td>
</tr>
<tr>
<td>GLS 2904</td>
<td>Topics in Global Studies</td>
<td>3</td>
</tr>
<tr>
<td>GLS 2905</td>
<td>Topics in Global Studies</td>
<td>3</td>
</tr>
<tr>
<td>GLS 2906</td>
<td>Topics in Global Studies</td>
<td>3</td>
</tr>
<tr>
<td>GLS 2907</td>
<td>Topics in Global Studies</td>
<td>3</td>
</tr>
<tr>
<td>GLS 2908</td>
<td>Topics in Global Studies</td>
<td>3</td>
</tr>
<tr>
<td>GLS 2909</td>
<td>Topics in Global Studies</td>
<td>3</td>
</tr>
<tr>
<td>GLS 2910</td>
<td>Topics in Global Studies: Revolutions &amp; Social Networking</td>
<td>3</td>
</tr>
</tbody>
</table>

### Graphic Design

#### Degrees

- Graphic Design (GRD.AAS) (p. 54)

### Graphic Design (GRD.AAS)

**Associate in Applied Science**

**Arts and Communication**

Orchard Ridge Campus

This program provides students with comprehensive instruction to gain the knowledge and skills to work as a graphic designer, art director or multi-media professional. Instruction begins with core design training of the elements of design such as color, values, balance, proportion, texture and the fundamentals of typography. Students will learn how to use design skills to create “real-world” projects such as trademarks, avatars, promotional materials, digital imagery and advertising campaigns. Software training is a critical component along with developing cognitive skills to assist in thinking conceptually. The overall goal is to provide students with the education that will assist them in creating a world-class portfolio.

**Program Plan Example** - Click Here (https://www.oaklandcc.edu/programs/plans/grd.aas.pdf)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>GRD 1100</td>
<td>Graphic Design</td>
<td>3</td>
</tr>
<tr>
<td>GRD 1120</td>
<td>Typography in Design</td>
<td>3</td>
</tr>
<tr>
<td>GRD 1160</td>
<td>Advertising Design</td>
<td>3</td>
</tr>
<tr>
<td>GRD 1210</td>
<td>Rendering Techniques</td>
<td>3</td>
</tr>
<tr>
<td>GRD 1310</td>
<td>Graphic Design User Interface</td>
<td>3</td>
</tr>
<tr>
<td>GRD 1320</td>
<td>Digital Typography</td>
<td>3</td>
</tr>
<tr>
<td>GRD 1450</td>
<td>Brand Identity Design</td>
<td>3</td>
</tr>
<tr>
<td>GRD 1750</td>
<td>Computer Design</td>
<td>4</td>
</tr>
<tr>
<td>GRD 1850</td>
<td>Digital Illustration</td>
<td>4</td>
</tr>
<tr>
<td>GRD 2100</td>
<td>Graphic Systems Design</td>
<td>3</td>
</tr>
<tr>
<td>GRD 2350</td>
<td>Graphic Design Strategies</td>
<td>3</td>
</tr>
<tr>
<td>GRD 2450</td>
<td>Portfolio Preparation</td>
<td>3</td>
</tr>
</tbody>
</table>

Complete ONE of the following Internship Courses: 1-4

- GRD 1401 Graphic Design Internship 1
- GRD 1402 Graphic Design Internship 2
- GRD 1403 Graphic Design Internship 3
- GRD 1404 Graphic Design Internship 4

**Required Supportive Courses**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 1510</td>
<td>Basic Drawing</td>
<td>3</td>
</tr>
<tr>
<td>PHO 1700</td>
<td>Beginning Digital Photography</td>
<td>4</td>
</tr>
</tbody>
</table>

Complete one of the following COM courses: 3

- COM 1290 Interpersonal Communication 3
- COM 1600 Fundamentals of Speech 3

Complete one of the following ENG courses: 3

- ENG 1350 Business Communications 3
- ENG 1510 Composition I 3

**Recommended Electives**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 1500</td>
<td>Accounting for the Small Business Owner</td>
<td>3</td>
</tr>
<tr>
<td>BUS 1210</td>
<td>Small Business Basics</td>
<td>3</td>
</tr>
<tr>
<td>GRD 2401</td>
<td>Advanced Design Projects (GRD 2401, GRD 2402, or GRD 2403)</td>
<td>1</td>
</tr>
<tr>
<td>GRD 2402</td>
<td>Advanced Design Projects</td>
<td>2</td>
</tr>
<tr>
<td>GRD 2403</td>
<td>Advanced Design Projects</td>
<td>3</td>
</tr>
<tr>
<td>MKT 2010</td>
<td>Advertising</td>
<td>3</td>
</tr>
<tr>
<td>PHO 1220</td>
<td>Fundamentals of Photography</td>
<td>3</td>
</tr>
</tbody>
</table>
Oakland Community College 2020-2021 Catalog

Total Credit Hours for Program-Related Courses 52-55

General Education Requirements

<table>
<thead>
<tr>
<th>Course Type</th>
<th>Credits</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication / English</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Fine Arts / Humanities</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics / Science</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Social Science</td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>

Complete 3 credits from Mathematics/Science courses listed in the General Education Distribution List (p. 9)

Write Communication (3-credits)

Satisfied

Additional elective credits needed to meet requirements for an Associate in Applied Science degree 1-4

Total Credit Hours 62

1 Or equivalent studio art course.

2 Course may be used to meet General Education requirements.

A minimum cumulative 2.00 grade point average (GPA) overall is required for graduation.

HVAC/R Systems Technology

Degree

- HVAC/R Systems Technology - Heating, Ventilation, Air Conditioning and Refrigeration Technician Option (HVA.HVT.AAS) (p. 55)

Certificates

- HVAC/R Systems Technology - Building Air and Water Balance/Retro-Commissioning (HVA.AWB.CT) (p. 56)
- HVAC/R Systems Technology - Heating (HVA.HVH.CT) (p. 56)
- HVAC/R Systems Technology - Air Conditioning (HVA.HVC.CT) (p. 56)
- HVAC/R Systems Technology - Refrigeration (HVA.HVR.CT) (p. 57)

Certificate of Achievement


Heating, Ventilation, Air Conditioning and Refrigeration Technician Option (HVA.HVT.AAS)

Associate in Applied Science

Engineering/Manufacturing and Industrial Technology

Auburn Hills Campus

This program leads to an Associate in Applied Science degree with specialization in Heating, Ventilation, Air Conditioning and Refrigeration.

The program is designed to qualify students for occupations and careers in air conditioning, heating and refrigeration, system designers, estimators, manufacturers' representatives, equipment fabricators, application technicians, salespeople, installation mechanics, service people, maintenance mechanics and many other related skilled and semi-skilled positions.

High school graduates who completed state-approved career and technical education (CTE) programs may be eligible to receive college credit for work completed while in high school. Detailed information can be obtained by contacting an OCC Counseling Office or by visiting www.oaklandcc.edu/articulation (http://www.oaklandcc.edu/articulation/).

Program Plan Example - Not Available

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>HVA 1114</td>
<td>Introduction to Refrigeration</td>
<td>4</td>
</tr>
<tr>
<td>HVA 1120</td>
<td>Sheet Metal Layout and Fabrication</td>
<td>3</td>
</tr>
<tr>
<td>HVA 1150</td>
<td>Basic Principles of HVACR Controls</td>
<td>4</td>
</tr>
<tr>
<td>HVA 1210</td>
<td>Domestic and Commercial Refrigeration</td>
<td>4</td>
</tr>
<tr>
<td>HVA 1220</td>
<td>Commercial Refrigeration II</td>
<td>3</td>
</tr>
<tr>
<td>HVA 1310</td>
<td>Heating, Ventilation, Air Conditioning and Refrigeration Design I</td>
<td>4</td>
</tr>
<tr>
<td>HVA 1430</td>
<td>Residential and Commercial Control Systems</td>
<td>4</td>
</tr>
<tr>
<td>HVA 1522</td>
<td>Refrigeration Code</td>
<td>2</td>
</tr>
<tr>
<td>HVA 1610</td>
<td>Heating Technology I</td>
<td>4</td>
</tr>
<tr>
<td>HVA 1630</td>
<td>Heating Technology II</td>
<td>3</td>
</tr>
<tr>
<td>HVA 1650</td>
<td>Troubleshooting Air Conditioning</td>
<td>2</td>
</tr>
<tr>
<td>HVA 1700</td>
<td>Heating Regulations</td>
<td>2</td>
</tr>
<tr>
<td>HVA 1800</td>
<td>Advanced Controls</td>
<td>3</td>
</tr>
<tr>
<td>HVA 1390</td>
<td>Heating, Ventilation, Air Conditioning and Refrigeration Design II</td>
<td>3</td>
</tr>
<tr>
<td>HVA 1390</td>
<td>Heating, Ventilation, Air Conditioning and Refrigeration Design II</td>
<td>3</td>
</tr>
<tr>
<td>HVA 2510</td>
<td>Direct Digital Controls</td>
<td>3</td>
</tr>
</tbody>
</table>

Required Supportive Courses

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>APP 2170</td>
<td>Applied Technology</td>
<td>4</td>
</tr>
</tbody>
</table>

Complete one of the following ENG courses:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 1350</td>
<td>Business Communications</td>
<td>3</td>
</tr>
<tr>
<td>ENG 1450</td>
<td>Writing and Reading for Problem Solving</td>
<td>3</td>
</tr>
</tbody>
</table>

Recommended Elective

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>HVA 1404</td>
<td>Cooperative Internship</td>
<td>4</td>
</tr>
</tbody>
</table>

Total Credit Hours for Program-Related Courses 52

<table>
<thead>
<tr>
<th>Course Type</th>
<th>Credits</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication / English</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Fine Arts / Humanities</td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>

May be satisfied with ENG-1450 or ENG-1510. This course will apply toward the Communication/English requirement or the Written Communication requirement, but not both. (p. 8)
Complete 3 credits from Fine Arts/Humanities courses listed in the General Education Distribution List (p. 8)

Mathematics / Science (3-credits)
Complete 3 credits from Mathematics/Science courses listed in the General Education Distribution List (p. 9)

Social Science (3-credits)
Complete 3 credits from Social Science courses listed in the General Education Distribution List (p. 10)

Written Communication (3-credits)

May be satisfied with ENG-1350, ENG-1450 or ENG-1510. ENG-1450 and ENG-1510 will apply toward the Communication/English requirement or the Written Communication requirement, but not both. (p. 10)

Total Credit Hours 64

1 Prospective transfer students should substitute PHY 1610.

2 Prospective transfer students should substitute ENG 1510.

3 Course may be used to meet General Education requirements.

A minimum cumulative 2.00 grade point average (GPA) overall is required for graduation.

HVAC/R Systems Technology - Building Air and Water Balance/Retro-Commissioning (HVA.AWB.CT)

Certificate
Engineering/Manufacturing and Industrial Technology
Auburn Hills Campus

This certificate is designed to introduce the student to a process that ensures new and existing buildings mechanical equipment operates as efficiently as possible. It will also provide background knowledge on commissioning of HVAC systems and equipment including a systematic approach to balancing the HVAC air and water flow systems.

Program Plan Example - Not Available

Gainful Employment Disclosure - Click Here (https://www.oaklandcc.edu/ged/docs/HVA.AWB.CT.pdf)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>APP 2170</td>
<td>Applied Technology</td>
<td>4</td>
</tr>
<tr>
<td>HVA 1114</td>
<td>Introduction to Refrigeration</td>
<td>4</td>
</tr>
<tr>
<td>HVA 1310</td>
<td>Heating, Ventilation, Air Conditioning and Refrigeration Design I</td>
<td>4</td>
</tr>
<tr>
<td>HVA 1390</td>
<td>Heating, Ventilation, Air Conditioning and Refrigeration Design II</td>
<td>3</td>
</tr>
<tr>
<td>HVA 1610</td>
<td>Heating Technology I</td>
<td>4</td>
</tr>
<tr>
<td>HVA 1800</td>
<td>Advanced Controls</td>
<td>3</td>
</tr>
<tr>
<td>HVA 2510</td>
<td>Direct Digital Controls</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credit Hours 25

HVAC/R Systems Technology - Heating (HVA.HVH.CT)

Certificate
Engineering/Manufacturing and Industrial Technology
Auburn Hills Campus

Recommended math proficiency at the level of MAT 1100.

A minimum cumulative 2.00 grade point average (GPA) overall is required for graduation.

HVAC/R Systems Technology - Air Conditioning (HVA.HVC.CT)

Certificate
Engineering/Manufacturing and Industrial Technology
Auburn Hills Campus

Gainful Employment Disclosure - Click Here (https://www.oaklandcc.edu/ged/docs/HVA.HVC.CT.pdf)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>HVA 1114</td>
<td>Introduction to Refrigeration</td>
<td>4</td>
</tr>
<tr>
<td>HVA 1120</td>
<td>Sheet Metal Layout and Fabrication</td>
<td>3</td>
</tr>
<tr>
<td>HVA 1150</td>
<td>Basic Principles of HVACR Controls</td>
<td>4</td>
</tr>
<tr>
<td>HVA 1430</td>
<td>Residential and Commercial Control Systems</td>
<td>4</td>
</tr>
<tr>
<td>HVA 1610</td>
<td>Heating Technology I</td>
<td>4</td>
</tr>
<tr>
<td>HVA 1630</td>
<td>Heating Technology II</td>
<td>3</td>
</tr>
<tr>
<td>HVA 1700</td>
<td>Heating Regulations</td>
<td>2</td>
</tr>
<tr>
<td>HVA 2400</td>
<td>Energy Management</td>
<td>4</td>
</tr>
</tbody>
</table>

Total Credit Hours 28

Recommended math proficiency at the level of MAT 1100.

A minimum cumulative 2.00 grade point average (GPA) overall is required for graduation.
HVAC/R Systems Technology - Refrigeration (HVA.HVR.CT)

Certificate

Engineering/Manufacturing and Industrial Technology

Auburn Hills Campus

Program Plan Example - Not Available

Gainful Employment Disclosure - Click Here (https://www.oaklandcc.edu/ged/docs/HVA.HVR.CT.pdf)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>HVA 1114</td>
<td>Introduction to Refrigeration</td>
<td>4</td>
</tr>
<tr>
<td>HVA 1150</td>
<td>Basic Principles of HVACR Controls</td>
<td>4</td>
</tr>
<tr>
<td>HVA 1210</td>
<td>Domestic and Commercial Refrigeration</td>
<td>4</td>
</tr>
<tr>
<td>HVA 1220</td>
<td>Commercial Refrigeration II</td>
<td>3</td>
</tr>
<tr>
<td>HVA 1430</td>
<td>Residential and Commercial Control Systems</td>
<td>4</td>
</tr>
<tr>
<td>HVA 1522</td>
<td>Refrigeration Code</td>
<td>2</td>
</tr>
<tr>
<td>HVA 1610</td>
<td>Heating Technology I</td>
<td>4</td>
</tr>
<tr>
<td>HVA 2400</td>
<td>Energy Management</td>
<td>4</td>
</tr>
<tr>
<td>Total Credit Hours</td>
<td></td>
<td>29</td>
</tr>
</tbody>
</table>

Recommended math proficiency at the level of MAT 1100.

A minimum cumulative 2.00 grade point average (GPA) overall is required for graduation.

Health Care Administration

Degrees

• Health Care Administration (HCA.AAS) (p. 57)

Certificates

• Health Care Administration (HCA.CT) (p. 58)

Health Care Administration (HCA.AAS)

Associate in Applied Science

Health Sciences

Southfield Campus

This program leading to an associate in applied science degree is designed to prepare students for a career in health care administration. This flexible program will enable students with health care experience to supplement previous experience and develop new skills necessary for upward mobility. Graduates of this program will be prepared as nursing home administrators, nursing home administrative personnel, department heads in hospitals and administrative personnel for public and private health facilities, including ambulatory clinics and assisted living facilities.

Courses in this program are also available to those individuals who are required to have continuing education credits in order to maintain their nursing home licensure. Courses prefixed HCA 1000 through 2300 are approved for continuing education credits. Students must complete HCA 1000 with a “C” or better or receive permission from the Program Coordinator to enroll in HCA 1110 through 2300.

The externship is individually arranged upon completion of the first 9 courses listed under “Major Requirements.” The number of hours required for this clinical experience is dependent upon previous supervisory experience in a health care facility and may range from 180 to 360 clock hours. The program coordinator makes arrangements with the students and the specific health care facility for this externship.

A mandatory criminal history check with fingerprinting and drug screening will be conducted in the semester immediately preceding the start of the externship courses, at the student's expense.
1. Conviction of a felony or conviction of any attempt to commit a felony within the 15 years immediately preceding the date of the criminal history check; or
2. Conviction of a misdemeanor within the 10 years immediately preceding the criminal history check, and/or a positive drug screen will preclude eligibility for enrollment in the externship course(s).

In addition to the regular tuition, Health Care Administration students incur extra costs including, but not limited to; liability insurance, health examination, uniforms, required vaccinations, travel and certification fees. For further details, contact the Health Care Administration Department at (248) 233-2917.

**Additional Program Requirements**

* All “Major Requirements” and “Required Supportive Courses” must be completed with a “C” or better.

**Program Plan Example** - Click Here (https://www.oaklandcc.edu/programs/plans/hca.aas.pdf)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>HCA 1000</td>
<td>Introduction to Health Care Administration</td>
<td>3</td>
</tr>
<tr>
<td>HCA 1110</td>
<td>Health Facility Maintenance and Sanitation</td>
<td>3</td>
</tr>
<tr>
<td>HCA 1210</td>
<td>Principles of Nursing Home Operations</td>
<td>3</td>
</tr>
<tr>
<td>HCA 1230</td>
<td>Patient Care and Auxiliary Relationships in Health Care Facilities</td>
<td>3</td>
</tr>
<tr>
<td>HCA 2100</td>
<td>Personnel Management in Health Care Facilities</td>
<td>3</td>
</tr>
<tr>
<td>HCA 2150</td>
<td>Labor Practices in Health Care Facilities</td>
<td>2</td>
</tr>
<tr>
<td>HCA 2200</td>
<td>Fiscal Management in Health Care Facilities</td>
<td>3</td>
</tr>
<tr>
<td>HCA 2250</td>
<td>Legal Aspects of Health Service Mgt</td>
<td>3</td>
</tr>
<tr>
<td>HCA 2300</td>
<td>Problems and Policies of Health Care Facilities</td>
<td>3</td>
</tr>
<tr>
<td>Complete one of the following Externship courses:</td>
<td>1-6</td>
<td></td>
</tr>
<tr>
<td>HCA 2401</td>
<td>HCA Externship</td>
<td>1</td>
</tr>
<tr>
<td>HCA 2402</td>
<td>HCA Externship</td>
<td>2</td>
</tr>
<tr>
<td>HCA 2403</td>
<td>HCA Externship</td>
<td>3</td>
</tr>
<tr>
<td>HCA 2404</td>
<td>HCA Externship</td>
<td>4</td>
</tr>
<tr>
<td>HCA 2405</td>
<td>HCA Externship</td>
<td>5</td>
</tr>
<tr>
<td>HCA 2406</td>
<td>HCA Externship</td>
<td>6</td>
</tr>
</tbody>
</table>

**Required Supportive Courses**

- BIO 1600 Human Structure and Function - 3
- BUS 1100 Introduction to Business - 4
- BUS 1310 Supervision - 3
- BUS 2530 Management - 3
- ENG 1510 \(^1\) Composition I - 3
- MDA 1103 Medical Terminology - 3
- PSY 2510 \(^1\) Introduction to Psychology - 3
- SOC 2550 Sociology of the Aging - 3
- PSY 2630 \(^1\) Psychology of Organizational Behavior - 3 or BUS 2700 Business and Labor Relations - 3

**Recommended Electives**

- CIS 1000 Computer Literacy - 1

**General Education Requirements**

- Communication / English (3-credits)

**Total Credit Hours for Program-Related Courses**

55-60

**Health Care Administration (HCA.CT)**

**Certificate**

**Health Sciences**

**Southfield Campus**

The certificate program is designed to prepare students for a career in health care administration. This flexible program will enable students with health care experience to supplement previous experience and develop new skills necessary for upward mobility. Graduates of this program will be prepared as nursing home administrators, nursing home administrative personnel, department heads in hospitals and administrative personnel for public and private health facilities, including ambulatory clinics and assisted living facilities.

Courses in this program are also available to those individuals who are required to have continuing education credits in order to maintain their nursing home license. Courses prefixed HCA 1000 through 2300 are approved for continuing education credits. However, students must complete HCA 1000 with a “C” or better, ENG 1510, ENG 1520 or ENG 2200 with a “C” or better and/or receive consent of Program Coordinator/designee to enroll in HCA 1110 through 2300. The externship is individually arranged upon completion of the first 9 courses listed under “Major Requirements.” The number of hours required for this clinical experience is dependent upon previous supervisory experience in a health care facility and may range from 180 to 360 clock hours. The program coordinator makes arrangements with the students and the specific health care facility for this externship.

A mandatory criminal history check with fingerprinting and drug screening will be conducted in the semester immediately preceding the start of the externship courses, at the student’s expense.

1. Conviction of a felony or conviction of any attempt to commit a felony within the 15 years immediately preceding the date of the criminal history check; or
2. Conviction of a misdemeanor within the 10 years immediately preceding the criminal history check, and/or a positive drug screen will preclude eligibility for enrollment in the externship course(s).
In addition to the regular tuition, Health Care Administration students incur extra costs including, but not limited to: liability insurance, health examination, uniforms, required vaccinations, travel and certification fees. For further details, contact the Health Care Administration Department at (248) 233-2917.

**Additional Program Requirements**

- All “Major Requirements” and “Required Supportive Courses” must be completed with a “C” or better.

**Program Plan Example** - Click Here (https://www.oaklandcc.edu/programs/plans/hca.ct.pdf)

**Gainful Employment Disclosure** - Click Here (https://www.oaklandcc.edu/ged/docs/HCA.CT.pdf)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>HCA 1000</td>
<td>Introduction to Health Care Administration</td>
<td>3</td>
</tr>
<tr>
<td>HCA 1110</td>
<td>Health Facility Maintenance and Sanitation</td>
<td>3</td>
</tr>
<tr>
<td>HCA 1210</td>
<td>Principles of Nursing Home Operations</td>
<td>3</td>
</tr>
<tr>
<td>HCA 1230</td>
<td>Patient Care and Auxiliary Relationships in Health Care Facilities</td>
<td>3</td>
</tr>
<tr>
<td>HCA 2100</td>
<td>Personnel Management in Health Care Facilities</td>
<td>3</td>
</tr>
<tr>
<td>HCA 2150</td>
<td>Labor Practices in Health Care Facilities</td>
<td>2</td>
</tr>
<tr>
<td>HCA 2200</td>
<td>Fiscal Management in Health Care Facilities</td>
<td>3</td>
</tr>
<tr>
<td>HCA 2250</td>
<td>Legal Aspects of Health Service Mgt</td>
<td>3</td>
</tr>
<tr>
<td>HCA 2300</td>
<td>Problems and Policies of Health Care Facilities</td>
<td>3</td>
</tr>
<tr>
<td>HCA 2401</td>
<td>HCA Externship</td>
<td>1-6</td>
</tr>
<tr>
<td>HCA 2402</td>
<td>HCA Externship</td>
<td>1</td>
</tr>
<tr>
<td>HCA 2403</td>
<td>HCA Externship</td>
<td>2</td>
</tr>
<tr>
<td>HCA 2404</td>
<td>HCA Externship</td>
<td>3</td>
</tr>
<tr>
<td>HCA 2405</td>
<td>HCA Externship</td>
<td>4</td>
</tr>
<tr>
<td>HCA 2406</td>
<td>HCA Externship</td>
<td>5</td>
</tr>
</tbody>
</table>

**Required Supportive Courses**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 1510</td>
<td>Composition I</td>
<td>3</td>
</tr>
<tr>
<td>MDA 1103</td>
<td>Medical Terminology</td>
<td>3</td>
</tr>
<tr>
<td>PSY 2510</td>
<td>Introduction to Psychology</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credit Hours: 36-41

A minimum cumulative 2.00 grade point average (GPA) overall is required for graduation.

**Industrial Technology**

**Technical Apprentice / Skilled Trades (IND.AAS) (IND.CT)**

**Associate in Applied Science Degrees, Certificates**

**Engineering/Manufacturing and Industrial Technology**

**Restricted**

Auburn Hills Campus

This program has been designed to meet the particular needs of business and industry. Although offered by Oakland Community College, this program is not available to the general public and, therefore, are restricted in use and application.

Oakland Community College, in cooperation with local industry, offers the required related instruction classes for apprentices from area industrial companies. Upon completion of a defined curriculum, eligible students may apply for degrees or certificates from OCC.

Apprentices are trained in occupations that require a wide and diverse range of skills and knowledge. Apprentices learn all the aspects of a trade through day-by-day training on the job, experience under proper supervision combined with technical instruction. After successfully completing their apprenticeships and learning the mechanics of their trade, apprentices become journeypersons and receive a completion certificate issued by the U.S. Department of Labor.

The demand for highly skilled workers is increasing more rapidly than the supply. Their skills set craftworkers apart from other workers. The careers are satisfying, rewarding and highly marketable.

Apprenticeable occupations can be found in such areas as manufacturing, electronics, construction, service and metal working. A large part of the apprenticeable trades are in the manufacturing and construction industries. New job standards are regularly added by the U.S. Department of Labor to reflect a changing business need.

For further information, see the Apprenticeship Supplement Catalog available by contacting the Apprentice Coordinator at the Auburn Hills Campus at (248) 232-4394.

Oakland Community College provides an opportunity for technical students, including apprentices, journeypersons and employees-in-training to continue their education and earn an Associate Degree in Applied Science.

These programs were designed with flexibility to allow technical students the opportunity to enhance their skills or to supplement their education with courses to assist in their career development.

Individuals who have completed an approved Oakland Community College Apprentice program could use these programs to advance their education. To aid companies in planning the sequence of courses for their training program, there are curricular outlines for the following trade areas:

**Degree Programs**

- Air Conditioning and Refrigeration (Industrial)
- Auto Truck and Trailer Repair
- Die Designer
- Die Maker
- Draftsman Designer
- Industrial Plant Electrician
- Machinist
- Millwright
- Pipe Fitter
- Stationary Engineer
- Tool and Die
- Tool Designer
• Tool Machinist – All Around
• Welder

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
</table>

Major Requirements

Select one of the following:

- Complete approved Oakland Community College Apprentice program courses.

- Complete an approved program recognized by the U.S. Department of Labor. A notarized copy of the original U.S. Department of Labor certificate is required.

- Present verification of Journeyperson’s status by a local union or sponsoring company.

Necessary electives to total at least 62 credits must also be completed to meet requirements for an Associate in Applied Science degree.

See degree requirements for an Associate in Applied Science degree (p. 21).

See General Education Distribution Requirements (p. 8).

Notes: All incoming apprentices must register with the Apprenticeship Coordinator. See Apprenticeship Coordinator for program codes.

A minimum cumulative 2.00 grade point average (GPA) overall is required for graduation.

Interior Design Degrees

• Interior Design (INT.AAS) (p. 60)

Interior Design (INT.AAS)

Associate in Applied Science

Arts and Communication

Orchard Ridge Campus

This program, leading to an associate in applied science degree, will expose the student to the human and professional issues of a building’s interior and the designing of environments. This career program will concentrate on developing artistic maturity and analytical strengths while providing cutting edge resources for balancing creative gifts with practical skills. In addition to gaining experience with selecting furnishings; fabrics; floor and wall coverings; making models and preparing presentations, the student will be designing, rendering and drafting by hand and through the use of digital imaging software.

Program Webpage - Click Here (https://www.oaklandcc.edu/programs/int/default.aspx)

Program Plan Example - Click Here (https://www.oaklandcc.edu/programs/plans/int.aas.pdf)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
</table>

Required Supportive Courses

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
</table>

Recommended Electives

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
</table>

Total Credit Hours for Program-Related Courses 40-42

General Education Requirements

Communication / English (3-credits)

Fine Arts / Humanities (3-credits)

Mathematics / Science (3-credits)

Social Science (3-credits)

Written Communication (3-credits)

Additional elective credits needed to meet requirements for an Associate in Applied Science degree 17-19

Total Credit Hours 62

1 Course may be used to meet General Education requirements.

2 Eastern Michigan University course.
A minimum cumulative 2.00 grade point average (GPA) overall is required for graduation.

**International Commerce**

**Degrees**

- International Commerce (ICM.INT.AA) (p. 61)

**International Commerce (ICM.INT.AA)**

Associate in Arts

**Business, Management, Marketing and Technology**

The International Commerce degree program is designed to combine courses with a global emphasis in business, liberal arts and foreign language. It focuses on developing competencies in international business and global economics alongside international cultural awareness and language skill. Students completing this program of study will be able to transfer these competencies to senior college programs in International Commerce. Because transferability of credits varies with colleges and universities, programs and departmental majors, students are urged to discuss their program plans with an OCC counselor and transfer institution.

Graduating from this program qualifies the student for the Michigan Transfer Agreement (MTA) endorsement. Students should work closely with an OCC counselor to identify courses from the MTA List which apply to the endorsement and to select courses that will satisfy the intake requirements of the intended transfer institution.

All courses that satisfy MTA requirements must be completed with a grade of ‘C’ (2.0) or higher. All courses comprising the 62 credits required for the degree must be completed with a cumulative GPA of 2.0 or higher.

Because transferability of credits varies with colleges and universities, programs, and departmental majors, students are urged to discuss their program plans with an OCC counselor and an advisor at the intended transfer institution.

**Program Plan Example** - Click Here (https://www.oaklandcc.edu/programs/plans/icm.int.aa.pdf)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Major Requirements</td>
<td></td>
</tr>
<tr>
<td>BUS 1100</td>
<td>Introduction to Business</td>
<td>4</td>
</tr>
<tr>
<td>BUS 2150</td>
<td>Global Business</td>
<td>3</td>
</tr>
<tr>
<td>ECO 2610</td>
<td>Economics I</td>
<td>3</td>
</tr>
<tr>
<td>ECO 2620</td>
<td>Economics II</td>
<td>3</td>
</tr>
<tr>
<td>Select one of the following options:</td>
<td></td>
<td>8</td>
</tr>
<tr>
<td>Option A:</td>
<td></td>
<td>8</td>
</tr>
<tr>
<td>ESL 2520 &amp; ESL 2420 &amp; ESL 2011</td>
<td>Writing and Reading for Academic Purposes IV and Advanced Oral Communication</td>
<td>8</td>
</tr>
<tr>
<td>or ESL 2520 &amp; ESL 2420</td>
<td>Writing and Reading for Academic Purposes IV and English Grammar and Listening Communication Skills IV</td>
<td>8</td>
</tr>
</tbody>
</table>

**General Requirements**

**English Composition**

Complete one course from the English Composition Michigan Transfer Agreement Distribution list. For MTA, this course must be completed with a grade of ‘C’ (2.0) or higher. (p. 7)

**Communications**

Satisfied. For MTA, this course must be completed with a grade of ‘C’ (2.0) or higher.

**Fine Arts / Humanities**

Complete a non-ESL foreign language course from Major Requirements and complete 2-4 credits in a different academic discipline from the Fine Arts/Humanities Michigan Transfer Agreement Distribution list; or complete two courses from the Fine Arts / Humanities Michigan Transfer Agreement Distribution list. These courses must be taken in more than one academic discipline. For MTA, these courses must be completed with a grade of ‘C’ (2.0) or higher. (p. 7)

**Mathematics**

Complete one course from the Mathematics Michigan Transfer Agreement Distribution list. For MTA, this course must be completed with a grade of ‘C’ (2.0) or higher. (p. 7)

**Natural Sciences**

Complete two courses from the Natural Sciences Michigan Transfer Agreement Distribution list. These courses must be taken in more than one academic discipline, and at least one course must include a laboratory component. For MTA, these courses must be completed with a grade of ‘C’ (2.0) or higher. (p. 8)

**Social Sciences**

Complete ECO-2610 or ECO-2620 from Major Requirements, and complete 3-4 credits in a different academic discipline from the Social Sciences Michigan Transfer Agreement Distribution list. For MTA, these courses must be completed with a grade of ‘C’ (2.0) or higher. (p. 7)

**Required Supportive Courses**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 1800</td>
<td>Accounting Procedures</td>
<td>2</td>
</tr>
<tr>
<td>ACC 1810</td>
<td>Principles of Financial Accounting</td>
<td>4</td>
</tr>
<tr>
<td>ACC 1820</td>
<td>Principles of Managerial Accounting</td>
<td>4</td>
</tr>
<tr>
<td>COM 2290</td>
<td>Intercultural Communication</td>
<td>3</td>
</tr>
</tbody>
</table>

**Recommended Electives**

The following courses are Recommended Electives for fulfilling the program credits (minimum 62):

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 1310</td>
<td>Supervision</td>
<td>3</td>
</tr>
<tr>
<td>BUS 2530</td>
<td>Management</td>
<td>3</td>
</tr>
<tr>
<td>CIS 1050</td>
<td>Personal Computer Productivity Tools</td>
<td>4</td>
</tr>
<tr>
<td>CIS 2313</td>
<td>E-Business and E-Commerce</td>
<td>4</td>
</tr>
<tr>
<td>GEO 1520</td>
<td>World Geography</td>
<td>3</td>
</tr>
<tr>
<td>HIS 1520</td>
<td>World Civilizations from the Modern Era</td>
<td>4</td>
</tr>
</tbody>
</table>

**Total Credit Hours for Program-Related Courses**

52-63
Library Services and Technology

Degree

- Library Services and Technology (LIB.AAS) (p. 62)

Certificate of Achievement

- Library Services and Technology (LIB.CA) (p. 63)

Library Services and Technology (LIB.AAS)

Associate in Applied Science

Human Services

Auburn Hills Campus

This associate in applied science degree is designed to prepare students for employment as library and/or information technicians in a wide variety of resource delivery settings, e.g., public, academic, school, business, medical, and legal.

The program gives the student experience in library technology, public services, circulation procedures, cataloging, and document delivery. Students will develop career skills in a required 120-hour library internship arranged at a library of his or her choice.

Program Webpage - Click Here (https://www.oaklandcc.edu/programs/lib/default.aspx)

Program Plan Example - Click Here (https://www.oaklandcc.edu/programs/plans/lib.aas.pdf)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIB 1100</td>
<td>Information Research Methods</td>
<td>1</td>
</tr>
<tr>
<td>LIB 1150</td>
<td>Introduction to Library Services</td>
<td>3</td>
</tr>
<tr>
<td>LIB 1200</td>
<td>Introduction to Media Technology</td>
<td>3</td>
</tr>
<tr>
<td>LIB 2000</td>
<td>Collection Management</td>
<td>3</td>
</tr>
<tr>
<td>LIB 2100</td>
<td>Library Cataloging</td>
<td>3</td>
</tr>
<tr>
<td>LIB 2150</td>
<td>Library Access Services</td>
<td>3</td>
</tr>
<tr>
<td>LIB 2170</td>
<td>Introduction to Reference Resources</td>
<td>3</td>
</tr>
<tr>
<td>LIB 2300</td>
<td>Library Communication and Teamwork Library Environment</td>
<td>2</td>
</tr>
<tr>
<td>LIB 2450</td>
<td>Library Practicum</td>
<td>2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIS 1050</td>
<td>Personal Computer Productivity Tools</td>
<td>4</td>
</tr>
<tr>
<td>COM 1290</td>
<td>Interpersonal Communication</td>
<td>3</td>
</tr>
<tr>
<td>COM 2290</td>
<td>Intercultural Communication</td>
<td>3</td>
</tr>
<tr>
<td>ENG 1510</td>
<td>Composition I</td>
<td>3</td>
</tr>
<tr>
<td>ENG 1520</td>
<td>Composition II</td>
<td>3</td>
</tr>
<tr>
<td>PSY 2630</td>
<td>Psychology of Organizational Behavior</td>
<td>3</td>
</tr>
<tr>
<td>SOC 2620</td>
<td>Sociology of Diversity</td>
<td>3</td>
</tr>
</tbody>
</table>

Complete one of the following MAT courses 3-4

- MAT 1070 Business Mathematics       3
- MAT 1125 Math Literacy               4
- MAT 1525 Quantitative Reasoning      4

Complete one of the following CIS courses 3-4

- CIS 1060 Personal Computer Spreadsheet Concepts 3
- CIS 1200 Introduction to Database Systems 4
- CIS 1400 Web Design I                  4

Complete two of the following Fine Arts/Humanities courses 6-8

- ARB 1510 Beginning Arabic I 4
- ARB 1530 Beginning Arabic II 4
- CHI 1510 Beginning Chinese I 4
- COM 2620 Oral Interpretation of Literature 3
- ENG 1610 Women in Literature 3
- ENG 1710 Introduction to Literature: Short Story and Novel 3
- ENG 1720 Introduction to Literature: Poetry and Drama 3
- ENG 2300 Science Fiction and Fantasy 3
- ENG 2510 American Literature Before the Civil War 3
- ENG 2520 American Literature Since the Civil War 3
- ENG 2540 World Literature II 3
- ENG 2550 British Literature Before 1700 3
- ENG 2560 British Literature After 1700 3
- ENG 2570 Survey of African American Literature 3
- ENG 2650 Children's Literature 3
- ENG 2750 William Shakespeare: Comedies, Histories and Sonnets 3
- ENG 2760 William Shakespeare: Tragedies, Romances and Selected Poems 3
- ENG 2770 Contemporary Literature 3
- FRE 1510 Beginning French I 4
- FRE 1530 Beginning French II 4
- FSH 1500 Foundations of Humanities 4
- GER 1510 Beginning German I 4
- GER 1530 Beginning German II 4
- IAH 1510 Beginning Italian I 4
- IAH 1530 Beginning Italian II 4
- JPN 1510 Beginning Japanese I 4
- JPN 1530 Beginning Japanese II 4
- SLI 1000 American Sign Language (ASL) I 3
- SLI 1010 American Sign Language (ASL) II 3
- SPA 1510 Beginning Spanish I 4
- SPA 1530 Beginning Spanish II 4

Total credit hours for Program-Related Courses 57-61

General Education Requirements

Additional elective credits needed to meet requirements for an Associate in Arts degree. Courses must be numbered 1000 through 2999.

Total Credit Hours 62-63

1 Course may be used to meet Social Sciences requirement.
2 A non-ESL foreign language courses may be used to meet Fine Arts/Humanities Michigan Transfer Agreement Distribution list requirement.
3 Course may be used to meet Communications requirement.

A minimum cumulative 2.00 grade point average (GPA) overall is required for graduation.
Communication / English (3-credits)
Satisfied

Fine Arts / Humanities (3-credits)
Satisfied

Mathematics / Science (3-credits)
0 or 3
Satisfied if MAT 1525 is selected as a Required Supportive Course; otherwise, complete 3 credits from Mathematics/Science courses listed in the General Education Distribution List. (p. 9)

Social Science (3-credits)
Satisfied

Written Communication (3-credits)
Satisfied

Additional elective credits needed to meet requirements for an Associate in Applied Science degree 0-2

Total Credit Hours 60-64

1 Course may be used to meet General Education requirements.

A minimum cumulative 2.00 grade point average (GPA) overall is required for graduation.

Library Services and Technology (LIB.CA)

Certificate

Human Services

Auburn Hills Campus

This certificate of achievement is designed to prepare students for employment as library and/or information technicians in a wide variety of resource delivery settings, e.g., public, academic, school, business, medical, and legal.

The program gives the student experience in library technology, public services, circulation procedures, cataloging, and document delivery. Students will develop career skills in a required 120-hour library internship arranged at a library of his or her choice.

Program Webpage - Click Here (https://www.oaklandcc.edu/programs/lib/default.aspx)

Program Plan Example - Click Here (https://www.oaklandcc.edu/programs/plans/lib.ca.pdf)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIB 1150</td>
<td>Introduction to Library Services</td>
<td>3</td>
</tr>
<tr>
<td>LIB 1200</td>
<td>Introduction to Media Technology</td>
<td>3</td>
</tr>
<tr>
<td>LIB 2000</td>
<td>Collection Management</td>
<td>3</td>
</tr>
<tr>
<td>LIB 2150</td>
<td>Library Access Services</td>
<td>3</td>
</tr>
<tr>
<td>LIB 2300</td>
<td>Library Communication and Teamwork Library Environment</td>
<td>2</td>
</tr>
<tr>
<td>LIB 2450</td>
<td>Library Practicum</td>
<td>2</td>
</tr>
</tbody>
</table>

Choose one of the following courses

LIB 2100 Library Cataloging 3
LIB 2170 Introduction to Reference Resources 3

Total Credit Hours 19

A minimum cumulative 2.00 grade point average (GPA) overall is required for graduation.

Machine Tool Technology

Degree

• Machine Tool Technology (MTT.CNC.AAS) (p. 63)

Certificate

• Machine Tool Technology (MTT.CNC.CT) (p. 64)

Machine Tool Technology (MTT.CNC.AAS)

Associate in Applied Science

Engineering/Manufacturing and Industrial Technology

Auburn Hills Campus

The Machine Tool Technology program is designed to emphasize the concepts of manually operated and computer-driven metal cutting machinery. Instruction will include cutting principles, programming techniques, computer controls, and computer numerical control (CNC) machine tool operations. In addition, the interfacing of automated equipment with computer aided design (CAD) and computer aided manufacturing (CAM) systems will be addressed.

Program Webpage - Click Here (https://www.oaklandcc.edu/programs/mtt/default.aspx)

Program Plan Example - Click Here (https://www.oaklandcc.edu/programs/plans/mtt.cnc.aas.pdf)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MTT 1100</td>
<td>Introduction to Machine Tools</td>
<td>3</td>
</tr>
<tr>
<td>MTT 1200</td>
<td>Machine Tool Setup &amp; Operation</td>
<td>3</td>
</tr>
<tr>
<td>MTT 1300</td>
<td>Advanced Machining Processes</td>
<td>3</td>
</tr>
<tr>
<td>MTT 1400</td>
<td>Manufacturing Processes</td>
<td>3</td>
</tr>
<tr>
<td>MTT 2100</td>
<td>Introduction to Computer Numerical Control (CNC)</td>
<td>3</td>
</tr>
<tr>
<td>MTT 2200</td>
<td>G&amp;M Code CNC Programming</td>
<td>3</td>
</tr>
<tr>
<td>MTT 2300</td>
<td>2D &amp; 3D Computer Aided Machining</td>
<td>4</td>
</tr>
<tr>
<td>MTT 2400</td>
<td>Jig &amp; Fixture Assemblies</td>
<td>3</td>
</tr>
</tbody>
</table>

Required Supportive Courses

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAD 1050</td>
<td>Geometric Dimensioning and Tolerancing (GD&amp;T)</td>
<td>4</td>
</tr>
<tr>
<td>CAD 1101</td>
<td>Introduction to CAD</td>
<td>4</td>
</tr>
<tr>
<td>CAD 1501</td>
<td>Special Topics in CAD: Fusion 360 Design</td>
<td>2</td>
</tr>
<tr>
<td>MAT 1560</td>
<td>Trigonometry</td>
<td>3</td>
</tr>
<tr>
<td>MSE 1000</td>
<td>Material Science Fundamentals-Metallurgy</td>
<td>3</td>
</tr>
<tr>
<td>ROB 1500</td>
<td>Introduction to Robotics Technology</td>
<td>4</td>
</tr>
<tr>
<td>TED 1030</td>
<td>Basic Blueprint Reading</td>
<td>3</td>
</tr>
</tbody>
</table>
Complete one of the following ENG courses:

ENG 1450 Writing and Reading for Problem Solving 3

or

ENG 1510 Composition I 3

Total Credit Hours for Program-Related Courses 54

General Education Requirements

Communication / English (3-credits)

May be satisfied with ENG-1450 or ENG-1510. This course will apply toward the Communication/English requirement or the Written Communication requirement, but not both. (p. 8)

Fine Arts / Humanities (3-credits)

Complete 3 credits from Fine Arts/Humanities courses listed in the General Education Distribution List (p. 8)

Mathematics / Science (3-credits) Satisfied

Social Science (3-credits) 3

Complete 3 credits from Social Science courses listed in the General Education Distribution List (p. 10)

Written Communication (3-credits)

May be satisfied with ENG-1450 or ENG-1510. This course will apply toward the Communication/English requirement or the Written Communication requirement, but not both. (p. 10)

Additional elective credits needed to meet requirements for an Associate in Applied Science degree

Total Credit Hours 60

1. Prospective transfer students should select MAT 1560.
2. Prospective transfer students should select ENG 1510.
3. Course may be used to meet General Education requirements.

A minimum cumulative 2.00 grade point average (GPA) overall is required for graduation.

Machine Tool Technology (MTT.CNC.CT)

Certificate

Engineering/Manufacturing and Industrial Technology

Auburn Hills Campus

The Machine Tool Technology program is designed to emphasize the concepts of manually operated and computer-driven metal cutting machinery. Instruction will include cutting principles, programming techniques, computer controls, and computer numerical control (CNC) machine tool operations. In addition, the interfacing of automated equipment with computer aided design (CAD) and computer aided manufacturing (CAM) systems will be addressed.

Program Webpage - Click Here (https://www.oaklandcc.edu/programs/mtt/default.aspx)

Program Plan Example - Click Here (https://www.oaklandcc.edu/programs/plans/mtt.cnc.ct.pdf)

Gainful Employment Disclosure - Click Here (https://www.oaklandcc.edu/ged/docs/MTT.CNC.CT.pdf)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MTT 1100</td>
<td>Introduction to Machine Tools</td>
<td>3</td>
</tr>
<tr>
<td>MTT 2100</td>
<td>Introduction to Computer Numerical Control (CNC)</td>
<td>3</td>
</tr>
<tr>
<td>MTT 2200</td>
<td>G&amp;M Code CNC Programming</td>
<td>3</td>
</tr>
<tr>
<td>MTT 2300</td>
<td>2D &amp; 3D Computer Aided Machining</td>
<td>4</td>
</tr>
</tbody>
</table>

Required Supportive Courses

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAD 1050</td>
<td>Geometric Dimensioning and Tolerancing (GD&amp;T)</td>
<td>4</td>
</tr>
<tr>
<td>CAD 1101</td>
<td>Introduction to CAD</td>
<td>4</td>
</tr>
<tr>
<td>CAD 1501</td>
<td>Special Topics in CAD: Fusion 360 Design</td>
<td>2</td>
</tr>
<tr>
<td>MSE 1000</td>
<td>Material Science Fundamentals-Metallurgy</td>
<td>3</td>
</tr>
<tr>
<td>ROB 1500</td>
<td>Introduction to Robotics Technology</td>
<td>4</td>
</tr>
<tr>
<td>TED 1030</td>
<td>Basic Blueprint Reading</td>
<td>3</td>
</tr>
<tr>
<td>APM 8110</td>
<td>Geometry Algebra</td>
<td>3</td>
</tr>
<tr>
<td>or MAT 1560</td>
<td>Trigonometry</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credit Hours 36

A minimum cumulative 2.00 grade point average (GPA) overall is required for graduation.

Management Development

Degree

- Management Development - Business Management (MGT.BUS.AAS) (p. 64)
- Management Development - Hospitality (MGT.HSP.AAS) (p. 65)

Management Development - Business Management (MGT.BUS.AAS)

Business Management (MGT.BUS.AAS)

The Management Development - Business Management program leads to an Associate in Applied Science Degree. Business occupations provide thousands of opportunities for people trained to supervise and manage employees in many different business environments. The Business Management curriculum provides skills essential for leadership in operations and general management.

Program Plan Example - Click Here (https://www.oaklandcc.edu/programs/plans/mgt.bus.aas.pdf)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 1500</td>
<td>Accounting for the Small Business Owner</td>
<td>3</td>
</tr>
<tr>
<td>or ACC 1810</td>
<td>Principles of Financial Accounting</td>
<td>4</td>
</tr>
</tbody>
</table>
A minimum cumulative 2.00 grade point average (GPA) overall is required for graduation.

Prospective transfer students should consult with their transfer institution to verify selected course transferability.

Management Development - Hospitality (MGT.HSP.AAS)

Associate in Applied Science

Human Services

Orchard Ridge Campus

This program, leading to an Associate in Applied Science Degree, is designed to develop skills and knowledge essential for employment in the Hospitality Industry to include food and beverage operations, guest services, sales and event planning. The program provides courses in sanitation certification, wine and spirits, front office operations, event planning, financial analysis and leadership management.

The student will acquire practical experience in their coursework by performing hands on skills at multiple levels in our on campus restaurants, and special events. Students will experience special event planning first hand as student manager planning special events for the public. Student will visit hospitality venues and complete an internship within a hospitality operation best related to their career path of choice. The Hospitality graduates career can lead to management positions in their hospitality field of choice with acquired industry experience and attaining higher education and/or certification that may be required.

Requirements for acceptance to the program

- Attend Culinary Program Orientation. Information is posted on culinary website at www.oaklandcc.edu/culinary/default.aspx.
- Attend ServeSafe Manager Certification within the last 2 years or complete CUL 1010 Food Standards, Sanitation and Hygiene with a 'C' or higher.

Program Plan Example - Click Here (https://www.oaklandcc.edu/programs/plans/mgt.hsp.aas.pdf)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>major</td>
<td>Culinary Skills</td>
<td>2</td>
</tr>
<tr>
<td>major</td>
<td>Cookery Techniques</td>
<td>4</td>
</tr>
<tr>
<td>major</td>
<td>Hospitality Careers</td>
<td>1</td>
</tr>
<tr>
<td>major</td>
<td>Front House Operations I</td>
<td>4</td>
</tr>
<tr>
<td>major</td>
<td>Food Service Cost Management</td>
<td>3</td>
</tr>
<tr>
<td>major</td>
<td>Food Purchasing and Storage</td>
<td>2</td>
</tr>
<tr>
<td>major</td>
<td>Wine and Spirits</td>
<td>3</td>
</tr>
<tr>
<td>major</td>
<td>Front House Operations II</td>
<td>2</td>
</tr>
<tr>
<td>major</td>
<td>Event and Catering Management</td>
<td>3</td>
</tr>
<tr>
<td>major</td>
<td>Hospitality Internship</td>
<td>2</td>
</tr>
</tbody>
</table>

Required Supportive Courses

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>major</td>
<td>Accounting for the Small Business Owner</td>
<td>3</td>
</tr>
<tr>
<td>major</td>
<td>Introduction to Business</td>
<td>4</td>
</tr>
</tbody>
</table>

Total Credit Hours for Program-Related Courses: 44-45

General Education Requirements

Satisfied

Fine Arts / Humanities (3-credits)

Complete 3 credits from Fine Arts/Humanities courses listed in the General Education Distribution List (p. 8)

Mathematics / Science (3-credits)

Complete 3 credits from Mathematics/Science courses listed in the General Education Distribution List (p. 9)

Social Science (3-credits)

Satisfied

Additional elective credits needed to meet requirements for an Associate in Applied Science degree: 8-12

Total Credit Hours: 62

1 Prospective transfer students should take ENG 1510.
2 Course may be used to meet General Education requirements.
Medical Assisting

**Degree**

- Medical Assisting (MDA.AAS) (p. 66)

**Certificate**

- Medical Assisting (MDA.CT) (p. 67)

**Certificates of Achievement**

- Medical Assisting - Medical Insurance Coding and Billing (MDA.MIC.CA) (p. 68)
- Medical Assisting - Medical Office Administrative Procedures (MDA.MOA.CA) (p. 68)
- Medical Assisting - Phlebotomy (MDA.PHT.CA) (p. 69)

**Medical Assisting (MDA.AAS)**

**Associate in Applied Science**

**Health Sciences**

Highland Lakes Campus

---

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MDA 1051</td>
<td>Medical Assisting-Administrative Procedures</td>
<td>4</td>
</tr>
<tr>
<td>MDA 1053</td>
<td>Medical Office Software Applications</td>
<td>1</td>
</tr>
<tr>
<td>MDA 1103</td>
<td>Medical Terminology</td>
<td>3</td>
</tr>
<tr>
<td>MDA 1130</td>
<td>Medical Assisting Clinical Skills</td>
<td>3</td>
</tr>
<tr>
<td>MDA 1140</td>
<td>Medical Assisting Clinical Procedures</td>
<td>4</td>
</tr>
<tr>
<td>MDA 1170</td>
<td>Medical Assisting Laboratory Procedures</td>
<td>3</td>
</tr>
<tr>
<td>MDA 1250</td>
<td>Phlebotomy</td>
<td>1</td>
</tr>
</tbody>
</table>

Students may expand on their Medical Assisting Certificate (MDA.CT) credential by further completion of required supportive courses for an Associate in Applied Science degree (MDA.AAS). The associate degree provides an opportunity for progression in related health care careers and degrees beyond the associate degree level.

A mandatory Medical Assisting orientation (current within two years) is required of all students entering any Medical Assisting program. Additionally, a criminal history check will be conducted on all students prior to the start of the program, at the student’s expense.

1. Conviction of a felony or conviction of any attempt to commit a felony within the 15 years immediately preceding the date of the criminal history check; or
2. Conviction of a misdemeanor within the 10 years immediately preceding the criminal history check, and/or a positive drug screen will preclude eligibility for admission.

For details contact (248) 942-3069 or refer to the OCC website: www.oaklandcc.edu/health/medical-assisting.

Selection into the Practicum portion of the Medical Assisting program is done at the point of placement through an application process. Details are provided in the Medical Assisting Student Handbook. Selected students will be notified prior to placement.

In order to be eligible for Practicum placement students must also obtain the following:

- A grade of a “C” (2.0) or better in all major program requirements.
- A current CPR card at health care provider or professional provider level.
- A current First Aid card.
- A current health history and physical exam with appropriate immunization documentation.
- A negative drug screen test immediately prior to the start of practicum courses.
- Application for Practicum placement is due the semester prior to Practicum. Selected students will be notified prior to placement.

The policies and regulations regarding progression and retention in all Medical Assisting Programs, as well as certification requirements, are outlined in the Medical Assisting Student Handbook which is provided to each student attending the mandatory orientation.

**Program Webpage** - Click Here (https://www.oaklandcc.edu/health/medical-assisting/default.aspx)

**Program Plan Example** - Click Here (https://www.oaklandcc.edu/programs/plans/mda.aas.pdf)

---

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MDA 1051</td>
<td>Medical Assisting-Administrative Procedures</td>
<td>4</td>
</tr>
<tr>
<td>MDA 1053</td>
<td>Medical Office Software Applications</td>
<td>1</td>
</tr>
<tr>
<td>MDA 1103</td>
<td>Medical Terminology</td>
<td>3</td>
</tr>
<tr>
<td>MDA 1130</td>
<td>Medical Assisting Clinical Skills</td>
<td>3</td>
</tr>
<tr>
<td>MDA 1140</td>
<td>Medical Assisting Clinical Procedures</td>
<td>4</td>
</tr>
<tr>
<td>MDA 1170</td>
<td>Medical Assisting Laboratory Procedures</td>
<td>3</td>
</tr>
<tr>
<td>MDA 1250</td>
<td>Phlebotomy</td>
<td>1</td>
</tr>
</tbody>
</table>

---

A minimum cumulative 2.00 grade point average (GPA) overall is required for graduation. Prospective transfer students should consult with their transfer institution to verify selected course transferability.
Medical Assisting (MDA.CT) Certificate

Health Sciences

Highland Lakes Campus

The Medical Assisting certificate is designed "to prepare competent entry-level medical assistants in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains" for an entry-level position as a Medical Assistant in a private medical office, clinic or other health care facility. Both clinical and administrative skills are included in the course work. On-the-job experience is provided by a total of 180 unpaid hours of practicum placement with a licensed health care practitioner. The student may choose to complete an associate in applied science degree after earning and applying for a certificate in Medical Assisting (MDA.CT).

A mandatory Medical Assisting orientation (current within two years) is required of all students entering any Medical Assisting program. Additionally, a criminal history check will be conducted on all students prior to the start of the program, at the student’s expense.

1. Conviction of a felony or conviction of any attempt to commit a felony within the 15 years immediately preceding the date of the criminal history check; or
2. Conviction of a misdemeanor within the 10 years immediately preceding the criminal history check, and/or a positive drug screen will preclude eligibility for admission.

For details contact (248) 942-3069 or refer to the OCC website: oaklandcc.edu/health/medical-assisting (https://oaklandcc.edu/health/medical-assisting/).

Upon completion of the certificate program the student will be eligible for the American Association of Medical Assistant's (AAMA) national certification exam to become a Certified Medical Assistant (CMA-AAMA). Training incorporates cognitive knowledge in the performance of psychomotor and affective domains in the practice as medical assistants in both administrative and clinical areas.

The business administration area of instruction will include medical law and ethics; scheduling appointments; telephone practices; processing mail; oral and written communication skills, including reports and manuscripts; responsibilities of office care and management; patient and insurance billing; financial records; payroll records and banking; and safety precautions. Students will also use word processing skills to develop job descriptions and office policy manuals.

The clinical area of instruction will include Universal Standards, preparing the patient for exam; obtaining vital signs and medical histories; assisting with exams, treatments and surgeries; performing routine laboratory procedures; EKGs and other diagnostic procedures; sterilization procedures; instructing patients in preparation for x-rays and laboratory tests; venipuncture; administration of medications; proper charting and documentation; first aid; and patient education.

The Medical Assisting certificate program is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP) (http://www.caahep.org/) upon recommendation of the Medical Assisting Education Review Board (MAERB) at maerb.org (http://www.maerb.org/).

Certificate

Required Coursework:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MDA 1350</td>
<td>Medical Law and Ethics</td>
<td>3</td>
</tr>
<tr>
<td>MDA 1461</td>
<td>Medical Assisting Practicum I</td>
<td>3</td>
</tr>
<tr>
<td>MDA 2010</td>
<td>Medical Office Medications</td>
<td>3</td>
</tr>
<tr>
<td>MDA 2380</td>
<td>Medical Office Insurance Coding and Billing</td>
<td>4</td>
</tr>
<tr>
<td>MDA 2383</td>
<td>Medical Office Insurance Coding and Billing</td>
<td>1</td>
</tr>
<tr>
<td>MDA 2460</td>
<td>Medical Assisting Practicum II</td>
<td>3</td>
</tr>
<tr>
<td>MDA 2560</td>
<td>Medical Assisting Seminar</td>
<td>4</td>
</tr>
</tbody>
</table>

Recommended Supportive Courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 1500</td>
<td>Accounting for the Small Business Owner</td>
<td>3</td>
</tr>
<tr>
<td>BIO 1570</td>
<td>Microbiology of Health and Disease</td>
<td>3</td>
</tr>
<tr>
<td>ENG 1510</td>
<td>Composition I</td>
<td>3</td>
</tr>
</tbody>
</table>

Select one of the following BIO options:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 1600</td>
<td>Human Structure and Function</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BIO 2630</td>
<td>Human Anatomy and Physiology I</td>
<td>6</td>
</tr>
<tr>
<td>&amp; BIO 2640</td>
<td>and Human Anatomy and Physiology II</td>
<td>8</td>
</tr>
</tbody>
</table>

Select one of the following CIS courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIS 1000</td>
<td>Computer Literacy</td>
<td>1</td>
</tr>
<tr>
<td>or</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CIS 1050</td>
<td>Personal Computer Productivity Tools</td>
<td>4</td>
</tr>
</tbody>
</table>

Select one of the following COM courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>COM 1290</td>
<td>Interpersonal Communication</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td></td>
<td></td>
</tr>
<tr>
<td>COM 1600</td>
<td>Fundamentals of Speech</td>
<td>3</td>
</tr>
</tbody>
</table>

Select one of the following PSY courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSY 2510</td>
<td>Introduction to Psychology</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PSY 2630</td>
<td>Psychology of Organizational Behavior</td>
<td>3</td>
</tr>
</tbody>
</table>

Recommended Electives:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PER 2540</td>
<td>Medical First Responder/First Responder</td>
<td>4</td>
</tr>
<tr>
<td>POL 1510</td>
<td>American Government</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credit Hours for Program-Related Courses: 59-67

General Education Requirements

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication / English (3-credits)</td>
<td>Satisfied</td>
</tr>
<tr>
<td>Fine Arts / Humanities (3-credits)</td>
<td>3</td>
</tr>
<tr>
<td>Complete 3 credits from Fine Arts/Humanities courses listed in the General Education Distribution List (p. 8)</td>
<td>Satisfied</td>
</tr>
<tr>
<td>Mathematics / Science (3-credits)</td>
<td>Satisfied</td>
</tr>
<tr>
<td>Social Science (3-credits)</td>
<td>Satisfied</td>
</tr>
<tr>
<td>Written Communication (3-credits)</td>
<td>Satisfied</td>
</tr>
</tbody>
</table>

Total Credit Hours: 62-70

1 Course may be used to meet General Education requirements.

A minimum cumulative 2.00 grade point average (GPA) overall is required for graduation.
Selection into the Practicum portion of the Medical Assisting Certificate program is done at the point of placement through an application process. Details are provided in the Medical Assisting Student Handbook. Selected students will be notified prior to placement.

In order to be eligible for Practicum placement students must also obtain the following:

- A grade of a “C” (2.0) or better in all major program requirements.
- A current CPR card at health care provider or professional provider level.
- A current First Aid card.
- A current health history and physical exam with appropriate immunization documentation.
- A negative drug screen test immediately prior to the start of practicum courses.
- Application for Practicum placement is due the semester prior to Practicum. Selected students will be notified prior to placement.

The policies and regulations regarding progression and retention in all Medical Assisting Programs, as well as certification requirements, are outlined in the Medical Assisting Student Handbook which is provided to each student attending the mandatory orientation.

A mandatory criminal history check will be conducted on all students prior to the start of the program. 1) Conviction of a felony or any attempt to commit a felony within the 15 years immediately preceding the date of the criminal history check; or 2) Conviction of a misdemeanor within the 10 years immediately preceding the criminal history check, will preclude eligibility for admission. For details, contact (248) 942-3069.
This option is intended for individuals who desire entry-level employment in administrative medical assisting in a private practice, clinic, or other health care facility. Successful completion of this option will result in a Certificate of Achievement in Medical Office Administrative Procedures. Eligibility for this certificate is dependent upon the student achieving a “C” (2.0) or better in each of the required courses. The student may choose to continue and complete an Associate in Applied Science degree in Medical Assisting or a Certificate in Medical Assisting.

A mandatory Medical Assisting orientation (current within two years) is required of all students entering any Medical Assisting program. Additionally, a criminal history check will be conducted on all students prior to the start of the program, at the student’s expense.

1. Conviction of a felony or conviction of any attempt to commit a felony within the 15 years immediately preceding the date of the criminal history check; or
2. Conviction of a misdemeanor within the 10 years immediately preceding the criminal history check, and/or a positive drug screen will preclude eligibility for admission.

For details contact (248) 942-3069 or refer to the OCC website: https://oaklandcc.edu/health/medical-assisting/

Program Webpage - Click Here (https://www.oaklandcc.edu/health/medical-assisting/default.aspx)

Program Plan Example - Click Here (https://www.oaklandcc.edu/programs/plans/mda.pht.ca.pdf)

A mandatory criminal history check will be conducted on all students prior to the start of the program. 1) Conviction of a felony or any attempt to commit a felony within the 15 years immediately preceding the date of the criminal history check; or 2) Conviction of a misdemeanor within the 10 years immediately preceding the criminal history check, will preclude eligibility for admission. For details, contact (248) 942-3069.

Program Webpage - Click Here (https://www.oaklandcc.edu/health/medical-assisting/default.aspx)

Program Plan Example - Click Here (https://www.oaklandcc.edu/programs/plans/mda.pht.ca.pdf)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIS 1000</td>
<td>Computer Literacy</td>
<td>1</td>
</tr>
<tr>
<td>or CIS 1050</td>
<td>Personal Computer Productivity Tools</td>
<td>4</td>
</tr>
<tr>
<td>MDA 1051</td>
<td>Medical Assisting-Administrative Procedures</td>
<td>4</td>
</tr>
<tr>
<td>MDA 1053</td>
<td>Medical Office Software Applications</td>
<td>1</td>
</tr>
<tr>
<td>MDA 1103</td>
<td>Medical Terminology</td>
<td>3</td>
</tr>
<tr>
<td>MDA 1350</td>
<td>Medical Law and Ethics</td>
<td>3</td>
</tr>
<tr>
<td>Total Credit Hours</td>
<td></td>
<td>12-15</td>
</tr>
</tbody>
</table>

A minimum cumulative 2.00 grade point average (GPA) overall is required for graduation.

**Medical Assisting - Phlebotomy (MDA.PHT.CA)**

**Certificate of Achievement**

**Health Sciences**

Highland Lakes Campus

This option is intended for individuals who desire entry-level employment as a phlebotomist in area labs or hospitals. Successful completion of this option will result in a certificate of achievement in Phlebotomy. Eligibility for this certificate is dependent upon the student achieving a “C” (2.0) or better in each of the required courses. The student may wish to continue and complete an Associate of Applied Science or Certificate in Medical Assisting. Completion of the mandatory Medical Assisting Program orientation is required.

A mandatory criminal history check will be conducted on all students prior to the start of the program. 1) Conviction of a felony or any attempt to commit a felony within the 15 years immediately preceding the date of the criminal history check; or 2) Conviction of a misdemeanor within the 10 years immediately preceding the criminal history check, will preclude eligibility for admission. For details, contact (248) 942-3069.

Program Webpage - Click Here (https://www.oaklandcc.edu/health/medical-assisting/default.aspx)

Program Plan Example - Click Here (https://www.oaklandcc.edu/programs/plans/mda.pht.ca.pdf)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MDA 1103</td>
<td>Medical Terminology</td>
<td>3</td>
</tr>
<tr>
<td>MDA 1170</td>
<td>Medical Assisting Laboratory Procedures</td>
<td>3</td>
</tr>
<tr>
<td>MDA 1250</td>
<td>Phlebotomy</td>
<td>1</td>
</tr>
<tr>
<td>MDA 1350</td>
<td>Medical Law and Ethics</td>
<td>3</td>
</tr>
<tr>
<td>CIS 1050</td>
<td>Personal Computer Productivity Tools</td>
<td>4</td>
</tr>
<tr>
<td>Total Credit Hours</td>
<td></td>
<td>14</td>
</tr>
</tbody>
</table>

A minimum cumulative 2.00 grade point average (GPA) overall is required for graduation.

**Mental Health/Social Work Degrees**

- Mental Health/Social Work (MHS.AAS) (p. 69)

**Mental Health/Social Work (MHS.AAS)**

**Associate in Applied Science Human Services**

The Associate of Applied Science Degree in Mental Health/Social Work (MHS) is designed to prepare students for transfer into partnering university programs and entry level employment in a range of social service careers. The program has transfer and articulation agreements with numerous university programs in Southeast Michigan. In addition, the program prepares students for entry level positions within the social work and human service fields.

Most graduates of the MHS Program intend to transfer into a bachelor degree program in social work (BSW) at one of the partnering university programs. As the field continues to require more formal education of individuals entering the profession, graduates are encouraged to transfer into a bachelor degree program. The program also prepares students for entry-level career opportunities which include: social work technician, social work assistant, case work specialist, case work assistant, human service specialist, human service specialist, mental health technician, psychiatric aid, outreach specialist, substance abuse technician, adoption counselor assistant, child and youth care worker, youth specialist, foster care specialist, and family protection specialist.

MHA classes may be taken in either the Fall or Winter Semester. Students have the option of taking one, two or three MHA classes during Fall and Winter Semesters. Students are encouraged to meet with an OCC counselor
to review the program plan of the MHS Program and create a personal plan of study. It is highly recommended that students intending to transfer into a bachelor degree program meet with an OCC counselor to develop a plan aligned with the transfer and articulation agreements of the respective bachelor degree program of interest. Current substance abuse, physical or mental health problems might affect the student’s ability to work in this field.

Program Plan Example - Click Here (https://www.oaklandcc.edu/programs/plans/mhs.aas.pdf)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Major Requirements</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MHA 2100</td>
<td>Counseling and Interviewing Skills</td>
<td>4</td>
</tr>
<tr>
<td>MHA 2300</td>
<td>Interpersonal Theory and Practice</td>
<td>4</td>
</tr>
<tr>
<td>MHA 2400</td>
<td>Group Dynamics Theory and Practice</td>
<td>4</td>
</tr>
<tr>
<td>MHA 2500</td>
<td>Family Systems Theory and Practice</td>
<td>4</td>
</tr>
<tr>
<td>Complete one of the following MHA courses:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MHA 1500</td>
<td>Fundamentals of Alcohol and Substance Abuse</td>
<td>4</td>
</tr>
<tr>
<td>or</td>
<td>MHA 2600</td>
<td>Mental Health and Social Work Internship</td>
</tr>
<tr>
<td><strong>Required Supportive Courses</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENG 1510</td>
<td>Composition I</td>
<td>3</td>
</tr>
<tr>
<td>PSY 2510</td>
<td>Introduction to Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PSY 2810</td>
<td>Psychology of Adjustment</td>
<td>3</td>
</tr>
<tr>
<td>PSY 2910</td>
<td>Abnormal Psychology</td>
<td>3</td>
</tr>
<tr>
<td>SOC</td>
<td>Any Sociology course</td>
<td>3</td>
</tr>
<tr>
<td>Complete one of the following PSY courses:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PSY 2710</td>
<td>Child Development</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td>PSY 2740</td>
<td>Human Development Across the Lifespan</td>
</tr>
<tr>
<td><strong>Total Credit Hours for Program-Related Courses</strong></td>
<td>38</td>
<td></td>
</tr>
</tbody>
</table>

**Recommended Electives**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANT</td>
<td>Any Anthropology course</td>
<td>3</td>
</tr>
<tr>
<td>COM</td>
<td>Any Communication course</td>
<td>1-3</td>
</tr>
<tr>
<td>ECO 2610</td>
<td>Economics I</td>
<td>3</td>
</tr>
<tr>
<td>MHA 1500</td>
<td>Fundamentals of Alcohol and Substance Abuse</td>
<td>4</td>
</tr>
<tr>
<td>MHA 1510</td>
<td>Substance Abuse Treatments</td>
<td>4</td>
</tr>
<tr>
<td>MHA 2600</td>
<td>Mental Health and Social Work Internship</td>
<td>4</td>
</tr>
<tr>
<td>PER 2540</td>
<td>Medical First Responder/First Responder</td>
<td>4</td>
</tr>
<tr>
<td>POL 1510</td>
<td>American Government</td>
<td>3</td>
</tr>
<tr>
<td>SLI 1000</td>
<td>American Sign Language (ASL) I</td>
<td>3</td>
</tr>
</tbody>
</table>

**General Education Requirements**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication / English (3-credits)</td>
<td>Satisfied</td>
</tr>
<tr>
<td>Fine Arts / Humanities (3-credits)</td>
<td>3</td>
</tr>
<tr>
<td>Complete 3 credits from Fine Arts/Humanities courses listed in the General Education Distribution List (p. 8)</td>
<td></td>
</tr>
<tr>
<td>Mathematics / Science (3-credits)</td>
<td>3</td>
</tr>
<tr>
<td>Complete 3 credits from Mathematics/Science courses listed in the General Education Distribution List (p. 9)</td>
<td></td>
</tr>
<tr>
<td>Social Science (3-credits)</td>
<td>Satisfied</td>
</tr>
<tr>
<td>Written Communication (3-credits)</td>
<td>3</td>
</tr>
</tbody>
</table>

**Additional elective credits needed to meet requirements for an Associate in Applied Science degree**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>English Composition</td>
<td>3</td>
</tr>
<tr>
<td>Complete one course from the English Composition Michigan Transfer Agreement Distribution list. This course must be completed with a grade of ‘C’ (2.0) or higher. (p. 7)</td>
<td></td>
</tr>
<tr>
<td>Communications</td>
<td>3-4</td>
</tr>
</tbody>
</table>

A minimum cumulative 2.00 grade point average (GPA) overall is required for graduation.

**Music**

**Degrees**

- Arts with a Concentration in Music (MUS.AA) (p. 70)

**Certificates**

- Music (MUS.CT) (p. 71)

**Associate in Arts with a Concentration in Music (MUS.AA)**

**Associate in Arts**

**Arts and Communication**

Oakland Community College offers an Associate in Arts degree with a concentration in music. This degree fulfills a variety of needs: transfer to a four-year institution with approximately two years of study completed, or begin work in any area of music with a solid understanding of music theory, music history, and performance experience.

Graduating from this program qualifies the student for the Michigan Transfer Agreement (MTA) endorsement. Students should work closely with an OCC counselor to identify courses from the MTA List which apply to the endorsement and to select courses that will satisfy the intake requirements of the intended transfer institution.

All courses that satisfy MTA requirements must be completed with a grade of ‘C’ (2.0) or higher. All courses comprising the 62 credits required for the degree must be completed with a cumulative GPA of 2.0 or higher.

Because transferability of credits varies with colleges and universities, programs, and departmental majors, students are urged to discuss their program plans with an OCC counselor and an advisor at the intended transfer institution.

Program Plan Example - Click Here (https://www.oaklandcc.edu/programs/plans/mus.aas.pdf)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>70</td>
<td>Music</td>
<td></td>
</tr>
<tr>
<td><strong>Music Degrees</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Arts with a Concentration in Music (MUS.AA)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Certificates</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Music (MUS.CT)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Associate in Arts with a Concentration in Music (MUS.AA)**

**Associate in Arts**

**Arts and Communication**

Oakland Community College offers an Associate in Arts degree with a concentration in music. This degree fulfills a variety of needs: transfer to a four-year institution with approximately two years of study completed, or begin work in any area of music with a solid understanding of music theory, music history, and performance experience.

Graduating from this program qualifies the student for the Michigan Transfer Agreement (MTA) endorsement. Students should work closely with an OCC counselor to identify courses from the MTA List which apply to the endorsement and to select courses that will satisfy the intake requirements of the intended transfer institution.

All courses that satisfy MTA requirements must be completed with a grade of ‘C’ (2.0) or higher. All courses comprising the 62 credits required for the degree must be completed with a cumulative GPA of 2.0 or higher.

Because transferability of credits varies with colleges and universities, programs, and departmental majors, students are urged to discuss their program plans with an OCC counselor and an advisor at the intended transfer institution.

Program Plan Example - Click Here (https://www.oaklandcc.edu/programs/plans/mus.aas.pdf)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>70</td>
<td>Music</td>
<td></td>
</tr>
<tr>
<td><strong>Music Degrees</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Arts with a Concentration in Music (MUS.AA)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Certificates</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Music (MUS.CT)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Complete one course from the Communications Michigan Transfer Agreement Distribution list. This course must be completed with a grade of 'C' (2.0) or higher. (p. 7)

**Fine Arts / Humanities** 3-4

Complete one non-Music course from the Michigan Transfer Agreement Distribution list. This course must be completed with a grade of 'C' (2.0) or higher. (p. 7)

**Mathematics** 3-4

Complete one course from the Mathematics Michigan Transfer Agreement Distribution list. This course must be completed with a grade of 'C' (2.0) or higher. (p. 7)

**Natural Sciences** 7-10

Complete two courses from the Natural Sciences Michigan Transfer Agreement Distribution list. These courses must be taken in more than one academic discipline and must be completed with a grade of 'C' (2.0) or higher. At least one course must include a laboratory component. (p. 8)

**Social Sciences** 6-7

Complete two courses from the Social Sciences Michigan Transfer Agreement Distribution list. These courses must be taken in more than one academic discipline and must be completed with a grade of 'C' (2.0) or higher. (p. 7)

---

**Major Requirements**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUS 1510</td>
<td>Piano I</td>
<td>2</td>
</tr>
<tr>
<td>MUS 1521</td>
<td>Fundamental Ear Training and Sight Singing</td>
<td>2</td>
</tr>
<tr>
<td>MUS 1530</td>
<td>Fundamentals of Music</td>
<td>2</td>
</tr>
<tr>
<td>MUS 1620</td>
<td>Ear Training and Sight Singing I</td>
<td>2</td>
</tr>
<tr>
<td>MUS 1630</td>
<td>Music Theory I</td>
<td>3</td>
</tr>
<tr>
<td>MUS 2521</td>
<td>Ear Training and Sight Singing II</td>
<td>2</td>
</tr>
<tr>
<td>MUS 2530</td>
<td>Music Theory II</td>
<td>3</td>
</tr>
<tr>
<td>MUS 2560</td>
<td>Conducting</td>
<td>2</td>
</tr>
<tr>
<td>MUS 2640</td>
<td>Music Composition: Art Music</td>
<td>2</td>
</tr>
</tbody>
</table>

Complete three different 1-credit courses from the following: 3

- MUS 2551 - Applied Music: Vocal or Instrumental Instruction 1
- MUS 2558

Complete one 1-credit course from the following: 1

- MUS 2810 - Recital / Special Project 1
- MUS 2814

Complete three different 1-credit courses from any of the following options: 3

- MUS 1751 - Small Ensemble / Combo 1
- MUS 1758
- MUS 1761 - OCC Chorale 1
- MUS 1768
- MUS 1771 - Concert Band 1
- MUS 1778
- MUS 1781 - Orchestra 1
- MUS 1788
- MUS 1791 - OCC Stage / Jazz Band 1
- MUS 1798

---

**Required Supportive Courses** 6

Complete a minimum of 6 credits from the following courses:

- MUS 1560 1 Listening to Music: ‘Classical’ to Jazz 3
- MUS 1585 1 Listening to Music: World Music 3
- MUS 1590 1 Listening to Music: Rock to Hip-Hop 3

---

**Additional Required Supportive Courses** 4

Complete a minimum of 4 credits from the following courses:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUS 1500</td>
<td>Voice I</td>
<td>2</td>
</tr>
<tr>
<td>MUS 1570</td>
<td>Guitar I</td>
<td>2</td>
</tr>
<tr>
<td>MUS 1601</td>
<td>Voice II</td>
<td>2</td>
</tr>
<tr>
<td>MUS 1611</td>
<td>Piano II</td>
<td>2</td>
</tr>
<tr>
<td>MUS 1671</td>
<td>Guitar II</td>
<td>2</td>
</tr>
<tr>
<td>MUS 2630</td>
<td>Music Theory: Jazz</td>
<td>2</td>
</tr>
<tr>
<td>MUS 2730</td>
<td>Jazz Improvisation</td>
<td>2</td>
</tr>
<tr>
<td>MUS 2740</td>
<td>Music Composition: Standard Forms</td>
<td>2</td>
</tr>
</tbody>
</table>

---

**Total Credit Hours** 62-69

1 Course may be used to meet Fine Arts / Humanities requirement.

A minimum cumulative 2.00 grade point average (GPA) overall is required for graduation.

---

**Music (MUS.CT)**

**Certificate**

**Arts and Communication**

The Music certificate is designed to provide a comprehensive foundation in music for students interested in pursuing an Associate in Arts degree with a concentration in music or for those students planning a transfer to a four-year university.

**Program Plan Example** - Click Here (https://www.oaklandcc.edu/programs/plans/mus.ct.pdf)

**Gainful Employment Disclosure** - Click Here (https://www.oaklandcc.edu/ged/docs/MUS.CT.pdf)

---

**Code** | **Title** | **Credit Hours**
---|---|---
**Major Requirements**
| MUS 1510 | Piano I | 2 |
| MUS 1521 | Fundamental Ear Training and Sight Singing | 2 |
| MUS 1530 | Fundamentals of Music | 2 |
| MUS 1620 | Ear Training and Sight Singing I | 2 |
| MUS 1630 | Music Theory I | 3 |
| MUS 2521 | Ear Training and Sight Singing II | 2 |
| MUS 2530 | Music Theory II | 3 |
| MUS 2560 | Conducting | 2 |
| MUS 2640 | Music Composition: Art Music | 2 |

Complete three different 1-credit courses from the following: 3

- MUS 2551 - Applied Music: Vocal or Instrumental Instruction 1
- MUS 2558

Complete one 1-credit course from the following: 1

- MUS 2810 - Recital / Special Project 1
- MUS 2814

Complete three different 1-credit courses from any of the following options: 3

- MUS 1751 - Small Ensemble / Combo 1
- MUS 1758
- MUS 1761 - OCC Chorale 1
- MUS 1768
- MUS 1771 - Concert Band 1
- MUS 1778
- MUS 1781 - Orchestra 1
- MUS 1788
- MUS 1791 - OCC Stage / Jazz Band 1
- MUS 1798

**Required Supportive Courses** 6

Complete a minimum of 6 credits from the following courses:

- MUS 1560 1 Listening to Music: ‘Classical’ to Jazz 3
- MUS 1585 1 Listening to Music: World Music 3
- MUS 1590 1 Listening to Music: Rock to Hip-Hop 3

---

**Additional Required Supportive Courses** 4

Complete a minimum of 4 credits from the following courses:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUS 1500</td>
<td>Voice I</td>
<td>2</td>
</tr>
<tr>
<td>MUS 1570</td>
<td>Guitar I</td>
<td>2</td>
</tr>
<tr>
<td>MUS 1601</td>
<td>Voice II</td>
<td>2</td>
</tr>
<tr>
<td>MUS 1611</td>
<td>Piano II</td>
<td>2</td>
</tr>
<tr>
<td>MUS 1671</td>
<td>Guitar II</td>
<td>2</td>
</tr>
<tr>
<td>MUS 2630</td>
<td>Music Theory: Jazz</td>
<td>2</td>
</tr>
<tr>
<td>MUS 2730</td>
<td>Jazz Improvisation</td>
<td>2</td>
</tr>
<tr>
<td>MUS 2740</td>
<td>Music Composition: Standard Forms</td>
<td>2</td>
</tr>
</tbody>
</table>

---

**Total Credit Hours** 62-69

1 Course may be used to meet Fine Arts / Humanities requirement.

A minimum cumulative 2.00 grade point average (GPA) overall is required for graduation.

---

**Music (MUS.CT)**

**Certificate**

**Arts and Communication**

The Music certificate is designed to provide a comprehensive foundation in music for students interested in pursuing an Associate in Arts degree with a concentration in music or for those students planning a transfer to a four-year university.

**Program Plan Example** - Click Here (https://www.oaklandcc.edu/programs/plans/mus.ct.pdf)

**Gainful Employment Disclosure** - Click Here (https://www.oaklandcc.edu/ged/docs/MUS.CT.pdf)
Nursing

Degrees

- Nursing (NUR.APP) (p. 72)
- Nursing - Transitional LPN to ADN Track (NUR.TPN.APP) (p. 73)

Nursing (NUR.APP)

Associate in Applied Science

Health Sciences

Highland Lakes Campus

The Associate Degree Nursing (ADN Traditional) curriculum is a 64.5 - 66.5 credit-hour program that leads to an associate in applied science degree and prepares graduates to provide direct nursing care at a beginning staff level in a variety of healthcare settings. Successful completion of the program qualifies the graduate to apply to take the National Council Licensure Examination for Registered Nurses (NCLEX-RN). Satisfactory achievement on this exam qualifies the graduate for licensure as a Registered Nurse (RN).

Registration in the nursing courses (designated 'NUR') is possible only after the student is admitted to the nursing program through a selection process. For a complete listing of the admission requirements (including HESI-A2 admission testing) and selection procedures, refer to the Nursing Admission Guide at www.oaklandcc.edu/health/nursing/docs/nursingadmissionguide.pdf. Application to the ADN program must be made by December 15 of the year preceding intended enrollment in the nursing program.

A mandatory criminal history check with fingerprinting and drug screening will be conducted on all students selected to the Nursing program prior to the start of the program, at the student's expense.

1. Conviction of a felony or conviction of any attempt to commit a felony within the fifteen years immediately preceding the date of the criminal history check; or
2. Conviction of a misdemeanor within the ten years immediately preceding the date of the criminal history check, and/or a positive drug screen will preclude eligibility for admission.

Students must obtain a grade of 'B-' or better in all required supportive courses and general education requirements and a grade of 'B-' or better in all nursing courses for successful completion of the program. For all other policies, refer to the Nursing Student Handbook.

The ADN program is accredited by the Accreditation Commission for Education in Nursing, 3343 Peachtree Road NE, Suite 850, Atlanta, GA 30326, www.acenursing.org (404) 975-5000, and has full approval of the Michigan Board of Nursing. Note: Conviction of a felony or misdemeanor may preclude eligibility for licensure. For more information contact the Michigan Board of Nursing, (517) 335-0918.

In addition to the regular tuition, Nursing students incur extra costs including, but not limited to: health examination, uniforms, required vaccinations, supplies, travel, and certification fees. For further details contact the Nursing Department at (248) 942-3333.

Program Webpage - Click Here (https://www.oaklandcc.edu/health/nursing/default.aspx)

Program Plan Example - Click Here (https://www.oaklandcc.edu/programs/plans/nur.app.pdf)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>NUR 1290</td>
<td>Pharmacology for Nurses</td>
<td>2</td>
</tr>
<tr>
<td>NUR 1410</td>
<td>Foundations of Nursing</td>
<td>7</td>
</tr>
<tr>
<td>NUR 1450</td>
<td>Clinical Skills</td>
<td>0.5</td>
</tr>
<tr>
<td>NUR 1460</td>
<td>Integrated Physical Assessment and Decision Making Skills I</td>
<td>0.5</td>
</tr>
<tr>
<td>NUR 1470</td>
<td>Integrated Physical Assessment and Decision Making Skills II</td>
<td>0.5</td>
</tr>
<tr>
<td>NUR 1510</td>
<td>Nursing of the Childbearing Family</td>
<td>4</td>
</tr>
<tr>
<td>NUR 1520</td>
<td>Nursing of Adults - Mental Health and Maladaptive Behavior</td>
<td>4</td>
</tr>
<tr>
<td>NUR 1530</td>
<td>Nursing of Adults I</td>
<td>4</td>
</tr>
<tr>
<td>NUR 2510</td>
<td>Nursing of Children and Families</td>
<td>4</td>
</tr>
<tr>
<td>NUR 2520</td>
<td>Nursing of Adults II</td>
<td>4</td>
</tr>
<tr>
<td>NUR 2530</td>
<td>Nursing of Adults III</td>
<td>4</td>
</tr>
<tr>
<td>NUR 2540</td>
<td>Transition to the Graduate Nurse Role</td>
<td>4</td>
</tr>
</tbody>
</table>

Required Supportive Courses

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 2630</td>
<td>Human Anatomy and Physiology I</td>
<td>4</td>
</tr>
<tr>
<td>BIO 2640</td>
<td>Human Anatomy and Physiology II</td>
<td>4</td>
</tr>
<tr>
<td>ENG 1510</td>
<td>Composition I</td>
<td>3</td>
</tr>
<tr>
<td>PSY 2510</td>
<td>Introduction to Psychology</td>
<td>3</td>
</tr>
</tbody>
</table>

Select one of the following BIO courses: 3-4

- BIO 1570 Microbiology of Health and Disease 3
or

BIO 2710 Microbiology 4

Select one of the following ENG courses: 3-4

ENG 1520 Composition II 3

or

ENG 2200 Professional Communication 4

Total Credit Hours for Program-Related Courses 58.5-60.5

General Education Requirements

Communication / English (3-credits)

Satisfied

Fine Arts / Humanities (3-credits) 3

Complete 3 credits from Fine Arts/Humanities courses listed in the General Education Distribution List (p. 8)

Mathematics / Science (3-credits) 0

or

3

Satisfied if BIO 1570 is selected as a Required Supportive Course; otherwise, complete 3 credits from Mathematics/Science courses listed in the General Education Distribution List (p. 9)

Social Science (3-credits)

Satisfied

Written Communication (3-credits)

Satisfied

Additional elective credits needed to meet requirements for an Associate in Applied Science degree 0-5

Total Credit Hours 62-66.5

1 Course may be used to meet General Education requirements.

2 BIO-2710 does not satisfy General Education requirements. Student must complete 3 credits from the Mathematics/Science General Education Distribution List.

A minimum cumulative 2.00 grade point average (GPA) overall is required for graduation.

Nursing - Transitional LPN to ADN Track (NUR.TPN.APP)

Associate in Applied Science

Health Sciences

Highland Lakes Campus

Oakland Community College Department of Nursing offers Licensed Practical Nurses (LPN) an opportunity to earn an Associate in Applied Science degree upon selection to the Transitional LPN to ADN track (TPN). The course of study combines general education in the humanities and the biological, behavioral, and social sciences with instruction in the theory and practice of nursing. The program is designed to prepare practitioners to give care at a beginning staff level in a variety of healthcare settings. Successful completion of the program qualifies the graduate to apply to write the National Licensure Examination for Registered Nurses (NCLEX-RN). Satisfactory achievement on this exam qualifies the graduate for licensure as a Registered Nurse (RN).

Registration in the nursing courses (designated 'NUR') is possible only after the student is admitted to the nursing program through a selection process. For a complete listing of the admission requirements (including HESI-A2 admission testing) and selection procedures, refer to the Nursing Admission Guide at www.oaklandcc.edu/health/nursing/docs/NursingAdmissionGuide.pdf or http://www.acenursing.org. Application to the TPN track must be made by March 1 of the year preceding intended enrollment in the nursing program.

A mandatory criminal history check with fingerprinting and drug screening will be conducted on all students selected to the Nursing program prior to the start of the program, at the student’s expense.

1. Conviction of a felony or conviction of any attempt to commit a felony within the fifteen years immediately preceding the date of the criminal history check; or

2. Conviction of a misdemeanor within the ten years immediately preceding the date of the criminal history check, and/or a positive drug screen will preclude eligibility for admission.

Students must obtain a grade of 'B-' or better in all required supportive courses and general education requirements and a grade of 'B-' or better in all nursing courses for successful completion of the program. For all other policies, refer to the Nursing Student Handbook.

The ADN program is accredited by the Accreditation Commission for Education in Nursing, 3343 Peachtree Road NE, Suite 850, Atlanta, GA 30326, www.acenursing.org, (404) 975-5000, and has full approval of the Michigan Board of Nursing. Note: Conviction of a felony or misdemeanor may preclude eligibility for licensure. For more information contact the Michigan Board of Nursing, (517) 335-0918.

In addition to the regular tuition, Nursing students incur extra costs including, but not limited to; health examination, uniforms, required vaccinations, supplies, travel, and certification fees. For further details contact the Nursing Department at (248) 942-3333.

Program Webpage - Click Here (https://www.oaklandcc.edu/health/nursing/default.aspx)

Program Plan Example - Click Here (https://www.oaklandcc.edu/programs/plans/nur.tpn.app.pdf)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>NUR 1290</td>
<td>Pharmacology for Nurses</td>
<td>2</td>
</tr>
<tr>
<td>NUR 1460</td>
<td>Integrated Physical Assessment and Decision Making Skills I</td>
<td>0.5</td>
</tr>
<tr>
<td>NUR 1470</td>
<td>Integrated Physical Assessment and Decision Making Skills II</td>
<td>0.5</td>
</tr>
<tr>
<td>NUR 1520</td>
<td>Nursing of Adults - Mental Health and Maladaptive Behavior</td>
<td>4</td>
</tr>
<tr>
<td>NUR 1811</td>
<td>Foundations for the Transition to the Registered Nurse Role</td>
<td>5</td>
</tr>
<tr>
<td>NUR 1812</td>
<td>Child Bearing Foundations for the Transition to the Registered Nurse Role</td>
<td>2</td>
</tr>
<tr>
<td>NUR 2510</td>
<td>Nursing of Children and Families</td>
<td>4</td>
</tr>
<tr>
<td>NUR 2520</td>
<td>Nursing of Adults II</td>
<td>4</td>
</tr>
<tr>
<td>NUR 2530</td>
<td>Nursing of Adults III</td>
<td>4</td>
</tr>
<tr>
<td>NUR 2540</td>
<td>Transition to the Graduate Nurse Role</td>
<td>4</td>
</tr>
</tbody>
</table>
Occupational Therapy Assistant

Reciprocal Program

- Occupational Therapy Assistant (OTA.MCC.REC) (p. 74)

Occupational Therapy Assistant (OTA.MCC.REC)

Oakland Community College/Macomb Community College

Reciprocal Program

Restricted

Required Supportive Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 2630</td>
<td>4</td>
</tr>
<tr>
<td>BIO 2640</td>
<td>4</td>
</tr>
<tr>
<td>ENG 1510</td>
<td>3</td>
</tr>
<tr>
<td>PSY 2510</td>
<td>3</td>
</tr>
</tbody>
</table>

Select one of the following BIO courses:

- BIO 1570 Microbiology of Health and Disease 3
- BIO 2710 Microbiology 4

Select one of the following ENG courses:

- ENG 1520 Composition II 3
- ENG 2200 Professional Communication 4

Total Credit Hours for Program-Related Courses 74

General Education Requirements

Communication / English (3-credits)

- Satisfied

Fine Arts / Humanities (3-credits)

- Complete 3 credits from Fine Arts/Humanities courses listed in the General Education Distribution List (p. 8)

Mathematics / Science (3-credits)

- 0 or 3

Satisfied if BIO 1570 is selected as a Required Supportive Course; otherwise, complete 3 credits from Mathematics/Science courses listed in the General Education Distribution List (p. 9)

Social Science (3-credits)

- Satisfied

Written Communication (3-credits)

- Satisfied

Additional elective credits needed to meet requirements for an Associate in Applied Science degree 4-9

Total Credit Hours 50-52

Occupational Therapy Assistant

An Occupational Therapy Assistant works under the supervision of a registered Occupational Therapist to provide skilled treatment to individuals of all ages with physical, developmental, social and emotional problems. OT Assistants help these people achieve the independence necessary to perform the activities of daily living.

Oakland Community College and Macomb Community College have established reciprocal arrangements for the Occupational Therapist Assistant (OTA), Physical Therapist Assistant (PTA) and the Veterinary Technician (VET) programs. Although the specialized courses for the programs are given at Macomb South Center Campus, Clinton Twp., students who complete the required specific credit hours at OCC and are Oakland County Residents are eligible to participate in this reciprocal arrangement. This means that upon completion of the courses at OCC and acceptance into the Macomb Community College’s Occupational Therapist Assistant (OTA) Physical Therapist Assistant (PTA) or Veterinary Technician (VET) program, the student will take all the OTA, PTA or VET courses at MCC and will pay in in-district tuition to Macomb Community College. Graduates of these reciprocal programs earn an associate in applied science degree from Macomb Community College.

After the required credit hours for the student’s chosen program are completed at Oakland Community College, the student should proceed with the application process for completion of this degree through Macomb Community College.

To Apply:

1. Apply to Oakland Community College.
2. Declare OTA.MCC.REC as your curriculum.
3. Take the ACCUPLACER Test, all three parts - Reading, Writing and Elementary Algebra, at Macomb Community College. Testing deadline for program entry is February 15th each year. These scores are used by Macomb as part of their selective admissions process. Additionally, for all selective admissions, Macomb Community College requires HESI testing. Please call (586) 445-7423 to schedule a test date.
4. Complete the credit hours required for your program of choice. Students must be currently enrolled in their final term of prerequisite courses or have them completed with grades posted before seeking a referral form from the Health Sciences Program Director/Counseling at the Southfield Campus.
5. Contact the Southfield Campus of Oakland Community College before February 1 if you wish to be considered for admission to Macomb Community College for the following September. For Example: if you wish to be considered for admission to MCC for September/Fall of the next academic year, you must contact the Health Sciences Department at (248) 233-2917 before January 15 of the current academic year for the referral form before applying to MCC.

For further information about preparation for the reciprocal arrangement programs, contact the Oakland Community College Health Sciences Office at Southfield Campus, (248) 233-2917 or a counselor on any OCC campus. For further information specific to any reciprocal program contact: Macomb Community College, Health and Human Services at (586) 286-2097.
Prerequisite courses to be taken at Oakland Community College

Students must complete a minimum of 19 credit hours at Oakland Community College which include the following courses:

Program Plan Example - Not Available

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 2630</td>
<td>Human Anatomy and Physiology I</td>
<td>4</td>
</tr>
<tr>
<td>BIO 2640</td>
<td>Human Anatomy and Physiology II</td>
<td>4</td>
</tr>
<tr>
<td>ENG 1510</td>
<td>Composition I</td>
<td>3</td>
</tr>
<tr>
<td>HHSC 1030</td>
<td>Introduction to Occupational Therapy</td>
<td>2</td>
</tr>
<tr>
<td>PHI 1610</td>
<td>Ethics</td>
<td>3</td>
</tr>
<tr>
<td>PSY 2510</td>
<td>Introduction to Psychology</td>
<td>3</td>
</tr>
</tbody>
</table>

Complete one of the following PER courses:

- PER 1300 Stress Management: Neuromuscular Relaxation 2
- PER 1590 Physical Well-Being in a Modern Society 2

Total Credit Hours 19

1. In order to participate in this reciprocal arrangement, the student must be an 'in-district' (live in Oakland County) OCC student. OCC students who are not in-district students should apply directly to Macomb Community College if interested in any of the reciprocal programs.

2. ACCUPLACER minimum score requirement: Reading: 78, Writing: 5, Elementary Algebra: 50

3. Please note there is a fee for retesting at MCC.

4. This course must be taken at Macomb Community College (MCC).

Requirements for acceptance to the program

- Complete all Required Supportive courses with a grade point average of 2.5 or higher.
- Complete ENG 1510, ENG 1520, BUS 2030, and BUS 2040 with a grade of C+ or higher.
- Be interviewed by the PLG program Coordinator. This interview should be scheduled as soon as possible once the student declares a PLG Major but must be scheduled prior to the student's enrollment in the first course sequence within the program.

The American Bar Association also requires that any course substitutions be approved before starting the PLG program of study. Students should see a counselor to initiate this process.

Program Webpage - Click Here (https://www.oaklandcc.edu/programs/plg/default.aspx)

Program Plan Example - Click Here (https://www.oaklandcc.edu/programs/plans/plg.aas.pdf)

Paralegal

Degree

- Paralegal (PLG.APP) (p. 75)

Certificate

- Paralegal - Post-Bachelor Degree Professional Paralegal (PLG.CT) (p. 76)

Paralegal (PLG.APP)

Associate in Applied Science

Business, Management, Marketing and Technology

Orchard Ridge Campus

The Paralegal program leads to an associate in applied science degree. The program is designed to provide the legal profession with qualified paraprofessionals who will perform legal research, aid in discovery and analyze evidence in preparation for litigation in the various court systems at the local, state and national levels.

Major Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLG 2100</td>
<td>Legal Research</td>
<td>3</td>
</tr>
<tr>
<td>PLG 2110</td>
<td>Litigation</td>
<td>4</td>
</tr>
<tr>
<td>PLG 2120</td>
<td>Legal Writing</td>
<td>4</td>
</tr>
<tr>
<td>PLG 2130</td>
<td>Substantive Law</td>
<td>4</td>
</tr>
<tr>
<td>PLG 2140</td>
<td>Trial Preparation</td>
<td>3</td>
</tr>
<tr>
<td>PLG 2160</td>
<td>Legal Ethics</td>
<td>2</td>
</tr>
</tbody>
</table>

Complete one of the following Special Topics courses (See Special Topics list below):

- PLG 2601 - PLG 2615

Required Supportive Courses

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIS 1050</td>
<td>Personal Computer Productivity Tools</td>
<td>4</td>
</tr>
<tr>
<td>BUS 2030</td>
<td>Business Law I</td>
<td>3</td>
</tr>
<tr>
<td>BUS 2040</td>
<td>Business Law II</td>
<td>3</td>
</tr>
<tr>
<td>ENG 1510</td>
<td>Composition I</td>
<td>3</td>
</tr>
<tr>
<td>ENG 1520</td>
<td>Composition II</td>
<td>3</td>
</tr>
</tbody>
</table>

Complete one of the following COM courses:

- COM 1290 Interpersonal Communication 3
- COM 1600 Fundamentals of Speech 3

Recommended Electives

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 1100</td>
<td>Introduction to Business</td>
<td>4</td>
</tr>
<tr>
<td>PLG 2510</td>
<td>Paralegal Internship</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credit Hours for Program-Related Courses 41

General Education Requirements

Communication / English (3-credits)

- Satisfied

Fine Arts / Humanities (3-credits)

- Complete 3 credits from Fine Arts/Humanities courses listed in the General Education Distribution List (p. 8)

Mathematics / Science (3-credits)

- Complete 3 credits from Mathematics/Science courses listed in the General Education Distribution List (p. 9)
Social Science (3-credits)

Complete 3 credits from Social Science courses listed in the General Education Distribution List (p. 10)

Written Communication (3-credits)

Satisfied

Additional elective credits needed to meet requirements for an Associate in Applied Science degree 12

Total Credit Hours 62

1 Course may be used to meet General Education requirement.

A minimum cumulative 2.00 grade point average (GPA) overall is required for graduation.

NOTE: A Paralegal is not licensed to practice law but does perform specifically delegated substantive legal work for which a lawyer is responsible. Paralegals are bound to the same recognized ethical standards and rules of professional responsibility as a lawyer. Paralegals may not provide legal services directly to the public except as permitted by law.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLG 2601</td>
<td>Special Topics: Bankruptcy</td>
<td>2</td>
</tr>
<tr>
<td>PLG 2602</td>
<td>Special Topics: Criminal Law</td>
<td>2</td>
</tr>
<tr>
<td>PLG 2603</td>
<td>Special Topics: Employment Law</td>
<td>2</td>
</tr>
<tr>
<td>PLG 2604</td>
<td>Special Topics: Immigration Law</td>
<td>2</td>
</tr>
<tr>
<td>PLG 2605</td>
<td>Special Topics: Family Law</td>
<td>2</td>
</tr>
<tr>
<td>PLG 2606</td>
<td>Special Topics: Probate Law</td>
<td>2</td>
</tr>
<tr>
<td>PLG 2607</td>
<td>Special Topics: Intellectual Property</td>
<td>2</td>
</tr>
<tr>
<td>PLG 2608</td>
<td>Special Topics: Real Estate</td>
<td>2</td>
</tr>
<tr>
<td>PLG 2609</td>
<td>Special Topics: Business Organizations</td>
<td>2</td>
</tr>
<tr>
<td>PLG 2611</td>
<td>Special Topics: Legal Technology</td>
<td>2</td>
</tr>
<tr>
<td>PLG 2612</td>
<td>Special Topics</td>
<td>2</td>
</tr>
<tr>
<td>PLG 2613</td>
<td>Special Topics</td>
<td>2</td>
</tr>
<tr>
<td>PLG 2614</td>
<td>Special Topics</td>
<td>2</td>
</tr>
<tr>
<td>PLG 2615</td>
<td>Special Topics</td>
<td>2</td>
</tr>
</tbody>
</table>

Paralegal - Post-Bachelor Degree Professional Paralegal (PLG.CT)

Certificate

Business, Management, Marketing and Technology

Orchard Ridge Campus

The Paralegal certificate leads to a Post-Bachelor Degree Professional Paralegal certificate. This program is designed to provide the legal profession with qualified paraprofessionals who will perform legal research, aid in discovery and analyze evidence in preparation for litigation in the various court systems at the local, state and national levels. Students may participate in an internship as part of their training.

To qualify for a Paralegal certificate, the student must have completed a bachelor degree from a regionally accredited four-year institution of higher learning and must complete the courses listed as Paralegal Major Requirements below.

Requirements for acceptance into the program

Prior to the student's enrollment in the first course sequence within the program, the student must complete an interview with the PLG Program Coordinator.

Program Webpage - Click Here (https://www.oaklandcc.edu/programs/plg/default.aspx)

Program Plan Example - Click Here (https://www.oaklandcc.edu/programs/plans/plg.ct.pdf)

Gainful Employment Disclosure - Click Here (https://www.oaklandcc.edu/ged/docs/PLG.CT.pdf)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLG 2601</td>
<td>Special Topics: Bankruptcy</td>
<td>2</td>
</tr>
<tr>
<td>PLG 2602</td>
<td>Special Topics: Criminal Law</td>
<td>2</td>
</tr>
<tr>
<td>PLG 2603</td>
<td>Special Topics: Employment Law</td>
<td>2</td>
</tr>
<tr>
<td>PLG 2604</td>
<td>Special Topics: Immigration Law</td>
<td>2</td>
</tr>
<tr>
<td>PLG 2605</td>
<td>Special Topics: Family Law</td>
<td>2</td>
</tr>
<tr>
<td>PLG 2606</td>
<td>Special Topics: Probate Law</td>
<td>2</td>
</tr>
<tr>
<td>PLG 2607</td>
<td>Special Topics: Intellectual Property</td>
<td>2</td>
</tr>
</tbody>
</table>

Paralegal - Post-Bachelor Degree Professional Paralegal (PLG.CT)

Certificate

Business, Management, Marketing and Technology

Orchard Ridge Campus

The Paralegal certificate leads to a Post-Bachelor Degree Professional Paralegal certificate. This program is designed to provide the legal profession with qualified paraprofessionals who will perform legal research, aid in discovery and analyze evidence in preparation for litigation in the various court systems at the local, state and national levels. Students may participate in an internship as part of their training.

To qualify for a Paralegal certificate, the student must have completed a bachelor degree from a regionally accredited four-year institution of higher learning and must complete the courses listed as Paralegal Major Requirements below.

Requirements for acceptance into the program

Prior to the student's enrollment in the first course sequence within the program, the student must complete an interview with the PLG Program Coordinator.

Program Webpage - Click Here (https://www.oaklandcc.edu/programs/plg/default.aspx)

Program Plan Example - Click Here (https://www.oaklandcc.edu/programs/plans/plg.ct.pdf)

Gainful Employment Disclosure - Click Here (https://www.oaklandcc.edu/ged/docs/PLG.CT.pdf)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLG 2601</td>
<td>Special Topics: Bankruptcy</td>
<td>2</td>
</tr>
<tr>
<td>PLG 2602</td>
<td>Special Topics: Criminal Law</td>
<td>2</td>
</tr>
<tr>
<td>PLG 2603</td>
<td>Special Topics: Employment Law</td>
<td>2</td>
</tr>
<tr>
<td>PLG 2604</td>
<td>Special Topics: Immigration Law</td>
<td>2</td>
</tr>
<tr>
<td>PLG 2605</td>
<td>Special Topics: Family Law</td>
<td>2</td>
</tr>
<tr>
<td>PLG 2606</td>
<td>Special Topics: Probate Law</td>
<td>2</td>
</tr>
<tr>
<td>PLG 2607</td>
<td>Special Topics: Intellectual Property</td>
<td>2</td>
</tr>
</tbody>
</table>
Photographic Technology

Degree

- Photographic Technology (PHT.AAS) (p. 77)

Certificate

- Photographic Technology (PHT.CT) (p. 77)

Photographic Technology (PHT.AAS)

Associate in Applied Science

Arts and Communication

Orchard Ridge and Royal Oak Campuses

This program provides professional and technical experience in still black and white, color and digital photography. Emphasis is on developing skills necessary for graduates to be employed as photographers, photographic assistants and lab technicians in business, industry, advertising, journalism, medical institutions, studios and schools. Graduates may also be self-employed as professional photographers and retailers.

Program Plan Example - Click Here (https://www.oaklandcc.edu/programs/plans/pht.aas.pdf)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHO 1220</td>
<td>Fundamentals of Photography</td>
<td>3</td>
</tr>
<tr>
<td>PHO 1500</td>
<td>Advanced Photography</td>
<td>3</td>
</tr>
<tr>
<td>PHO 1550</td>
<td>History of Photography</td>
<td>3</td>
</tr>
<tr>
<td>PHO 1700</td>
<td>Beginning Digital Photography</td>
<td>4</td>
</tr>
<tr>
<td>PHO 2050</td>
<td>Studio Photography</td>
<td>3</td>
</tr>
<tr>
<td>PHO 2100</td>
<td>Color Photography</td>
<td>3</td>
</tr>
<tr>
<td>PHO 2110</td>
<td>Advanced Color Photography</td>
<td>3</td>
</tr>
<tr>
<td>PHO 2700</td>
<td>Advanced Digital Photography</td>
<td>4</td>
</tr>
</tbody>
</table>

Complete one of the following courses:

- PHO 2402 Special Projects in Photography 2
- PHO 2403 Special Projects in Photography 3
- PHO 2404 Special Projects in Photography 4

Total Credit Hours for Program-Related Courses 48-54

General Education Requirements

Communication / English (3-credits)

Satisfied if COM 1290 is selected as a Secondary Requirement; otherwise, complete 3 credits from Communication / English courses listed in the General Education Distribution List (p. 8)

Fine Arts / Humanities (3-credits)

Satisfied

Mathematics / Science (3-credits)

Complete 3 credits from Mathematics/Science courses listed in the General Education Distribution List (p. 9)

Social Science (3-credits)

Complete 3 credits from Social Science courses listed in the General Education Distribution List (p. 10)

Written Communication (3-credits)

Complete 3 credits from Written Communication courses listed in the General Education Distribution List (p. 10)

Additional elective credits needed to meet requirements for an Associate in Applied Science degree 0-5

Total Credit Hours 62-66

1 Course may be used to meet General Education requirements.

A minimum cumulative 2.00 grade point average (GPA) overall is required for graduation.

Photographic Technology (PHT.CT)

Certificate

Arts and Communication

Orchard Ridge and Royal Oak Campuses
This program provides professional and technical experience in still black and white, color and digital photography. Emphasis is on developing skills necessary for graduates to be employed as photographers, photographic assistants and lab technicians in business, industry, advertising, journalism, medical institutions, studios and schools. Graduates may also be self-employed as professional photographers and retailers.

**Program Plan Example** - Click Here (https://www.oaklandcc.edu/programs/plans/pht.ct.pdf)

**Gainful Employment Disclosure** - Click Here (https://www.oaklandcc.edu/ged/docs/PHT.CT.pdf)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHO 1220</td>
<td>Fundamentals of Photography</td>
<td>3</td>
</tr>
<tr>
<td>PHO 1500</td>
<td>Advanced Photography</td>
<td>3</td>
</tr>
<tr>
<td>PHO 1550</td>
<td>History of Photography</td>
<td>3</td>
</tr>
<tr>
<td>PHO 1700</td>
<td>Beginning Digital Photography</td>
<td>4</td>
</tr>
<tr>
<td>PHO 2050</td>
<td>Studio Photography</td>
<td>3</td>
</tr>
<tr>
<td>PHO 2100</td>
<td>Color Photography</td>
<td>3</td>
</tr>
<tr>
<td>PHO 2110</td>
<td>Advanced Color Photography</td>
<td>3</td>
</tr>
<tr>
<td>PHO 2700</td>
<td>Advanced Digital Photography</td>
<td>4</td>
</tr>
</tbody>
</table>

Complete one of the following courses: 2-4

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHO 2402</td>
<td>Special Projects in Photography</td>
<td>2</td>
</tr>
<tr>
<td>PHO 2403</td>
<td>Special Projects in Photography</td>
<td>3</td>
</tr>
<tr>
<td>PHO 2404</td>
<td>Special Projects in Photography</td>
<td>4</td>
</tr>
</tbody>
</table>

Complete one of the following courses: 2-3

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHO 2452</td>
<td>Special Projects in Digital Photography</td>
<td>2</td>
</tr>
<tr>
<td>PHO 2453</td>
<td>Special Projects in Digital Photography</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credit Hours: 30-33

A minimum cumulative 2.00 grade point average (GPA) overall is required for graduation.

**Physical Therapist Assistant Reciprocal Program**

- Physical Therapist Assistant (PTA.MCC.REC) (p. 78)

**Physical Therapist Assistant (PTA.MCC.REC)**

### Reciprocal Program

**Oakland Community College/Macomb Community College**

**Health Sciences**

**Restricted**

The Physical Therapist Assistant works within a physical therapy service under the supervision of a professional Physical Therapist. The student assists the Physical Therapist in performing selected procedures relating to the use of therapeutic exercise, applying heat and cold, performing measurements for various assistive devices (crutches, canes, etc.), instructing and motivating patients and families, testing gross muscle strength and measuring joint range of motion. A Physical Therapist Assistant may work in a hospital, a clinic, a rehabilitation center, a long-term facility and in patients’ homes.

Oakland Community College and Macomb Community College have established reciprocal arrangements for the Occupational Therapist Assistant (OTA), Physical Therapist Assistant (PTA) and the Veterinary Technician (VET) programs. Although the specialized courses for the programs are given at Macomb South Center Campus, Clinton Twp., students who complete the required specific credit hours at OCC and are Oakland County Residents are eligible to participate in this reciprocal arrangement. This means that upon completion of the courses at OCC and acceptance into the Macomb Community College’s Occupational Therapist Assistant (OTA) Physical Therapist Assistant (PTA) or Veterinary Technician (VET) program, the student will take all the OTA, PTA or VET courses at MCC and will pay in-district tuition to Macomb Community College. Graduates of these reciprocal programs earn an associate in applied science degree from Macomb Community College.

After the required credit hours for the student’s chosen program are completed at Oakland Community College, the student should proceed with the application process for completion of this degree through Macomb Community College.

To Apply:

1. Apply to Oakland Community College.
2. Declare PTA.MCC.REC as your curriculum.
3. Take the ACCUPLACER Test, all three parts - Reading, Writing and Elementary Algebra, at Macomb Community College. Testing deadline for program entry is February 15th each year. These scores are used by Macomb as part of their selective admissions process. Additionally, for all selective admissions, Macomb Community College requires HESI testing. Please call (586) 445-7423 to schedule a test date.
4. Complete the credit hours required for your program of choice. Students must be currently enrolled in their final term of prerequisite courses or have them completed with grades posted before seeking a referral form from the Health Sciences Program Director/Counseling at the Southfield Campus.
5. Contact the Southfield Campus of Oakland Community College before February 1 if you wish to be considered for admission to Macomb Community College for the following September. For Example: if you wish to be considered for admission to MCC for September/Fall of the next academic year, you must contact the Health Sciences Department at (248) 233-2917 before January 15 of the current academic year for the referral form before applying to MCC.

For further information about preparation for the reciprocal arrangement programs, contact the Oakland Community College Health Sciences Office at Southfield Campus, (248) 233-2917 or a counselor on any OCC campus. For further information specific to any reciprocal program contact: Macomb Community College, Health and Human Services at (586) 286-2097.
Prerequisite courses to be taken at Oakland Community College

Students must complete a minimum of 19 credit hours at Oakland Community College which include the following courses:

Program Plan Example - Not Available

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 2630</td>
<td>Human Anatomy and Physiology I</td>
<td>4</td>
</tr>
<tr>
<td>BIO 2640</td>
<td>Human Anatomy and Physiology II</td>
<td>4</td>
</tr>
<tr>
<td>ENG 1510</td>
<td>Composition I</td>
<td>3</td>
</tr>
<tr>
<td>PSY 2510</td>
<td>Introduction to Psychology</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Complete one of the following courses:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>HUM 1710 World Religions</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>or</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PHI 1610 Ethics</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Complete one of the following PER courses:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PER 1300 Stress Management: Neuromuscular Relaxation</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>or</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PER 1590 Physical Well-Being in a Modern Society</td>
<td>2</td>
</tr>
</tbody>
</table>

Total Credit Hours 19

1 In order to participate in this reciprocal arrangement, the student must be an ‘in-district’ (live in Oakland County) OCC student. OCC students who are not in-district students should apply directly to Macomb Community College if interested in any of the reciprocal programs.

2 ACCUPLACER minimum score requirement: Reading: 70, Writing: 5, Elementary Algebra: 45

3 Please note there is a fee for retesting at MCC.

Radiologic Technology

Degree

- Radiologic Technology (RAL.APP) (p. 79)

Radiologic Technology (RAL.APP)

Extended Degree – Associate in Applied Science

Health Sciences

Southfield Campus

The Radiologic Technology program leads to an associate in applied science degree and is designated as an extended degree program in that students must complete a minimum of 73 or more required credit hours. The program prepares selected individuals through theory and clinical experiences to practice safely and ethically as a Radiologic Technologist in a variety of health care settings. Successful completion of the program, fulfills the American Registry of Radiologic Technologists (ARRT) educational requirement necessary to apply to take the national credentialing examination offered by the ARRT. Satisfactory achievement on this examination qualifies the graduate to practice as a Certified and Registered Radiologic Technologist, R.T. (R).

Certified and Registered Radiologic Technologists who do not have a college degree may enroll in the required supportive and general education courses as outlined in the college catalog. Applicants will be granted a degree upon successful completion of the requirements.

The course of study combines general education in the humanities, biological, and behavioral sciences with instruction in the theory and practice of radiologic technology. All Major Requirement (RAD) courses must be completed with a grade of "C" or higher.

Program Admission Procedures

Students must first be admitted to the college and must designate radiologic technology (RAL.APP) as their curriculum. Admission to the college does not guarantee admission to the Radiologic Technology program. Each year, a limited number of students are admitted through a selection procedure. Basic admission requirements include:

- High school diploma or completion of GED
- Declaration of Radiologic Technology as the designated curriculum choice.
- Attendance at an Information Session.
- Completion of all Required Supportive courses with a grade of “B” or higher.
- Completion of General Education requirements with a grade of “B” or higher.
- Apply to the program with a counselor at the Southfield campus by March 1st.
- Attendance at a Record Review session - March.

Students who are eligible for the program are notified in writing no later than June 1. All requirements and procedures for admission as outlined in the Radiologic Technology Information Sessions must be completed by April 30 of the year in which the student is intended to enroll in the program.

In order to be eligible to take the national credentialing examination administered by the American Registry of Radiologic Technologists, students must successfully complete all requirements of the program.

The Radiologic Technology program is accredited by the Joint Review Committee on Education in Radiologic Technology (JRCERT).

A mandatory criminal history check with fingerprinting and drug screening will be conducted on all students selected to the Radiologic Technology program, prior to the start of the program, at the student's expense.

1. Conviction of a felony or conviction of any attempt to commit a felony within the 15 years immediately preceding the date of the criminal history check; or
2. Conviction of a misdemeanor within the 10 years immediately preceding the criminal history check, or
3. A positive drug screen will preclude eligibility for admission.

In addition to the regular tuition, Radiography students incur extra costs including, but not limited to; books, liability insurance, health examination, uniforms, supplies, required vaccinations, CPR, travel, registry application and certification fees. For further details contact the Health Sciences Department at (248) 233-2916.

Program Webpage - Click Here (https://www.oaklandcc.edu/health/radiologic-technology/default.aspx)
Program Plan Example - Click Here (https://www.oaklandcc.edu/programs/plans/ral.aasx.pdf)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>RAD 2000</td>
<td>Introduction to Radiologic Technology</td>
<td>2</td>
</tr>
<tr>
<td>RAD 2009</td>
<td>Radiographic Procedures I</td>
<td>2</td>
</tr>
<tr>
<td>RAD 2011</td>
<td>Procedures Lab I</td>
<td>1</td>
</tr>
<tr>
<td>RAD 2021</td>
<td>Radiographic Procedures II</td>
<td>2</td>
</tr>
<tr>
<td>RAD 2022</td>
<td>Procedures Lab II</td>
<td>1</td>
</tr>
<tr>
<td>RAD 2030</td>
<td>Advanced Radiographic Procedures</td>
<td>2</td>
</tr>
<tr>
<td>RAD 2033</td>
<td>Procedures Lab III</td>
<td>1</td>
</tr>
<tr>
<td>RAD 2080</td>
<td>Radiation Physics</td>
<td>3</td>
</tr>
<tr>
<td>RAD 2088</td>
<td>Clinical Practice I</td>
<td>4</td>
</tr>
<tr>
<td>RAD 2110</td>
<td>Radiographic Exposure/Quality Assurance And Imaging Systems</td>
<td>3</td>
</tr>
<tr>
<td>RAD 2120</td>
<td>Radiologic Pathology</td>
<td>2</td>
</tr>
<tr>
<td>RAD 2140</td>
<td>Radiation Protection/Radiation Biology</td>
<td>3</td>
</tr>
<tr>
<td>RAD 2199</td>
<td>Clinical Practice II</td>
<td>6</td>
</tr>
<tr>
<td>RAD 2220</td>
<td>Radiation Seminar</td>
<td>2</td>
</tr>
<tr>
<td>RAD 2244</td>
<td>Clinical Practice III</td>
<td>5</td>
</tr>
<tr>
<td>RAD 2266</td>
<td>Clinical Practice IV</td>
<td>8</td>
</tr>
<tr>
<td>RAD 2277</td>
<td>Clinical Practice V</td>
<td>8</td>
</tr>
</tbody>
</table>

Required Supportive Courses

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 2630</td>
<td>Human Anatomy and Physiology I</td>
<td>4</td>
</tr>
<tr>
<td>BIO 2640</td>
<td>Human Anatomy and Physiology II</td>
<td>4</td>
</tr>
<tr>
<td>CIS 1000</td>
<td>Computer Literacy</td>
<td>1</td>
</tr>
<tr>
<td>ENG 1510</td>
<td>Composition I</td>
<td>3</td>
</tr>
<tr>
<td>MDA 1103</td>
<td>Medical Terminology</td>
<td>3</td>
</tr>
<tr>
<td>MDA 1350</td>
<td>Medical Law and Ethics</td>
<td>3</td>
</tr>
<tr>
<td>PHY 1610</td>
<td>College Physics I</td>
<td>4</td>
</tr>
<tr>
<td>PSY 2510</td>
<td>Introduction to Psychology</td>
<td>3</td>
</tr>
<tr>
<td>ENG 1520</td>
<td>Composition II</td>
<td>3</td>
</tr>
<tr>
<td>ENG 2200</td>
<td>Professional Communication</td>
<td>4</td>
</tr>
</tbody>
</table>

Total Credit Hours for Program-Related Courses 83-84

General Education Requirements

Communication / English (3-credits)

- Satisfied

Fine Arts / Humanities (3-credits)

- Complete 3 credits from Fine Arts/Humanities courses listed in the General Education Distribution List (p. 8)

Mathematics / Science (3-credits)

- Satisfied

Social Science (3-credits)

- Satisfied

Written Communication (3-credits)

- Satisfied

Total Credit Hours 86-87

Respiratory Therapy Degree

- Respiratory Therapy (RSP.APP) (p. 80)

Respiratory Therapy (RSP.APP)

Extended Degree – Associate in Applied Science

Health Sciences

Southfield Campus

This program leads to an Associate in Applied Science Degree and is designated as an Extended Degree Program in that the student must complete a minimum of 73 or more required credit hours.

The Respiratory Therapy Program is accredited by the Commission on Accreditation for Respiratory Care, www.coarc.com (http://www.coarc.com) and is an entry-level program. Our goal is to prepare students to be competent registered respiratory therapists upon completion of this program.

The first year consists of pre-respiratory therapy courses and the second year consists of both theory and clinical experience specific to respiratory care of patients in hospitals, extended care facilities, or outpatient clinics. For admission to the second year of the program, see Program Admission Procedures below.

Program Admission Procedures

Students must first be admitted to the college and must declare Respiratory Therapy (RSP) as their curriculum. Each year a limited number of students are admitted to the program through a selection procedure. Basic admission requirements include:

- Attendance at a respiratory therapy information session
- Graduation from high school or GED
- Declaration of Respiratory Therapy as the designated curriculum choice.
- Completion of all required supportive courses with a grade of a "C" (2.0) or higher.
- Completion of General Education Requirements with a grade of a "C" (2.0) or higher.
- Overall Grade point average (GPA) of 2.50 or better.
- HESI admission assessment (A2) exam completed at OCC. Minimum composite score of 75% on each section, achieved during the same testing session. One retake permitted; fees are assessed for each attempt.
- Attendance at a record review session.

Students who meet the basic eligibility admission requirements and apply by the deadline (DECEMBER 15) will be included in the selection process. All requirements must be completed by the deadline of the year preceding intended enrollment in the respiratory therapy program. Notification of the selection decision will be sent by mail by March 15. Students will be

1 Or higher CIS course.
2 Course may be used to meet General Education requirements.

A minimum cumulative 2.00 grade point average (GPA) overall is required for graduation.
scored on three criteria: GPA of the required supportive English, Math, Biology and Chemistry courses, the number of required supportive English, Math, Biology and Chemistry courses repeated, and the number of required supportive English, Math, Biology and Chemistry courses transferred to OCC.

Requirements and procedures for admission may be found on the respiratory therapy web site at https://www.oaklandcc.edu/health/respiratory-therapy/default.aspx.

Students must obtain a grade of a “C” (2.0) or better in all currently required college and program courses for an Associate in Applied Science in order to be certified as eligible to take the national credential examinations administered by the National Board of Respiratory Care.

The policies and regulations regarding admission, progression and retention in the respiratory therapy program, as well as certification, registry, and state licensure qualifications are outlined in the Respiratory Therapy Student Handbook which is provided to each student enrolled in the respiratory therapy program.

The Respiratory Therapy Program is designed as a full-time program. Supportive courses must be completed before entering the respiratory therapy program.

A mandatory criminal history check with fingerprinting and drug screening will be conducted on all students selected to the Respiratory Therapy Program, prior to the start of the program, at the student's expense.

1. Conviction of a felony or conviction of any attempt to commit a felony within the 15 years immediately preceding the date of the criminal history check; or
2. Conviction of a misdemeanor within the 10 years immediately preceding the criminal history check, and/or a positive drug screen will preclude eligibility for admission.

In addition to the regular tuition, Respiratory Therapy students incur extra costs including, but not limited to; liability insurance, health examination, uniforms, required vaccinations, supplies, travel, registry application and certification fees. For further details contact the Respiratory Therapy Department at (248) 233-2919.

Program Webpage - Click Here (https://www.oaklandcc.edu/health/respiratory-therapy/default.aspx)

Program Plan Example - Click Here (https://www.oaklandcc.edu/programs/plans/rsp.aasx.pdf)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>RSP 2370</td>
<td>Registry Review Seminar</td>
<td>2</td>
</tr>
<tr>
<td><strong>Required Supportive Courses</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BIO 2630</td>
<td>Human Anatomy and Physiology I</td>
<td>4</td>
</tr>
<tr>
<td>BIO 2640</td>
<td>Human Anatomy and Physiology II</td>
<td>4</td>
</tr>
<tr>
<td>CHE 1000</td>
<td>Introductory Chemistry</td>
<td>4</td>
</tr>
<tr>
<td>ENG 1510</td>
<td>Composition I</td>
<td>3</td>
</tr>
<tr>
<td>ENG 1520</td>
<td>Composition II</td>
<td>3</td>
</tr>
<tr>
<td>MAT 1100</td>
<td>Elementary Algebra</td>
<td>4</td>
</tr>
<tr>
<td>MDA 1103</td>
<td>Medical Terminology</td>
<td>3</td>
</tr>
<tr>
<td>MDA 1350</td>
<td>Medical Law and Ethics</td>
<td>3</td>
</tr>
<tr>
<td>PSY 2510</td>
<td>Introduction to Psychology</td>
<td>3</td>
</tr>
</tbody>
</table>

Select one of the following BIO courses:

- BIO 1570 Microbiology of Health and Disease 3
- or
- BIO 2710 Microbiology 4

**Total Credit Hours for Program-Related Courses** 79-80

**General Education Requirements**

<table>
<thead>
<tr>
<th>Category</th>
<th>Satisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication / English (3-credits)</td>
<td>Satisfied</td>
</tr>
<tr>
<td>Fine Arts / Humanities (3-credits)</td>
<td>3</td>
</tr>
<tr>
<td>Complete 3 credits from Fine Arts/Humanities courses listed in the General Education Distribution List (p. 8)</td>
<td>Satisfied</td>
</tr>
<tr>
<td>Mathematics / Science (3-credits)</td>
<td>Satisfied</td>
</tr>
<tr>
<td>Social Science (3-credits)</td>
<td>Satisfied</td>
</tr>
<tr>
<td>Written Communication (3-credits)</td>
<td>Satisfied</td>
</tr>
</tbody>
</table>

**Total Credit Hours** 82-83

1. Course may be used to meet General Education requirements.
2. Or higher level CHE course
3. Or higher level MAT course

A minimum cumulative 2.00 grade point average (GPA) overall is required for graduation.

**Robotics/Automated Systems Technology**

**Degree**

- Robotics/Automated Systems Technology (ROB.AUT.AAS) (p. 82)

**Certificate**

- Robotics/Automated Systems Technology (ROB.AUT.CT) (p. 82)

**Certificate of Achievement**

- Robotics/Automated Systems Technology - Programmable Controllers (ROB.PCT.CA) (p. 83)
Robotics/Automated Systems Technology (ROB.AUT.AAS)

Associate in Applied Science

Engineering/Manufacturing and Industrial Technology

Auburn Hills Campus

This program is designed to prepare students for career opportunities in the robotics and automation fields and provides a background in many areas of technology:

- Robotic Programming Applications
- Computer Integrated Manufacturing
- Robotic Controllers
- Robotic Mechanical Drives
- Robotic Welding Systems
- Programmable Controllers
- Human Machine Interface
- Industrial Networks
- Vision Systems

Robotics/Automated Systems Technologies prepare students for employment in advance manufacturing and for emerging technologies.

A robotics technologist applies traditional electro-mechanical skills with knowledge of programming, controls, and networking to mechatronics concepts as related to robotic systems. Individuals in the field of robotics apply logic and reasoning to identify the strengths and weaknesses of approaches to problems, or to alternative solutions for innovations in technology leading to development of new applications and markets for robotics.

High school graduates who completed state-approved career and technical education (CTE) programs may be eligible to receive college credit for work completed while in high school. Detailed information can be obtained by contacting an OCC Counseling Office or by visiting [articulation](http://www.oaklandcc.edu/articulation/).

Two certificates are offered for acquiring useful credentials in robotics, enhancing current skills, or building toward an associate degree:

- Robotics/Automated Systems certificate
- Programmable Controllers certificate of achievement

Program Plan Example - Click Here (https://www.oaklandcc.edu/programs/plans/rob.aut.aas.pdf)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROB 1500</td>
<td>Introduction to Robotics Technology</td>
<td>4</td>
</tr>
<tr>
<td>ROB 1520</td>
<td>Robotic Maintenance</td>
<td>4</td>
</tr>
<tr>
<td>ROB 1620</td>
<td>Industrial Robotic Applications</td>
<td>4</td>
</tr>
<tr>
<td>ROB 1640</td>
<td>Interpolated Welding Robotic Application</td>
<td>4</td>
</tr>
<tr>
<td>ROB 1650</td>
<td>Collaborative Robotics</td>
<td>2</td>
</tr>
<tr>
<td>ROB 1660</td>
<td>Robotic Communications and Machine Vision</td>
<td>4</td>
</tr>
<tr>
<td>ROB 2040</td>
<td>Programmable Controller Applications</td>
<td>4</td>
</tr>
</tbody>
</table>

Required Supportive Courses

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>APP 2170</td>
<td>Applied Technology</td>
<td>4</td>
</tr>
<tr>
<td>CAD 1101</td>
<td>Introduction to CAD</td>
<td>4</td>
</tr>
<tr>
<td>ENG 1450</td>
<td>Writing and Reading for Problem Solving</td>
<td>3</td>
</tr>
<tr>
<td>MAT 1150</td>
<td>Intermediate Algebra (or higher)</td>
<td>4</td>
</tr>
</tbody>
</table>

Total Credit Hours for Program-Related Courses 53

General Education Requirements

<table>
<thead>
<tr>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication / English (3-credits)</td>
<td>0</td>
</tr>
<tr>
<td>or</td>
<td>3</td>
</tr>
</tbody>
</table>

May be satisfied with ENG-1450 or ENG-1510. This course will apply toward the Communication/English requirement, but not both. (p. 8)

<table>
<thead>
<tr>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fine Arts / Humanities (3-credits)</td>
<td>3</td>
</tr>
</tbody>
</table>

Complete 3 credits from Fine Arts/Humanities courses listed in the General Education Distribution List (p. 8)

<table>
<thead>
<tr>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematics / Science (3-credits)</td>
<td>Satisfied</td>
</tr>
</tbody>
</table>

Complete 3 credits from Social Science courses listed in the General Education Distribution List (p. 10)

<table>
<thead>
<tr>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Written Communication (3-credits)</td>
<td>0</td>
</tr>
<tr>
<td>or</td>
<td>3</td>
</tr>
</tbody>
</table>

May be satisfied with ENG-1450 or ENG-1510. This course will apply toward the Communication/English requirement, but not both. (p. 10)

Total Credit Hours 62

Prospective transfer students should select ENG 1510.

Course may be used to meet General Education requirements.

Note: Computer skills are essential for the lab requirements of the courses. Students without basic computer skills are strongly encouraged to enroll in CIS 1000.

A minimum cumulative 2.00 grade point average (GPA) overall is required for graduation.

Robotics/Automated Systems Technology (ROB.AUT.CT)

Certificate

Engineering/Manufacturing and Industrial Technology

Auburn Hills Campus

The Robotics/Automated Systems certificate is intended for individuals who have earned a previous degree or have significant work related experience in manufacturing technology.

Students without any or limited previous related experience in manufacturing technology are encouraged to enroll in the Robotics/Automated Systems Technology Associate Degree.
High school graduates who completed state-approved career and technical education (CTE) programs may be eligible to receive college credit for work completed while in high school. Detailed information can be obtained by contacting an OCC Counseling Office or by visiting www.oaklandcc.edu/articulation.

Program Plan Example - Click Here (https://www.oaklandcc.edu/programs/plans/rob.aut.ct.pdf)

Gainful Employment Disclosure - Click Here (https://www.oaklandcc.edu/ged/docs/ROB.AUT.CT.pdf)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROB 1500</td>
<td>Introduction to Robotics Technology</td>
<td>4</td>
</tr>
<tr>
<td>ROB 1520</td>
<td>Robotic Maintenance</td>
<td>4</td>
</tr>
<tr>
<td>ROB 1620</td>
<td>Industrial Robotic Applications</td>
<td>4</td>
</tr>
<tr>
<td>ROB 1640</td>
<td>Interpolated Welding Robotic Application</td>
<td>4</td>
</tr>
<tr>
<td>ROB 1650</td>
<td>Collaborative Robotics</td>
<td>2</td>
</tr>
<tr>
<td>ROB 1660</td>
<td>Robotic Communications and Machine Vision</td>
<td>4</td>
</tr>
<tr>
<td>ROB 2400</td>
<td>Robotic Automated Systems Applications</td>
<td>4</td>
</tr>
<tr>
<td>ROB 2500</td>
<td>Robotic Controller Maintenance</td>
<td>4</td>
</tr>
<tr>
<td>APP 2170</td>
<td>Applied Technology</td>
<td>4</td>
</tr>
</tbody>
</table>

Total Credit Hours: 34

Note: Computer skills are essential for the lab requirements of the courses. Students without basic computer skills are strongly encouraged to enroll in CIS 1000.

A minimum cumulative 2.00 grade point average (GPA) overall is required for graduation.

Science

Associate Degree Requirements (ASC.ASC)

The Associate in Science degree offers a strong foundation in biology, chemistry, earth and environmental science, mathematics, and physics.

Students may elect the Associate in Science degree to further their study toward a Bachelor of Science degree or to complete pre-professional coursework in dentistry, engineering, human and veterinary medicine, and pharmacy.

Graduating from this program qualifies the student for the Michigan Transfer Agreement (MTA) endorsement. Students should work closely with an OCC counselor to identify courses from the MTA List which apply to the endorsement and to select courses that will satisfy the intake requirements of the intended transfer institution.

All courses that satisfy MTA requirements must be completed with a grade of ‘C’ (2.0) or higher. All courses comprising the 60 credits required for the degree must be completed with a cumulative GPA of 2.0 or higher.

Because transferability of credits varies with colleges and universities, programs, and departmental majors, students are urged to discuss their program plans with an OCC counselor and an advisor at the intended transfer institution.

Program Plan Example - Click Here (https://www.oaklandcc.edu/programs/plans/asc.asc.pdf)

Courses that satisfy Associate in Science degree requirements

General Education

Candidates for the Associate in Science degree must satisfy the following specific General Education requirements with a ‘C’ (2.0) or higher in each course.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 1510</td>
<td>Composition I</td>
<td>3</td>
</tr>
<tr>
<td>ENG 1520</td>
<td>Composition II</td>
<td>3</td>
</tr>
<tr>
<td>MAT 1730</td>
<td>Calculus I</td>
<td>4</td>
</tr>
</tbody>
</table>

Because transferability of credits varies with colleges and universities, programs, and departmental majors, students are urged to discuss their program plans with an OCC counselor and an advisor at the intended transfer institution.

Program Plan Example - Click Here (https://www.oaklandcc.edu/programs/plans/asc.asc.pdf)

Courses that satisfy Associate in Science degree requirements

General Education

Candidates for the Associate in Science degree must satisfy the following specific General Education requirements with a ‘C’ (2.0) or higher in each course.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 1510</td>
<td>Composition I</td>
<td>3</td>
</tr>
<tr>
<td>ENG 1520</td>
<td>Composition II</td>
<td>3</td>
</tr>
</tbody>
</table>

Because transferability of credits varies with colleges and universities, programs, and departmental majors, students are urged to discuss their program plans with an OCC counselor and an advisor at the intended transfer institution.

Program Plan Example - Click Here (https://www.oaklandcc.edu/programs/plans/asc.asc.pdf)

Courses that satisfy Associate in Science degree requirements

General Education

Candidates for the Associate in Science degree must satisfy the following specific General Education requirements with a ‘C’ (2.0) or higher in each course.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 1510</td>
<td>Composition I</td>
<td>3</td>
</tr>
<tr>
<td>ENG 1520</td>
<td>Composition II</td>
<td>3</td>
</tr>
</tbody>
</table>

Because transferability of credits varies with colleges and universities, programs, and departmental majors, students are urged to discuss their program plans with an OCC counselor and an advisor at the intended transfer institution.

Program Plan Example - Click Here (https://www.oaklandcc.edu/programs/plans/asc.asc.pdf)
In this program, leading to a Sign Language Interpreter Associate in Applied Science degree, the student will gain knowledge of the Deaf community, culture and language, with emphasis on interpretation. The program is designed to train students to be qualified sign language interpreters. Successful completion of the program requirements qualifies the student to take interpreter certification exams. Satisfactory achievement on a certification exam is required by the State of Michigan Deaf Person’s Interpreter Act (1982 PA 204 Amended 2007) prior to becoming employed as an interpreter. The policies and procedures regarding progression and retention in the sign language interpreter program, certification exam information, and State of Michigan registration requirements are provided to students after enrollment in SLI 2050. In addition to tuition, students will incur additional expenses related to supplies, travel, and certification exam application.

**General Education Requirements**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 1510</td>
<td>Composition I</td>
<td>3</td>
</tr>
<tr>
<td>ENG 1520</td>
<td>Composition II</td>
<td>3</td>
</tr>
</tbody>
</table>

**Recommended Electives**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANT 1540</td>
<td>Introduction to Cultural Anthropology</td>
<td>3</td>
</tr>
<tr>
<td>MDA 1103</td>
<td>Medical Terminology</td>
<td>3</td>
</tr>
<tr>
<td>PSY 2510</td>
<td>Introduction to Psychology</td>
<td>3</td>
</tr>
<tr>
<td>SLI 1040</td>
<td>American Sign Language (ASL) V</td>
<td>3</td>
</tr>
<tr>
<td>SLI 1045</td>
<td>American Sign Language (ASL) VI</td>
<td>3</td>
</tr>
<tr>
<td>SLI 2918</td>
<td>Topics in Interpreting (see Topics list below)</td>
<td>3</td>
</tr>
<tr>
<td>SLI 2921</td>
<td>Interpreter Certification Preparation</td>
<td>2</td>
</tr>
<tr>
<td>SLI 2922</td>
<td>Educational Interpreting: EIPA Bootcamp</td>
<td>2</td>
</tr>
<tr>
<td>SLI 2925</td>
<td>Introduction to DeafBlind Interpreting</td>
<td>2</td>
</tr>
<tr>
<td>SOC 2510</td>
<td>Sociology</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total Credit Hours for Program-Related Courses**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLI 1000</td>
<td>American Sign Language (ASL) I</td>
<td>3</td>
</tr>
<tr>
<td>SLI 1001</td>
<td>Orientation to Deafness</td>
<td>2</td>
</tr>
<tr>
<td>SLI 1010</td>
<td>American Sign Language (ASL) II</td>
<td>3</td>
</tr>
<tr>
<td>SLI 1020</td>
<td>American Sign Language (ASL) III</td>
<td>3</td>
</tr>
<tr>
<td>SLI 1030</td>
<td>American Sign Language (ASL) IV</td>
<td>3</td>
</tr>
<tr>
<td>SLI 1050</td>
<td>Linguistic Principles of ASL</td>
<td>3</td>
</tr>
<tr>
<td>SLI 1150</td>
<td>Interpreting: ASL to English I</td>
<td>3</td>
</tr>
<tr>
<td>SLI 1211</td>
<td>Non-manual Grammatical Features of ASL</td>
<td>2</td>
</tr>
<tr>
<td>SLI 1501</td>
<td>Deaf Culture and History</td>
<td>3</td>
</tr>
<tr>
<td>SLI 1550</td>
<td>Interpreting: ASL to English II</td>
<td>3</td>
</tr>
<tr>
<td>SLI 1600</td>
<td>American Sign Language Fingerspelling and Number Use</td>
<td>3</td>
</tr>
<tr>
<td>SLI 2050</td>
<td>Principles of Interpreting</td>
<td>3</td>
</tr>
<tr>
<td>SLI 2150</td>
<td>Interpreting: ASL to English III</td>
<td>3</td>
</tr>
<tr>
<td>SLI 2250</td>
<td>Interpreting: English to ASL I</td>
<td>3</td>
</tr>
<tr>
<td>SLI 2450</td>
<td>Interpreting: English to ASL II</td>
<td>2</td>
</tr>
<tr>
<td>SLI 2800</td>
<td>Interactive Interpreting</td>
<td>3</td>
</tr>
<tr>
<td>SLI 2900</td>
<td>ASL - English Interpreting Internship</td>
<td>2</td>
</tr>
</tbody>
</table>

**Total Credit Hours for Program-Related Courses**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLI 1050</td>
<td>Principles of Interpreting</td>
<td>3</td>
</tr>
<tr>
<td>SLI 2050</td>
<td>Interpreting: ASL to English III</td>
<td>3</td>
</tr>
<tr>
<td>SLI 2250</td>
<td>Interpreting: English to ASL I</td>
<td>3</td>
</tr>
<tr>
<td>SLI 2450</td>
<td>Interpreting: English to ASL II</td>
<td>2</td>
</tr>
<tr>
<td>SLI 2800</td>
<td>Interactive Interpreting</td>
<td>3</td>
</tr>
<tr>
<td>SLI 2900</td>
<td>ASL - English Interpreting Internship</td>
<td>2</td>
</tr>
</tbody>
</table>

A minimum cumulative 2.00 grade point average (GPA) overall is required for graduation.

**Sign Language Interpreter Degree**

- Sign Language Interpreter (SLI.AAS) (p. 84)

**Sign Language Interpreter (SLI.AAS)**

**Associate in Applied Science**

**Human Services**

Highland Lakes Campus

Students must maintain a C+ or better in all required Sign Language Interpreting Program courses, including required supportive courses, in order to advance from course to course and ultimately obtain the Sign Language Interpreter Associate in Applied Science degree.

Students must complete ENG 1510 and ENG 1520 prior to enrollment in SLI 2050.

**Program Plan Example** - Click Here (https://www.oaklandcc.edu/programs/plans/sli.aas.pdf)
**Additional elective credits needed to meet requirements for an Associate in Applied Science degree**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUR 1500</td>
<td>Pharmacology for the Surgical Technologist</td>
<td>2</td>
</tr>
<tr>
<td>SUR 2150</td>
<td>Clinical Practicum I</td>
<td>4</td>
</tr>
</tbody>
</table>

1. Course may be used to meet General Education requirements.

A minimum cumulative 2.00 grade point average (GPA) overall is required for graduation.

**Topics in Interpreting**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLI 2910</td>
<td>Topics in Interpreting: Interpreting in Artistic Settings</td>
<td>1</td>
</tr>
<tr>
<td>SLI 2913</td>
<td>Topics in Interpreting: Idioms</td>
<td>1</td>
</tr>
<tr>
<td>SLI 2914</td>
<td>Topics in Interpreting: ASL Storytelling</td>
<td>1</td>
</tr>
<tr>
<td>SLI 2917</td>
<td>Topics in Interpreting: Freelance 101</td>
<td>1</td>
</tr>
<tr>
<td>SLI 2918</td>
<td>Topics in Interpreting: Team Interpreting</td>
<td>1</td>
</tr>
</tbody>
</table>

**Surgical Technology**

**Degree**

- Surgical Technology (SUR.APP) (p. 85)

**Surgical Technology (SUR.APP)**

**Extended Degree - Associate in Applied Science**

**Health Sciences**

Southfield Campus

The Associate Degree Surgical Technology Curriculum leads to an associate in applied science degree and is designated as an extended degree program in that the student must complete a minimum of 73 or more required credit hours. A graduate may be employed at a hospital operating room, surgical center or private office setting. Successful completion of the program requirements qualifies the student to take the National Certification Examination for the Surgical Technologist.

Currently certified Surgical Technologists who do not have a degree may enroll in the required general education courses as outlined in the college catalog. Applicants will be granted a degree upon successful completion of the entire program. The course of study combines general education in the humanities and the biological, behavioral and social sciences with instruction in the theory and practice of surgical technology.

**Program Admission Procedures**

Students must first be admitted to the college and must designate surgical technology (SUR.APP) as their curriculum. Admission to the college does not guarantee admission into the program. Registration in the SUR courses is possible only after the student is interviewed and admitted into the track through a selection process based on a system of priorities. Each year there are a limited number of students admitted to the program through a selection process.

Basic admission requirements include:

- High school diploma or completion of GED
- Declaration of Surgical Technology (SUR.APP) as the designated curriculum choice
- Completion of ALL required supportive courses with a grade of “B” or higher
- Completion of General Education requirements with a grade of “C” or higher
- Attendance at a records review session with the Program Director or designee
- Validated attendance at an Information Session
- Completion of a program application and checklist with a counselor at the Southfield campus

All requirements and procedures for admission must be completed by the end of the semester preceding intended program enrollment. Students who are accepted into the program are notified in writing no later than 1 month prior to admission.

In order to sit for the National Certification Examination administered by the National Board of Surgical Technologist and Surgical Assistants (NBSTSA), students must obtain a “C” or better in all the currently required college and program courses for an Associate in Applied Science Degree.

The policies and regulations regarding admission, progression and retention in the program, as well as certification are outlined in the student handbook that is provided to each student enrolled in the program. In addition to the tuition, students incur extra costs such as liability insurance, pre-admission health examination, supplies, travel expense for clinical, and application fee for membership to the Association of Surgical Technologists (AST).

The Commission on Accreditation of Allied Health Education Programs (CAAHEP) accredits the SUR program. This program is designed as a full-time study; however, students may complete the required pre-requisites on a part time basis.

A mandatory criminal history check with fingerprinting and drug screening will be conducted on all students selected to the Surgical Technology program, prior to the start of the program, at the student’s expense.

1. Conviction of a felony or conviction of any attempt to commit a felony within the 15 years immediately preceding the date of the criminal history check; or
2. Conviction of a misdemeanor within the 10 years immediately preceding the criminal history check, and/or a positive drug screen will preclude eligibility for admission.

In addition to the regular tuition, Surgical Technology students incur extra costs including, but not limited to: liability insurance, health examination, uniforms, required vaccinations, travel, and certification fees. For further details contact the Surgical Technology Department at (248) 233-2916.

**Program Webpage** - Click Here (https://www.oaklandcc.edu/health/surgical-technology/default.aspx)

**Program Plan Example** - Click Here (https://www.oaklandcc.edu/programs/plans/sur.aasx.pdf)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUR 1500</td>
<td>Pharmacology for the Surgical Technologist</td>
<td>2</td>
</tr>
<tr>
<td>SUR 2150</td>
<td>Clinical Practicum I</td>
<td>4</td>
</tr>
</tbody>
</table>
### Technological Sciences

#### Degrees
- Technological Sciences (TSC.AAS) (p. 86)

### Technological Sciences (TSC.AAS)

#### Associate in Applied Science

#### Engineering/Manufacturing and Industrial Technology

Auburn Hills Campus

The Associate in Technological Sciences Degree program is designed for students choosing to pursue widely varying areas of occupational, technological, engineering, and emerging sector-related interests.

This degree is also designed for career-minded students, yet includes flexibility to meet the Michigan Transfer Agreement for students wishing to continue their education with one of our many 4-year partner institutions. See a counselor for courses that may be required at the college you plan to attend.

A minimum of sixteen credit hours in the primary occupational discipline of your choice, plus nineteen credits of fundamental General Education leaves you with twenty-seven elective credits (14 required) to design your future.

Graduating from this program does not automatically qualify the student for the Michigan Transfer Agreement (MTA) endorsement. Students in this program seeking MTA endorsement should work closely with an OCC counselor to identify classes from the MTA List which apply to the endorsement and to degree requirements.

### Program Plan Example - Not Available

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUR 2350</td>
<td>Clinical Practicum II</td>
<td>4</td>
</tr>
<tr>
<td>SUR 2370</td>
<td>Clinical Practicum III</td>
<td>6</td>
</tr>
<tr>
<td>SUR 2410</td>
<td>Foundations of Surgical Technology I</td>
<td>4</td>
</tr>
<tr>
<td>SUR 2420</td>
<td>Foundations of Surgical Technology II</td>
<td>6</td>
</tr>
<tr>
<td>SUR 2430</td>
<td>Surgical Procedures I</td>
<td>6</td>
</tr>
<tr>
<td>SUR 2440</td>
<td>Surgical Procedures II</td>
<td>6</td>
</tr>
<tr>
<td>SUR 2450</td>
<td>Surgical Instrumentation &amp; Equipment</td>
<td>4</td>
</tr>
<tr>
<td>SUR 2460</td>
<td>Capstone &amp; Certificate Preparatory</td>
<td>2</td>
</tr>
</tbody>
</table>

**Required Supportive Courses**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 2630</td>
<td>Human Anatomy and Physiology I</td>
<td>4</td>
</tr>
<tr>
<td>BIO 2640</td>
<td>Human Anatomy and Physiology II</td>
<td>4</td>
</tr>
<tr>
<td>ENG 1510</td>
<td>Composition I</td>
<td>3</td>
</tr>
<tr>
<td>MAT 1100</td>
<td>Elementary Algebra</td>
<td>4</td>
</tr>
<tr>
<td>MDA 1103</td>
<td>Medical Terminology</td>
<td>3</td>
</tr>
<tr>
<td>MDA 1350</td>
<td>Medical Law and Ethics</td>
<td>3</td>
</tr>
<tr>
<td>PSY 2510</td>
<td>Introduction to Psychology</td>
<td>3</td>
</tr>
</tbody>
</table>

Select one of the following BIO courses:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 1570</td>
<td>Microbiology of Health and Disease</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td>BIO 2710 Microbiology</td>
<td>4</td>
</tr>
</tbody>
</table>

Select one of the following CIS courses:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIS 1000</td>
<td>Computer Literacy</td>
<td>1</td>
</tr>
<tr>
<td>or</td>
<td>CIS 1050 Personal Computer Productivity Tools</td>
<td>4</td>
</tr>
</tbody>
</table>

Select one of the following ENG courses:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 1520</td>
<td>Composition II</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td>ENG 2200 Professional Communication</td>
<td>4</td>
</tr>
</tbody>
</table>

**Total Credit Hours for Program-Related Courses** 75-80

##### General Education Requirements

- **Communication / English (3-credits)**
  - Satisfied

- **Fine Arts / Humanities (3-credits)**
  - Complete 3 credits from Fine Arts/Humanities courses listed in the General Education Distribution List (p. 8)
  - 3

- **Mathematics / Science (3-credits)**
  - Complete 3 credits from Mathematics/Science courses listed in the General Education Distribution List (p. 9)
  - 3

- **Social Science (3-credits)**
  - 3

- **Written Communication (3-credits)**
  - Satisfied

**Total Credit Hours** 81-86

1 Course may be used to meet General Education requirements.

A minimum cumulative 2.00 grade point average (GPA) overall is required for graduation.

### Technological Sciences Major Focus

Select a primary focus of a minimum of 16 credits with the same prefix from any one of the following occupational disciplines: ARC, AUT, CAD, CAR, CIS, EEC, GRD, HLA, HVA, INT, MCT, MTT, PHO, ROB, WEL

**Required Supportive Courses**

Select a minimum of 14 credits, in any combination of courses from the following list of prefixes. (Courses previously used in Major Focus may not be used to meet this requirement.)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 1500</td>
<td>APM, APP, ARC, ATF, AUT, BIO, BUS, CAD, CAR, CHE, CIS, CMN, CRJ, DDT, DHE, EEC, EMS, ETT, FFT, GRD, HLA, HVA, INT, MCT, MSE, MTT, PHO, PHY, ROB, TED, TSC, WEL</td>
<td>16</td>
</tr>
</tbody>
</table>

**Total credit hours for Program-Related Courses** 30

##### General Education Requirements

- **Communication / English (3-credits)**
  - 3

- Complete 3 credits from Communication/English courses listed in the General Education Distribution List (p. 8)

- **Fine Arts / Humanities (3-credits)**
  - 3

- Complete 3 credits from Fine Arts/Humanities courses listed in the General Education Distribution List (p. 8)

- **Mathematics / Science (3-credits)**
  - 3

- Complete 3 credits from Mathematics/Science courses listed in the General Education Distribution List (p. 9)

- **Social Science (3-credits)**
  - 3

- Complete 3 credits from Social Science courses listed in the General Education Distribution List (p. 10)
A minimum cumulative 2.00 grade point average (GPA) overall is required for graduation.

**Theatre**

**Degree**

- Theatre (THE.AA) (p. 87)

**Theatre (THE.AA)**

**Associate in Arts**

**Arts and Communication**

*Orchard Ridge Campus*

The Theatre program is an Associate in Arts degree with a concentration in Theatre. This program includes performance and the technical aspects of theatre, including theory and practical experience. Upon completion of this program, students will be prepared to pursue a Bachelor's degree in Theatre, enter a specialized school of acting, or enter the professional entertainment industry.

Graduating from this program qualifies the student for the Michigan Transfer Agreement (MTA) endorsement. Students should work closely with an OCC counselor to identify courses from the MTA List which apply to the endorsement and to select courses that will satisfy the intake requirements of the intended transfer institution.

All courses that satisfy MTA requirements must be completed with a grade of 'C' (2.0) or higher. All courses comprising the 62 credits required for the degree must be completed with a cumulative GPA of 2.0 or higher.

Because transferability of credits varies with colleges and universities, programs, and departmental majors, students are urged to discuss their program plans with an OCC counselor and an advisor at the intended transfer institution.

**Program Webpage** - Click Here (https://www.oaklandcc.edu/programs/the/default.aspx)

**Program Plan Example** - Click Here (https://www.oaklandcc.edu/programs/plans/the.aa.pdf)

**General Requirements**

**English Composition**

Complete one course from the English Composition Michigan Transfer Agreement Distribution list. This course must be completed with a grade of 'C' (2.0) or higher. (p. 7)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>THE 1561</td>
<td>Introduction to Theatre</td>
<td>3</td>
</tr>
<tr>
<td>THE 1571</td>
<td>Acting I</td>
<td>3</td>
</tr>
<tr>
<td>THE 1580</td>
<td>Acting II</td>
<td>3</td>
</tr>
<tr>
<td>THE 1583</td>
<td>Movement for the Actor</td>
<td>3</td>
</tr>
<tr>
<td>THE 1585</td>
<td>Acting for Film</td>
<td>3</td>
</tr>
<tr>
<td>THE 1587</td>
<td>Audition and the Business of Acting</td>
<td>3</td>
</tr>
<tr>
<td>THE 1590</td>
<td>Improvisation</td>
<td>3</td>
</tr>
<tr>
<td>THE 1701</td>
<td>Theatre Activity</td>
<td>1</td>
</tr>
<tr>
<td>THE 1702</td>
<td>Theatre Activity</td>
<td>2</td>
</tr>
</tbody>
</table>

Complete 12 credits from the following courses:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>COM 1710</td>
<td>Forensic Activity</td>
<td>1</td>
</tr>
<tr>
<td>COM 2620</td>
<td>Oral Interpretation of Literature</td>
<td>3</td>
</tr>
<tr>
<td>ENG 1720</td>
<td>Introduction to Literature: Poetry and Drama</td>
<td>3</td>
</tr>
<tr>
<td>ENG 2750</td>
<td>William Shakespeare: Comedies, Histories and Sonnets</td>
<td>3</td>
</tr>
<tr>
<td>ENG 2780</td>
<td>Introduction to Playwriting and Screenwriting</td>
<td>3</td>
</tr>
<tr>
<td>HUM 1900</td>
<td>Introduction to Film</td>
<td>3</td>
</tr>
<tr>
<td>PER 1653</td>
<td>Dance - Modern</td>
<td>1</td>
</tr>
<tr>
<td>PER 1880</td>
<td>Yoga</td>
<td>1</td>
</tr>
<tr>
<td>THE 1581</td>
<td>Voice for the Actor</td>
<td>3</td>
</tr>
<tr>
<td>THE 1601</td>
<td>Theatre Production and Technology</td>
<td>3</td>
</tr>
<tr>
<td>THE 1703</td>
<td>Theatre Activity</td>
<td>3</td>
</tr>
<tr>
<td>THE 1990</td>
<td>Fundamentals of Directing</td>
<td>3</td>
</tr>
</tbody>
</table>

Any Topics in Theatre Course: THE-2101-2107 (See course list below)
Duties of a veterinary technician include

- Preparing patient, instruments and equipment for surgery,
- Obtaining and recording information about cases,
- Collecting specimens,
- Performing laboratory and medical procedures,
- Dressing wounds,
- Exposing and developing diagnostic radiographs,
- Keeping records,
- Animal care and feeding.

Employment is available in private practice, medical research, humane organizations, pharmaceutical firms, good quality control and meat inspection, veterinary hospitals, zoos, pet stores and grooming parlors.

Oakland Community College and Macomb Community College have established reciprocal arrangements for the Occupational Therapist Assistant (OTA), Physical Therapist Assistant (PTA) and the Veterinary Technician (VET) programs. Although the specialized courses for the programs are given at Macomb S. Center Campus (Clinton Twp., students who complete the required specific credit hours at OCC and are Oakland County Residents are eligible to participate in this reciprocal arrangement. This means that upon completion of the courses at OCC and acceptance into the Macomb Community College’s Occupational Therapist Assistant (OTA) Physical Therapist Assistant (PTA) or Veterinary Technician (VET) program, the student will take all the OTA, PTA or VET courses at MCC and will pay in-district tuition to Macomb Community College. Graduates of these reciprocal programs earn an associate in applied science degree from Macomb Community College.

After the required credit hours for the student’s chosen program are completed at Oakland Community College, the student should proceed with the application process for completion of this degree through Macomb Community College.

To Apply:

1. Apply to Oakland Community College.
2. Declare VET.MCC.REC as your curriculum.
3. Take the ACCUPLACER Test, all three parts - Reading, Writing and Elementary Algebra, at Macomb Community College. Testing deadline for program entry is February 15th each year. These scores are used by Macomb as part of their selective admissions process. Additionally, for all selective admissions, Macomb Community College requires HESI testing. Please call (586) 445-7423 to schedule a test date.
4. Complete the credit hours required for your program of choice. Students must be currently enrolled in their final term of prerequisite courses or have them completed with grades posted before seeking a referral form from the Health Sciences Program Director/Counseling at the Southfield Campus.
5. Contact the Southfield Campus of Oakland Community College before February 1 if you wish to be considered for admission to Macomb Community College for the following September. For Example: if you wish to be considered for admission to MCC for September/Fall of the next academic year, you must contact the Health Sciences Department at (248) 233-2917 before January 15 of the current academic year for the referral form before applying to MCC.

For further information about preparation for the reciprocal arrangement programs, contact the Oakland Community College Health Sciences Office at Southfield Campus, (248) 233-2917 or a counselor on any OCC campus. For further information specific to any reciprocal program contact: Macomb Community College, Health and Human Services at (586) 286-2097.

Prerequisite courses to be taken at Oakland Community College

Students must complete a minimum of 23-24 credit hours at Oakland Community College which include the following courses:

Program Plan Example - Not Available

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHE 1000</td>
<td>Introductory Chemistry</td>
<td>4</td>
</tr>
<tr>
<td>CIS 1050</td>
<td>Personal Computer Productivity Tools</td>
<td>4</td>
</tr>
<tr>
<td>ENG 1510</td>
<td>Composition I</td>
<td>3</td>
</tr>
<tr>
<td>MAT 1100</td>
<td>Elementary Algebra</td>
<td>4</td>
</tr>
<tr>
<td>PSY 2510</td>
<td>Introduction to Psychology</td>
<td>3</td>
</tr>
<tr>
<td>General Education Electives (p. 8)</td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

Complete 2 - 3 credits from the following options:  

- Fine Arts/Humanities (p. 8)  
- PER 1300 Stress Management: Neuromuscular Relaxation 2  
- PER 1590 Physical Well-Being in a Modern Society 2  

Total Credit Hours 23-24

1. In order to participate in this reciprocal arrangement, the student must be an 'in-district' (live in Oakland County) OCC student. OCC students who are not in-district students should apply directly to Macomb Community College if interested in any of the reciprocal programs.

2. ACCUPLACER minimum score requirement: Reading: 70, Writing: 5, Elementary Algebra: 45

3. Please note there is a fee for retesting at MCC.

4. Student must select a minimum of 2 - 3 credit hours in the areas of art, creative writing, drama, foreign language, humanities, literature, music, philosophy, theater arts, PER 1300 or PER 1590.

Welding Technology

Certificate

- Welding/Fabrication Technology - Level 1 Fundamentals (WEL.LV1.CA) (p. 89)
- Welding/Fabrication Technology - Level 2 Intermediate (WEL.LV2.CT) (p. 89)

Welding/Fabrication Technology - Level 1 Fundamentals (WEL.LV1.CA)

Certificate of Achievement

Engineering/Manufacturing and Industrial Technology

Auburn Hills Campus

This proficiency certificate, awarded for progress made in the Welding program, is available for all students, whether they are working toward an OCC certificate or an associate degree, or if this competency milestone is a goal in and of itself. This document will provide validation and some credentialing to show potential employers students' skill levels. This Certificate of Achievement is also the foundational skills for the Certificate (WEL.LV2.CT) program.

Program Webpage - Click Here (https://www.oaklandcc.edu/programs/wel/default.aspx)

Program Plan Example - Click Here (https://www.oaklandcc.edu/programs/plans/wel.lv1.ca.pdf)

Gainful Employment Disclosure - Click Here (https://www.oaklandcc.edu/ged/docs/WEL.CT.pdf)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>WEL 1500</td>
<td>Welding Fundamentals</td>
<td>3</td>
</tr>
<tr>
<td>WEL 1600</td>
<td>Basic Welding</td>
<td>4</td>
</tr>
<tr>
<td>WEL 1700</td>
<td>Fabrication Basics</td>
<td>4</td>
</tr>
</tbody>
</table>

Required Supportive Courses

- TED 1030 Basic Blueprint Reading 3

Total Credit Hours 14

A minimum cumulative 2.00 grade point average (GPA) overall is required for graduation.

Welding/Fabrication Technology - Level 2 Intermediate (WEL.LV2.CT)

Certificate

Engineering/Manufacturing and Industrial Technology

Auburn Hills Campus

This certificate further enhances student skills in welding and fabrication.

The certificate also allows students the chance to attain nationally recognized certifications through the Lincoln Electric LEEPS/National Coalition of Certification Centers (NC3) program, and prepares students to enter the occupation as a welder/fabricator.

Program Webpage - Click Here (https://www.oaklandcc.edu/programs/wel/default.aspx)

Program Plan Example - Click Here (https://www.oaklandcc.edu/programs/plans/wel.lv2.ct.pdf)
Gainful Employment Disclosure - Click Here (https://www.oaklandcc.edu/ged/docs/WEL.CT.pdf)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>TED 1030</td>
<td>Basic Blueprint Reading</td>
<td>3</td>
</tr>
<tr>
<td>WEL 1500</td>
<td>Welding Fundamentals</td>
<td>3</td>
</tr>
<tr>
<td>WEL 1600</td>
<td>Basic Welding</td>
<td>4</td>
</tr>
<tr>
<td>WEL 1700</td>
<td>Fabrication Basics</td>
<td>4</td>
</tr>
<tr>
<td>WEL 2500</td>
<td>Advanced Welding</td>
<td>5</td>
</tr>
<tr>
<td>WEL 2600</td>
<td>Welding of Advanced Materials</td>
<td>5</td>
</tr>
<tr>
<td>WEL 2700</td>
<td>Welding and Fabrication Capstone</td>
<td>5</td>
</tr>
</tbody>
</table>

**Major Requirements**

Complete Level I Fundamentals program (WEL.LV1.CA). Consists of the following 4 courses.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>TED 1030</td>
<td>Basic Blueprint Reading</td>
<td>3</td>
</tr>
<tr>
<td>WEL 1500</td>
<td>Welding Fundamentals</td>
<td>3</td>
</tr>
<tr>
<td>WEL 1600</td>
<td>Basic Welding</td>
<td>4</td>
</tr>
<tr>
<td>WEL 1700</td>
<td>Fabrication Basics</td>
<td>4</td>
</tr>
<tr>
<td>WEL 2500</td>
<td>Advanced Welding</td>
<td>5</td>
</tr>
<tr>
<td>WEL 2600</td>
<td>Welding of Advanced Materials</td>
<td>5</td>
</tr>
<tr>
<td>WEL 2700</td>
<td>Welding and Fabrication Capstone</td>
<td>5</td>
</tr>
</tbody>
</table>

**Required Supportive Courses**

MSE 1000 | Material Science Fundamentals-Metallurgy | 3            |

or MSE 1200 | Welding Metallurgy                      | 3            |

and choose one or more from the following: 3-4

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 1210</td>
<td>Small Business Basics</td>
<td>3</td>
</tr>
<tr>
<td>CAD 1101</td>
<td>Introduction to CAD</td>
<td>4</td>
</tr>
<tr>
<td>DDT 1000</td>
<td>Fundamentals for the Drafting Industry</td>
<td>3</td>
</tr>
<tr>
<td>MTT 1100</td>
<td>Introduction to Machine Tools</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credit Hours 35-36

A minimum cumulative 2.00 grade point average (GPA) overall is required for graduation.
Course Descriptions

- Academic Support Center (ASC) (p. 91)
- Accounting (ACC) (p. 92)
- Anthropology (ANT) (p. 93)
- Apprentice Applied Technology (APP) (p. 94)
- Apprentice Engineering / Drafting (TED) (p. 94)
- Apprentice Mathematics (APM) (p. 94)
- Apprentice Tinsmith (APT) (p. 94)
- Arabic (ARB) (p. 94)
- Architecture (ARC) (p. 95)
- Art (ART) (p. 97)
- Automotive Technology (AUT) (p. 100)
- Biology (BIO) (p. 102)
- Business (BUS) (p. 103)
- Chemistry (CHE) (p. 104)
- Chinese (CHI) (p. 105)
- Collision Auto Repair (CAR) (p. 105)
- Communication (COM) (p. 107)
- Computer Aided Design and Engineering (CAD) (p. 108)
- Computer Information Systems (CIS) (p. 111)
- Construction Management (CMN) (p. 118)
- Counseling (CNS) (p. 119)
- Criminal Justice (CRJ) (p. 119)
- Culinary Arts (CUL) (p. 124)
- Dental Hygiene (DHY) (p. 131)
- Diagnostic Medical Sonography (DMS) (p. 133)
- Diesel Technology (DHE) (p. 134)
- Drafting and Design Technology (DDT) (p. 134)
- Early Childhood Education (ECE) (p. 135)
- Economics (ECO) (p. 136)
- Education (EDU) (p. 136)
- Electrical / Electronics Technology (EEC) (p. 136)
- Electrical Trades Technology (ETT) (p. 137)
- Emergency Medical Services (EMS) (p. 137)
- English (ENG) (p. 140)
- English as a Second Language (ESL) (p. 142)
- Fire Fighter Technology (FFT) (p. 144)
- Fluid Power Technology (ATF) (p. 145)
- Foundational Studies (FSH) (p. 145)
- Foundational Studies (FSN) (p. 145)
- French (FRE) (p. 145)
- General Science (GSC) (p. 146)
- Geography (GEO) (p. 146)
- German (GER) (p. 146)
- Global Studies (GLS) (p. 147)
- Graphic Design (GRD) (p. 148)
- Health (HEA) (p. 149)
- Health Care Administration (HCA) (p. 149)
- Heating Ventilation Air Conditioning (HVA) (p. 150)
- History (HIS) (p. 153)
- Humanities (HUM) (p. 154)
- Interior Design (INT) (p. 156)
- Italian (ITA) (p. 157)
- Japanese (JPN) (p. 157)
- Library Services and Technology (LIB) (p. 158)
- Machine Tool Technology (MTT) (p. 159)
- Marketing (MKT) (p. 160)
- Material Science (MSE) (p. 160)
- Mathematics (MAT) (p. 160)
- Mechatronics (MCT) (p. 162)
- Medical Assisting (MDA) (p. 163)
- Mental Health / Social Work (MHA) (p. 165)
- Music (MUS) (p. 166)
- Nursing (NUR) (p. 174)
- Paralegal (PLG) (p. 176)
- Philosophy (PHI) (p. 178)
- Photographic Technology (PHO) (p. 178)
- Physical Education and Recreation (PER) (p. 180)
- Physical Science (PSC) (p. 183)
- Physics (PHY) (p. 183)
- Political Science (POL) (p. 183)
- Pre-Engineering (EGR) (p. 140)
- Psychology (PSY) (p. 184)
- Radiologic Technology (RAD) (p. 185)
- Respiratory Therapy (RSP) (p. 187)
- Robotics / Automated Systems Technology (ROB) (p. 189)
- Service Learning (SRV) (p. 190)
- Sign Language Interpreter (SLI) (p. 190)
- Sociology (SOC) (p. 193)
- Spanish (SPA) (p. 194)
- Surgical Technology (SUR) (p. 195)
- Technical Internships (IND) (p. 197)
- Technological Sciences (TSC) (p. 197)
- Theatre (THE) (p. 197)
- Welding (WEL) (p. 199)

Academic Support Center (ASC)

ASC 1070    College Success Skills          2 Credit Hours  
Equivalent: IIC 1070, IIC 0570

**English/ESL Placement:** Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)

This course is designed to improve students' academic performance. Students will practice strategies for test taking, textbook study, note taking, memory enhancement and time management. They will be given opportunities to apply these strategies to current course work and personal life situations. BILLABLE CONTACT HOURS: 2
ASC 1072  Textbook Learning Strategies ............ 1 Credit Hour
English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)
This course is an introduction to college textbook learning. Students taking this course will practice a variety of strategies aimed at developing their learning from college textbooks. BILLABLE CONTACT HOURS: 1

ASC 1074  Lecture Learning Strategies ............ 1 Credit Hour
English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)
This course is an introduction to college lecture learning. Students taking this course will practice a variety of strategies aimed at developing their learning from college lectures and discussions. BILLABLE CONTACT HOURS: 1

ASC 1076  Critical Thinking Strategies ............ 1 Credit Hour
English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)
This course assists students in becoming more proficient critical thinkers. Students will be introduced to and practice some of the most important skills of critical thinking, including the ability to comprehend, analyze and evaluate academic material. Emphasis will be placed on the development and practical application of critical thinking skills to maximize success with textbook and lecture learning, and a variety of assessments. BILLABLE CONTACT HOURS: 1

Accounting (ACC)

Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.

ACC 1500  Accounting for the Small Business
Owner .......................................................... 3 Credit Hours
Equivalent: ACC 1110
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses.)
This course is designed for the non-accountant business owner. The student will study accounting procedures and applications for small businesses. Topics include bookkeeping for the small business, accounting systems for the small business, understanding of financial statements, overview of inventory management, survey of small business owner tax concerns and accounting concepts relating to financing the small business. BILLABLE CONTACT HOURS: 3

ACC 1800  Accounting Procedures  ................. 2 Credit Hours
English/ESL Placement: Placement into ENG 1510.
This course presents general accounting procedures. Students will study the accounting equation, emphasizing the process of analyzing and recording financial information using the double-entry accounting system. Coverage includes the recording of basic transactions and adjustments for both service and merchandising concerns. BILLABLE CONTACT HOURS: 2

ACC 1803  Payroll Accounting  ...................... 2 Credit Hours
Equivalent: ACC 2230, ACC 2230
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: ACC 1500 or ACC 1800 with a 'C' or better within the last three years.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
This course provides an overview of payroll, record-keeping regulations, reporting requirements, accounting procedures and federal labor laws. The course includes computations of gross wages, salaries, mandatory deductions of federal, state and local taxes, and optional deductions. Also covered is employer related taxes and preparation of various payroll tax forms. BILLABLE CONTACT HOURS: 2

ACC 1805  Accounting with Quickbooks ............ 2 Credit Hours
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: ACC 1500 or ACC 1800 with a 'C' or better within the last three years.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
This course will expose students to the popular accounting software, Quickbooks. The course reinforces basic accounting procedures through the use of Quickbooks. The student will use Quickbooks to enter receivable and accounts payable transactions and to generate financial reports. BILLABLE CONTACT HOURS: 2

ACC 1810  Principles of Financial Accounting ... 4 Credit Hours
Equivalent: ACC 2510
English/ESL Placement: Placement into ENG 1510.
Prerequisite: ACC 1500 or ACC 1800 with a 'C' or better within the last three years.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
This course reviews basic financial accounting principles covering the accounting cycle. Topics include: cash, investments, receivables and payables, inventory valuation, fixed and intangible assets valuation, current and long term liabilities, and owner's equity. Internal control and financial statement analysis is also considered. Emphasis is placed on the corporate form of ownership. BILLABLE CONTACT HOURS: 4

ACC 1820  Principles of Managerial Accounting  4 Credit Hours
Equivalent: ACC 2520
English/ESL Placement: Placement into ENG 1510.
Prerequisite: ACC 1810 with a 'C' or better within the last three years.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
This course emphasizes the managerial aspects of cost accounting for manufacturing and service entities. Managerial topics will include: cost terms and behavior, determination of the cost of goods manufactured and sold, job order and process cost accounting, cost-volume-profit analysis, variable costing, profit planning and budgeting, standard costs and variance analysis, capital budgeting, and the Statement of Cash Flows. BILLABLE CONTACT HOURS: 4
ACC 2070  Cost Accounting  4 Credit Hours
Equivalent: ACC 2040, ACC 2020
English/ESL Placement: Placement into ENG 1510.
Prerequisite: ACC 1820 with a “C” or better within the last three years.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor’s degree or higher from a U.S. institution.
This intermediate level course reviews and further develops material presented in Managerial Accounting. Additional topics presented include: activity based costing, quality and just-in-time issues, the theory of constraints, pricing decisions and cost management, cost allocation, management control systems and performance measurement. BILLABLE CONTACT HOURS: 4

ACC 2210  Computerized Accounting  3 Credit Hours
Equivalent: ACC 2710
English/ESL Placement: Placement into ENG 1510.
Prerequisite: ACC 1810 with a “C” or better within the last three years and CIS 1050.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor’s degree or higher from a U.S. institution.
The student will be exposed to microcomputer skills as used in accounting and business. The course reinforces financial accounting concepts and procedures through use of personal computers and popular commercial software. The student will use a commercial general ledger software package to cover topics such as: the general ledger, accounts receivable, accounts payable, payroll, adjusting and closing entries. The student will use spreadsheets and/or other appropriate software for report preparation and solution of typical accounting related problems. BILLABLE CONTACT HOURS: 3

ACC 2501  Special Topics in Accounting  1-4 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: The prerequisite for a special topics section will depend on the content of that section. Refer to the specific section using OCC’s online system for a description of the current course and its associated prerequisites.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor’s degree or higher from a U.S. institution.
Students will be introduced to a particular contemporary topic or in accounting that is relevant in today’s business environment. Refer to the specific section using OCC’s online system for current topics. BILLABLE CONTACT HOURS: 1 - 4

ACC 2503  Special Topics in Accounting  1-4 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: The prerequisite for a special topics section will depend on the content of that section. Refer to the specific section using OCC’s online system for a description of the current course and its associated prerequisites.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor’s degree or higher from a U.S. institution.
Students will be introduced to a particular contemporary topic or in accounting that is relevant in today’s business environment. Refer to the specific section using OCC’s online system for current topics. BILLABLE CONTACT HOURS: 1 - 4

Anthropology (ANT)

ANT 1520  Physical and Archaeology Anthropology  3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
In this course we will examine basic concepts in the biological evolution of Homo sapiens. The concepts needed to understand evolution, such as natural selection, will be studied. The evolution of primates and examination of existing primates will be stressed. The function of culture as it relates to human evolution and the development of culture as seen through archaeological techniques will also be studied. BILLABLE CONTACT HOURS: 3

GE Outcomes: Scientific Literacy

ANT 1540  Introduction to Cultural Anthropology  3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
In this course, we will develop the concept of culture and demonstrate the integration of major institutions common to all societies while recognizing the interconnection between culture and environment. The wide range and variability of human culture will be explored in terms of current and historical cultural theories. It will also be demonstrated that the existence of humankind is dependent on culture. BILLABLE CONTACT HOURS: 3

GE Outcomes: Global Understanding and Responsibility

ANT 2750  Myth, Magic and Folk Religion  3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
In this course, we will examine religious beliefs and practices to demonstrate their value in a particular cultural setting as well as to lay a basis for cross-cultural comparison. Witchcraft and associated magical beliefs and practices will be studied with different cultures. These variations will be analyzed to ascertain if there are parallel beliefs and practices found in dissimilar cultures. Tribal myths and religious rituals will also be studied for aesthetic reasons, to examine connections between art, music, and literature within a culture and to allow for cross-cultural comparisons of religious phenomena. BILLABLE CONTACT HOURS: 3

GE Outcomes: Global Understanding and Responsibility
Apprentice Applied Technology (APP)

APP 2170  Applied Technology  .....................  4 Credit Hours
Equivalent: APP 8160,APP 8150

English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: MAT 1050 or placement into MAT 1100 or higher; or consent of instructor.
This course is designed to prepare students for technical careers. The complexity and rapid change of modern technology require training that is applicable to more than a single job. Technicians will be exposed to the concepts of the mechanical, fluid, electrical and thermal principles on which modern technology is based. This course integrates the above mentioned four concepts with the physical principles of force, work, rate, resistance, energy, power and force transformers. This material is taught by lecture, video tape and lab demonstrations to reinforce the concepts of technical physics. BILLABLE CONTACT HOURS: 4

Apprentice Engineering / Drafting (TED)

TED 1030  Basic Blueprint Reading  .....................  3 Credit Hours

English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
The student will learn a series of related steps leading to an understanding of shop blue-prints, with emphasis placed on the interpretation of blueprints, performing mathematical computations, basic blueprint terminology and sketching various views of pictorial and orthographic drawings. BILLABLE CONTACT HOURS: 3

Apprentice Mathematics (APM)

APM 8110  Geometry Algebra  .....................  3 Credit Hours

English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: Secondary school algebra.
This course will provide the student with the fundamentals of Algebra and Geometry as applied to practical industrial problems that arise in his or her trade area. Topics include positive and negative numbers, ratio and proportion, simple equations, percentage, tapers, square root, formulas, and quadratic equations. Geometry principles of axioms, propositions, circle definitions, central angles, and tangents will be applied in the problem solving techniques of actual trade problems. BILLABLE CONTACT HOURS: 3

APM 8210  Plane Trigonometry  .....................  3 Credit Hours

English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: APM 8110 or equivalent.
This course provides the student with the basic principles of trigonometry as applied to industrial problems. Topics covered are basic trigonometric functions, functions of angles, relations between trigonometric functions, tables and their uses, and solution of right angles. It will also cover the interpolation of angles to the nearest second of a degree, solution of oblique triangles by right triangle methods, Law of Sines, and Law of Cosines. BILLABLE CONTACT HOURS: 3

APM 8310  Advanced Trigonometry and Angle Calculations for Industry  .....................  4 Credit Hours

English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: APM 8210
This course provides students with advanced applications of trigonometry and compound angles to solve for out of shape features of solids. Trigonometric and compound angle formulas will be used to create definite values of solids containing out of shape features essential to measure and locate details on a blueprint. Students will use advanced mathematical calculations to transform blueprints from art to part. Students will learn how trigonometric and angular computations apply to setting up various materials for machining and checking in today's shop environment. Students will learn the principles of CNC machining that are applied in creating accurate representations of shaped features. Students will gain the knowledge of many methods of checking these figures for accuracy. BILLABLE CONTACT HOURS: 4

Apprentice Tinsmith (APT)

APM 8310  Industrial Safety  .....................  2 Credit Hours

English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Work place safety based upon OSHA standards is addressed in this course. Topics will include rigging, personal safety equipment, lock-out tag-out procedures, use of ladders, confined space entry, and hazardous environments. Students will demonstrate appropriate behaviors while performing work place activities under the supervision of the instructor. This course fulfills; Ten (10) contact hours of OSHA/Safety Awareness, and Fifteen (15) contact hours of Industry Orientation (Michigan Laws & Rules) for State of Michigan registered Electrical Apprentices for a total of twenty five (25) contact hours. BILLABLE CONTACT HOURS: 2

Arabic (ARB)

ARB 1510  Beginning Arabic I  .....................  4 Credit Hours

English/ESL Placement: Placement into ENG 1510.
This is an introductory course with special emphasis on the fundamentals of speaking, listening, reading, writing and understanding Arabic language and culture. The course will introduce basic Arabic linguistic structure according to functional models, which can be applied to everyday conversational situations. BILLABLE CONTACT HOURS: 4

GE Outcomes: Effective Communication
ARB 1530  Beginning Arabic II  4 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: ARB 1510 or equivalent.
This course, which is a continuation of ARB 1510, comprises the second half of the introduction to Arabic. The course will emphasize the fundamentals of speaking, listening, reading, writing and understanding of Arabic language and culture according to functional models, which can be applied to everyday conversational situations. BILLABLE CONTACT HOURS: 3
GE Outcomes: Effective Communication

Architecture (ARC)

ARC 1000  Basic Architectural Drawing and Drafting  4 Credit Hours
Equivalent: ARC 1010
English/ESL Placement: Placement into ENG 1510.
Corequisite: ARC 1040
This is a freehand drawing and drafting studio course. This intro level course is designed for students who have no background in drawing and intend to pursue architecture, interior design and/or landscape architecture related fields, it is also open to students who wish to improve their visual literacy. The first part of the course is focused on understanding graphics and their relationship in context of architectural drawings. The second part focuses on actual placement of elements as part of a completed set of architectural drawings. BILLABLE CONTACT HOURS: 4

ARC 1040  Introduction to Architecture  4 Credit Hours
Equivalent: ARC 1020
English/ESL Placement: Placement into ENG 1510.
Corequisite: ARC 1000
This lecture course introduces students to the history of architecture from antiquity to the present. The course is designed to encourage creative and analytical thinking while introducing students to important developments and innovations as well as the history of architectural practices, stylistic expression, construction methods and materials. The course content focuses heavily on developing the ability to question, write, draw and present materials as part of the decision making process. As part of semester-long research, students will explore and present the abstract, spatial, social/cultural, and environmental concepts that affect our built environment. BILLABLE CONTACT HOURS: 4

ARC 1130  Basic Architecture Design I  3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: ARC 1000 and ARC 1040 or consent of instructor.
This course is designed to develop basic visualization skills, observations, analysis and the application of principles and elements of design in the creation of two and three dimensional compositions. The students will learn the art of basic delineation through the development of perspectives, isometrics, shade and shadows and at times development of models. Since this is an introductory visual communication course, emphasis is placed on the creative process and expression with form, color, light and compositions. BILLABLE CONTACT HOURS: 3

ARC 1135  Presentations and Model Building  3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: ARC 1130 or consent of instructor.
Students should be familiar with Photoshop or similar programs before enrolling in this course. This studio course explores traditional and contemporary methods of graphic presentations as a means of communication in architectural design. The course emphasizes a variety of presentation techniques; including color renderings, delineation of elevation, section, plan views and articulation of image and transfer methodologies. Media include computer-generated images, vellum based renderings, and architectural model building. Emphasis is also placed on preparation of student portfolio and presentation skills, in preparation for student interviews upon entering the profession. BILLABLE CONTACT HOURS: 3

ARC 1140  Architectural Design II  3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: ARC 1130 and ARC 2110 or consent of instructor.
Corequisite: ARC 1135
This course is the next in sequence of architectural design studio courses intended to develop students' abilities to solve small to medium scale architectural design problems. In this course, students start with emphasis on simple programmatic design solutions. The course concentrates on the ways in which basic human factors affect architectural design on a daily basis. Lectures include topics such as behavioral aspects of design, human aspiration, language of architecture, environmental and site issues. A variety of studio assignments are used to apply the knowledge and skills acquired throughout the term. BILLABLE CONTACT HOURS: 3

ARC 1500  Building Systems I  5 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: ARC 1000 or consent of instructor.
Corequisite: ARC 1040 and CAD 1101.
This course provides the foundational information for producing quality construction documents for light wood frame residential construction. The student will be introduced to the development, composition, and application of various building materials. Specific materials that will be addressed include wood, masonry, and concrete. Topics include residential construction principles, wood frame detailing, footings, foundations, and electrical plan concepts and their relationship to wood frame construction, circulation methods, as well as geographical, climatic and safety issues. BILLABLE CONTACT HOURS: 5

ARC 1505  Sustainable Architecture  3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: ARC 1500 or consent of instructor.
This course explores sustainability concepts and principles in the design of environmentally sound buildings, i.e. Green Buildings. Modern buildings consume significant amounts of our natural resources, requiring integration of all building systems to provide the utmost efficiency. Topics will include: environmental architecture, ecologically sound building designs, efficient use of energy sources, utilization of renewable energy systems, sustainable management of resources and the concept of intelligent buildings. Along with the aforementioned topics, the challenges of adaptive reuse of buildings and the voluntary certification program LEED Green Building Rating systems will be addressed. BILLABLE CONTACT HOURS: 3

ARC 1801  Special Topics - Architecture: Schematic Development through SketchUp  2 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: ARC 1500 or consent of instructor.
Schematic Development through SketchUp. BILLABLE CONTACT HOURS: 2
ARC 1802  Special Topics - Architecture ..........1-4 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: ARC 1500 or consent of instructor.
In the continual development of architectural technology, selected topics are to be pursued as a series of lectures for a given term or project development. Research topics can also be undertaken by individuals or small groups, and are to be development or project specific. The area of study will not duplicate the content covered in the existing OCC architecture course offerings. BILLABLE CONTACT HOURS: 1 - 4

ARC 1803  Special Topics - Architecture ..........1-4 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: ARC 1500 or consent of instructor.
In the continual development of architectural technology, selected topics are to be pursued as a series of lectures for a given term or project development. Research topics can also be undertaken by individuals or small groups, and are to be development or project specific. The area of study will not duplicate the content covered in the existing OCC architecture course offerings. BILLABLE CONTACT HOURS: 1 - 4

ARC 1804  Special Topics - Architecture ..........1-4 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: ARC 1500 or consent of instructor.
In the continual development of architectural technology, selected topics are to be pursued as a series of lectures for a given term or project development. Research topics can also be undertaken by individuals or small groups, and are to be development or project specific. The area of study will not duplicate the content covered in the existing OCC architecture course offerings. BILLABLE CONTACT HOURS: 1 - 4

ARC 1805  Special Topics - Architecture ..........1-4 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: ARC 1500 or consent of instructor.
In the continual development of architectural technology, selected topics are to be pursued as a series of lectures for a given term or project development. Research topics can also be undertaken by individuals or small groups, and are to be development or project specific. The area of study will not duplicate the content covered in the existing OCC architecture course offerings. BILLABLE CONTACT HOURS: 1 - 4

ARC 1806  Special Topics - Architecture ..........1-4 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: ARC 1500 or consent of instructor.
In the continual development of architectural technology, selected topics are to be pursued as a series of lectures for a given term or project development. Research topics can also be undertaken by individuals or small groups, and are to be development or project specific. The area of study will not duplicate the content covered in the existing OCC architecture course offerings. BILLABLE CONTACT HOURS: 1 - 4

ARC 1807  Special Topics - Architecture ..........1-4 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: ARC 1500 or consent of instructor.
In the continual development of architectural technology, selected topics are to be pursued as a series of lectures for a given term or project development. Research topics can also be undertaken by individuals or small groups, and are to be development or project specific. The area of study will not duplicate the content covered in the existing OCC architecture course offerings. BILLABLE CONTACT HOURS: 1 - 4

ARC 1808  Special Topics - Architecture ..........1-4 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: ARC 1500 or consent of instructor.
In the continual development of architectural technology, selected topics are to be pursued as a series of lectures for a given term or project development. Research topics can also be undertaken by individuals or small groups, and are to be development or project specific. The area of study will not duplicate the content covered in the existing OCC architecture course offerings. BILLABLE CONTACT HOURS: 1 - 4

ARC 1809  Special Topics - Architecture ..........1-4 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: ARC 1500 or consent of instructor.
In the continual development of architectural technology, selected topics are to be pursued as a series of lectures for a given term or project development. Research topics can also be undertaken by individuals or small groups, and are to be development or project specific. The area of study will not duplicate the content covered in the existing OCC architecture course offerings. BILLABLE CONTACT HOURS: 1 - 4

ARC 2050  Building Systems II ......................5 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: ARC 1500 and CAD 1151 or consent of instructor.
This course provides the foundational information for producing quality construction documents for small to medium scale commercial construction. The student will be introduced to the development, composition, and application of various building materials. Specific materials that will be addressed include steel, concrete, glass and aluminum as well as modern synthetic materials. Topics include steel construction principles, detailing, footings, electrical and mechanical plan layouts. The course content also includes discussion on related building codes and construction specifications. The course content is structured for lecture and studio drawing time. BILLABLE CONTACT HOURS: 5

ARC 2110  Architectural Site Development ..........4 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: ARC 1500 or consent of instructor.
This course introduces the student to design issues for good site planning process principles and methods. The course addresses the issues related to site engineering such as grading, drainage, circulation, road alignment, and overall organizational concepts relative to a given site. The course content also includes an understanding of zoning, variances, easements and ordinances. The students will be required to understand and develop grading plans for a small to medium-sized property. BILLABLE CONTACT HOURS: 4

ARC 2111  Global Site Development ..................1 Credit Hour
English/ESL Placement: Placement into ENG 1510.
Prerequisite: ARC 1140 and ARC 1500 or consent of instructor.
This course is an introduction to natural systems as they relate to sustainability with focus on the physical elements of a site, their influence on the site development and their effects on the architectural design. The focal point of the course is site grading and its related techniques, e.g., defining the land, reading topography, development of grading plans and its applications. Also included throughout the course are applications of accessibility standards, e.g., American Disability Act. The course, along with Architectural Design II and Architectural Site Development, if completed as part of the OCC Associated Degree will meet LTU's Integrated Design Studio I requirements. BILLABLE CONTACT HOURS: 1
ARC 2120  Structural Systems  4 Credit Hours
Prerequisite: ARC 2050 and PHY 1610 or consent of instructor.
This course is an introduction to the structural design process. The
students will learn structural theory through analytical and graphical
solutions, determination of loads, resolution of force systems, equilibrium
analysis, structural properties of shape and materials, shear and bending
moments and deflection. Overall students will perform analysis on
elementary indeterminate structures and introductory awareness of
structural system behavior. It is suggested that you take this course within
a semester of taking physics in order to be current on your formulas.
BILLABLE CONTACT HOURS: 4

ARC 2130  Building Code Analysis  2 Credit Hours
Prerequisite: ARC 1500 or consent of instructor.
This course is an overview of building codes utilizing International Building
Codes as a reference. Specific topics include: local, state and city
applications of the international building codes. Students review building
plans in order to understand compliances, terminologies, definitions
and review processes and submit a compiled report and presentation.
BILLABLE CONTACT HOURS: 2

ARC 2140  Architectural Environmental Systems  4 Credit Hours
Prerequisite: ARC 1500 or consent of instructor.
The course will introduce students to environmental systems as they
relate to building design and construction. Topics include design and
understanding of mechanical, electrical, plumbing, and acoustical systems.
The course presents students with a basic technical vocabulary and
visual familiarity with environmental systems. Students will prepare
typical electrical, mechanical, and plumbing drawings as well as perform
load calculations. Additionally the course will expose students to
environmentally friendly green building concepts including active and
passive solar system designs. BILLABLE CONTACT HOURS: 4

ARC 2150  Interior Design and Color Theory  3 Credit Hours
Equivalent: ARC 1160
Prerequisite: ARC 1500 or consent of instructor.
This course introduces the student to interior planning by understanding
behavioral, directional, personal, and conceptual spaces. The students
explore solutions to two and three-dimensional interior design projects
using color theory, perception, material and finish selections with
emphasis on space planning, lighting, anthropometrics, ergonomics and
codes. Several graphic presentation strategies and verbal communication
skills will be introduced and explored. This course is taken in conjunction
with ARC 2180 for the purpose of project continuity. BILLABLE CONTACT
HOURS: 3

ARC 2180  Architectural Design and Development  4 Credit Hours
Equivalent: ARC 2160
Prerequisite: ARC 1140 ARC 2050 ARC 2110 and ARC 2140 or consent
of instructor.
This course is the last of the architectural drawing classes which
specifically deals with concept to full scale design development drawings.
The student will utilize their past skills and experience in the development
of sequential design development drawings. The topics that are being
reinforced include zoning regulations, easements, development of site
plan, building codes and building systems. The course is an intensive
studio which focuses towards an end design presentation which includes
interior design package as well as three-dimensional graphics and
modeling. BILLABLE CONTACT HOURS: 4

ARC 2181  Design Theory  1 Credit Hour
Prerequisite: ARC 2165 and ARC 2180 or consent of instructor.
This course is required for the student pursuing the articulation path with
Lawrence Technological University (LTU). This design studio/lecture
course examines the historical and contemporary theories of architecture
such as modern, post modern and de-constructive movements that shape
modern day architecture. As part of the learning process the student
will test and demonstrate these theories against their individual design
projects within the confines of architectural techniques. This course is
intended to augment and compliment similar independent design studio
courses offered at LTU. BILLABLE CONTACT HOURS: 1

ARC 2182  Portfolio Review  1 Credit Hour
Prerequisite: ARC 2111 ARC 2165 ARC 2180 and ARC 2181 or consent
of instructor.
Students finishing OCC-LTU track will prepare a portfolio containing
selected work samples for the transfer selection process. Emphasis will be
placed on presentation, creativity and content assembled to be reviewed
by a panel of jury members. BILLABLE CONTACT HOURS: 1

Art (ART)

ART 1510  Basic Drawing  3 Credit Hours
Equivalent: ART 1010
Prerequisite: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)
The student will demonstrate the use of various drawing techniques
including contour drawings, continuous lines, shadow-mass impressions,
and expressive line quality. The student will identify and analyze the
structure of form and render a drawing on the basis of these observations.
BILLABLE CONTACT HOURS: 3

GE Outcomes: Aesthetic Awareness

ART 1520  Basic Design  3 Credit Hours
Equivalent: ART 1020
Prerequisite: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)
The student will develop skills that are fundamental in understanding
design in two and three-dimensional aspects. The student will be assigned
various problems where the specific use of media and its objectives are
outlined, viewed from its functional and aesthetic importance. BILLABLE
CONTACT HOURS: 3

GE Outcomes: Aesthetic Awareness
ART 1530  Acrylic Painting ................................. 3 Credit Hours
English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)
The student will develop an understanding of acrylic painting medium by exploring a multi-media approach to painting. Students will demonstrate competency in handling figurative and non-figurative subjects, montage, collage, impasto build-up, and other related technical problems. BILLABLE CONTACT HOURS: 3
GE Outcomes: Aesthetic Awareness

ART 1540  Introduction to Ceramics ...................... 3 Credit Hours
Equivalent: ART 1300
English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)
This course covers the basic nature and properties of clay, applying hand-building techniques, and a select range of decorating and ceramic trimming processes. Students will develop an awareness of how elements and principles of design integrate into functional and sculptural ceramic form. Historical and contemporary ceramic sources are explored. BILLABLE CONTACT HOURS: 3
GE Outcomes: Aesthetic Awareness

ART 1550  Sculpture ........................................... 3 Credit Hours
Equivalent: ART 1350
English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)
The student will create several sculptures utilizing a variety of materials such as plaster, wood, stone, metal, and plastics. A variety of techniques and philosophies will be explored. BILLABLE CONTACT HOURS: 3
GE Outcomes: Aesthetic Awareness

ART 1560  Art Appreciation ................................. 3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Students are introduced to the visual arts in relation to their cultures and societies. The course includes arts of various times and places, aesthetic orientations that affect them and individual artists' relationship to their environments. The class connects artistic expressions and their aesthetic orientations with philosophical, religious, political and/or socio-economic influences. BILLABLE CONTACT HOURS: 3
GE Outcomes: Aesthetic Awareness

ART 1570  Oil Painting ........................................ 3 Credit Hours
English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)
The student will develop skills requisite to oil painting based on a systematic approach to fundamental techniques and philosophies utilizing such media as slides, films, and laboratory reading, supplemented by gallery participation and discussion. In the studio, emphasis will be placed on materials and concepts while encouraging personal and creative production. BILLABLE CONTACT HOURS: 3
GE Outcomes: Aesthetic Awareness

ART 1600  Watercolor Painting ........................... 3 Credit Hours
English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)
The student will develop skills in the transparent watercolor medium based on fundamental and experimental techniques. The many watercolor styles will be investigated utilizing slides, films, and readings, supplemented by gallery participation and discussion. In the studio, emphasis will be placed on the spontaneity and immediacy of watercolor while encouraging personal and creative production. BILLABLE CONTACT HOURS: 3
GE Outcomes: Aesthetic Awareness

ART 1610  Jewelry ............................................. 3 Credit Hours
English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)
Jewelry offers the basic techniques of metal work, allowing the student opportunity to create attractive jewelry or small objects by sawing, soldering, fusion, and forging in various metals. BILLABLE CONTACT HOURS: 3
GE Outcomes: Aesthetic Awareness

ART 1611  Advanced Jewelry ............................... 3 Credit Hours
English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)
Prerequisite: ART 1610 or consent of instructor.
Advanced Jewelry offers the student an opportunity to learn methods of casting in precious metals from original wax models. Work will include centrifugal casting, burning out, finishing, and gemstone setting. BILLABLE CONTACT HOURS: 3

ART 2110  Wheel Throwing I: Introduction to the Potter's Wheel ......................................................... 3 Credit Hours
Equivalent: CER 1210
English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)
This course teaches the basic techniques of throwing on the potter's wheel. Shaping of tall and low forms will be emphasized. BILLABLE CONTACT HOURS: 3

ART 2120  Wheel Throwing II ............................... 3 Credit Hours
Equivalent: CER 1221,CER 1220
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses.)
Prerequisite: ART 2110 or consent of instructor.
Building upon the skills developed in Wheel Throwing I, this course emphasizes more complex forms including lids, handles, and closed forms. BILLABLE CONTACT HOURS: 3

ART 2130  Wheel Throwing III .............................. 3 Credit Hours
Equivalent: CER 2230
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses.)
Prerequisite: ART 2110 or consent of instructor.
This course builds upon the skills learned in Wheel Throwing I. Alternative approaches and techniques will be taught using the potter's wheel to achieve both functional and sculptural forms. BILLABLE CONTACT HOURS: 3
ART 2140  Wheel Throwing IV  3 Credit Hours
Equivalent: CER 2240
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: ART 2110 or consent of instructor.
Building on the skills learned in Wheel Throwing III, this course will introduce students to techniques used in production of multiple objects of similar size and construction of complex forms. BILLABLE CONTACT HOURS: 3

ART 2240  Ceramics: Intermediate Hand-Building  3 Credit Hours
Equivalent: ART 2540, ART 2300
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Intermediate Hand-Building builds upon basic methods and processes learned in ART 1540. Students will learn advanced methods of construction based on coursework that addresses functional and sculptural ceramic objects, while continuing to further develop an understanding of historical and contemporary ceramics. ART 1540 is highly recommended, but not required. BILLABLE CONTACT HOURS: 3

GE Outcomes: Aesthetic Awareness

ART 2250  Ceramics: Advanced Hand-Building  3 Credit Hours
Equivalent: CER 2320
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: ART 2240 or consent of instructor.
Advanced Hand-Building builds upon methods and processes learned during Intermediate Hand-Building. This course approaches experimental and advanced techniques in fabricating and considering sculptural and functional ceramic form. Discourse and research around contemporary and historical ceramics will continue to be developed. BILLABLE CONTACT HOURS: 3

ART 2260  Ceramic Field Study  3 Credit Hours
Equivalent: CER 2211, CER 2210
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: Consent of instructor.
Ceramic Field Study will permit students to concentrate their learning experiences in one special area of interest. This can be an in-depth experience in an area not ordinarily covered in other ceramic courses. BILLABLE CONTACT HOURS: 3

ART 2270  Ceramics: Glaze Formulation  3 Credit Hours
Equivalent: CER 2410
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
The purpose of this course is to provide an introduction to making glazes. It will help students to learn the basic ingredients used for glazes and how they react in the batch formula. BILLABLE CONTACT HOURS: 3

ART 2510  Fundamentals of Figure Drawing  3 Credit Hours
Equivalent: ART 2010
English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)
Prerequisite: ART 1510 or consent of instructor.
The student will develop skills, primarily in black and white media, of rendering an artist's understanding of anatomy. Students will concentrate on proportions, form, and portrait studies. BILLABLE CONTACT HOURS: 3

ART 2520  Advanced Drawing  3 Credit Hours
Equivalent: ART 2350
English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)
Prerequisite: ART 1510
Working with a thorough understanding of proportion and form, the student will gain skills in a creative approach to the visual image. These skills will be facilitated through the use of watercolor, pastel, charcoal, and ink washes. BILLABLE CONTACT HOURS: 3

ART 2550  Advanced Sculpture  3 Credit Hours
Equivalent: ART 2350
English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)
Prerequisite: ART 1550.
The student will create a minimum of two sculptures equal in time value to 45 hours each from a variety of media including welding, bronze casting, fiberglass construction, and outdoor cement sculpture. Emphasis will be placed on creative involvement in seeking a personal expression. BILLABLE CONTACT HOURS: 3

ART 2570  Advanced Design  3 Credit Hours
Equivalent: ART 1520
English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)
Prerequisite: ART 1520.
The student will complete a variety of assignments dealing with various facets of functional and non-functional design, including forms and techniques of media application and two and three-dimensional projects utilizing paint, plaster, and/or plastics. BILLABLE CONTACT HOURS: 3

ART 2600  American Art  3 Credit Hours
Equivalent: ART 2010
English/ESL Placement: Placement into ENG 1510.
The course presents American visual arts from the colonial period to the present time with emphasis on modern/contemporary expressions. The class is designed to show the uniquely American character of these arts as they reflect American life and the varied cultural influences that affect it. BILLABLE CONTACT HOURS: 3

GE Outcomes: Aesthetic Awareness
ART 2630  Advanced Oil Painting .................. 3 Credit Hours

English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)

Prerequisite: ART 1570 or consent of instructor.
The student will further develop his/her skills and abilities toward a better understanding of the oil painting medium. The student will continue his/her investigation of oil painting by viewing slides and films, by reading art books and periodicals, and by attending galleries and museums followed by periodic class critiques. In the studio, emphasis will be placed on techniques and design qualities (formal elements) which are necessary ingredients to produce a well-composed painting while encouraging personal and creative growth. BILLABLE CONTACT HOURS: 3

ART 2640  Advanced Watercolor Painting ............ 3 Credit Hours

English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)

Prerequisite: ART 1600 or consent of instructor.
The student will further develop his/her skills and abilities toward a better understanding of the watercolor medium. The student will continue his/her investigation of water-color by viewing slides and films, by reading art books and art periodicals, and by attending galleries and museums followed by periodic class critiques. In the studio, emphasis will be placed on the spontaneity and the immediacy of watercolor while encouraging personal and creative growth. BILLABLE CONTACT HOURS: 3

ART 2702  Sculpture Welding .......................... 3 Credit Hours

English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)
The student will weld and/or braze two or more pieces of sculpture from a list of options including, but not limited to, rod structures, planes over armatures, found objects, and welded forms combined with other media. Creativity is encouraged. Design principles relating to sculpture will be presented orally and visually. Although safety is stressed, equipment is used at the student's risk. The focus of this course is artistic, not industrial. BILLABLE CONTACT HOURS: 3

ART 2704  Sculpture Casting ............................ 3 Credit Hours

English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)
The student will create two or more pieces of sculpture using casting techniques including, but not limited to, casting hydrostone and polyester resin in plaster molds, metal casting in sand using Styrofoam, and lost wax method. Students should check individual campuses for specific techniques available. Design principles relating to sculpture will be presented orally and visually. BILLABLE CONTACT HOURS: 3

ART 2710  Advanced Figure Drawing .................. 3 Credit Hours

English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)

Prerequisite: ART 2510 or consent of instructor.
In this class, the student will engage in a series of problem solving assignments pertaining to an in-depth study of the human anatomy as it relates to drawing. This task will be carried out on the part of the student by working with a multimedia format or choosing to concentrate on one medium as a means of self-expression. BILLABLE CONTACT HOURS: 3

Automotive Technology (AUT)

AUT 1000  Automotive Fundamentals .................. 4 Credit Hours
Equivalent: AUT 1110

English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).

The course covers how to identify and discuss major automotive systems, components and tools, using the correct terminology. The course will also explore the safe and efficient use of standard automotive tools and equipment during performance of basic automotive servicing procedures. Students will participate in discussions of various automotive employment opportunities and analyze the job entry requirements for each. Students are tested on the following Industry certifications: NC3-Precision Measuring Instruments; Battery Maintenance & Starting; ShopKey Pro Level1; and Torque Theory, Mechanical, and Electrical. BILLABLE CONTACT HOURS: 5

AUT 1100  Automotive Brake Systems Service .... 4 Credit Hours
Equivalent: ATA 1100

English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).

Corequisite: AUT 1000
This course will cover the skills required to properly service the hydraulic brake system, utilizing hands-on training and work experience on licensed vehicles, developing entry-level job skills. The student will rebuild or renew all components of current major automotive manufacturers' brake systems with an emphasis on safe and proper work habits and procedures. BILLABLE CONTACT HOURS: 5

AUT 1200  Front Suspension & Steering Service ...... 4 Credit Hours
Equivalent: ATA 1200

English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).

Corequisite: AUT 1000
This course will cover the skills required to properly service the front suspension and steering system of current model vehicles. A great portion of class time will be spent in the lab rebuilding or renewing all components of the suspension and steering systems. Wheel alignment measurement and correction will be performed by all students on all major automotive equipment, with an emphasis on safe and proper work habits and procedures. BILLABLE CONTACT HOURS: 5

AUT 1300  Automotive Electrical Systems Servicing .... 4 Credit Hours
Equivalent: ATA 1300, TEA 1160

English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).

Corequisite: AUT 1000 or consent of instructor.
This course will cover the skills required to service the battery, cranking system, charging system, and electrical accessories systems of all current major automobile manufacturers' vehicles. Theory of the systems as well as hands-on training will provide job entry-level job skills for the student. Current manufacturers' specifications as well as safe and proper work habits and procedures will be emphasized. BILLABLE CONTACT HOURS: 5
AUT 1350  Automotive Advanced Electrical and Electronics  ... 4 Credit Hours
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: AUT 1000 and AUT 1300
This course develops the skills required to diagnose and service electrical/electronic components. The student will be instructed through a variety of methodologies and instruction to promote discussions related to advanced theories and diagnosis. Advanced training aids and diagnostic tools will be used to enhance knowledge. Multiple vehicles and manufacturer systems will be utilized for advanced troubleshooting; as well as hands-on experience using licensed vehicles. The student will develop advanced-level job skills in diagnosing and repairing malfunctions in the vehicle systems, with an emphasis on safe and proper work practices and procedures. BILLABLE CONTACT HOURS: 5

AUT 1400  Engine Support Systems Servicing  ... 4 Credit Hours
Equivalent: ATA 1400, TEA 1110
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: AUT 1000 and AUT 1300 or Consent of Instructor.
This course will develop the skills required to properly service the engine fuel, lubrication, cooling, exhaust and valve systems. A great portion of the class time will be spent in the laboratory performing tests, as well as repairing and renewing major components of the above named systems. The student will make adjustments, and replace components in accordance with manufacturers' specifications, with a major emphasis on developing safe and proper work habits and techniques. BILLABLE CONTACT HOURS: 5

AUT 1500  Automotive Tune-Up & Emissions Service  ..... 4 Credit Hours
Equivalent: ATA 1500, TEA 1140
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: AUT 1000 and AUT 1300 or Consent of Instructor.
Corequisite: AUT 1400
This course will develop the skills required to properly tune an engine and diagnose the amount of emissions the engine produces. The student will also calibrate, make adjustments, and renew or replace components of the ignition and emission systems in accordance with the manufacturers' specifications. The student will also diagnose drive-ability concerns related to engine performance and emissions. Current ignition analysis equipment as well as infrared and other emissions measuring devices and equipment will be used in a safe and proper manner. BILLABLE CONTACT HOURS: 5

AUT 1600  Automotive Transmission Servicing  . 4 Credit Hours
Equivalent: ATA 1600
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: AUT 1000 or consent of instructor.
Corequisite: AUT 1300
This course will develop the skills required to perform service operations on all current major automobile manufacturers' automatic transmissions. A major portion of the class time will be spent in the laboratory performing tests, making adjustments, renewing or replacing various components of the transmissions. Manufacturer's specifications and procedures as well as safe and proper work habits will be greatly emphasized. BILLABLE CONTACT HOURS: 5

AUT 1700  Manual Transmission and Axle Service ..... 4 Credit Hours
Equivalent: ATA 1700
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: AUT 1000 or consent of instructor.
This course will develop the skills required to service all current major automobile manufacturers' manual transmissions and rear axles. Servicing procedures will include diagnosis, removal and replacement, and rebuilding of the clutch, transmission, drive shaft and the rear axle. Manufacturers' specifications and procedures as well as safe and proper work habits will be emphasized. BILLABLE CONTACT HOURS: 5

AUT 1800  Automotive Air Conditioning & Heating Service ........................................... 4 Credit Hours
Equivalent: ATA 1800
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: AUT 1000 or consent of instructor.
Corequisite: AUT 1300
This course will develop the skills required to service all major automobile manufacturers' current model heating and air conditioning systems. Theory of the systems as well as work experience on licensed vehicles will be included. The student will develop entry-level job skills in diagnosing and repairing malfunctions in the systems, with an emphasis on safe and proper work habits and procedures. BILLABLE CONTACT HOURS: 5

AUT 2000  Cooperative Internship  ...................... 3 Credit Hours
Equivalent: IND 1403, IND 1403
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: Completion of 24 Automotive (AUT) credits. Consent of Instructor.
The student will be employed in the automotive servicing industry in a supervised situation under the guidance of a coordinator. The student will identify and describe, through reports and position papers, technical problems encountered on the job. Students will complete a minimum of 135 hours. BILLABLE CONTACT HOURS: 3
Biology (BIO)

BIO 1500 Environmental Science .......................... 4 Credit Hours
English/ESL Placement: Placement into ENG 1510.
A laboratory science course which will focus through an interdisciplinary investigation on (a) developing an awareness of one's total environment (social, physical, and biological), (b) identifying the cause and perspective of our environmental concerns and, (c) exploring the possible and preferred solutions and strategies to those environmental issues.
BILLABLE CONTACT HOURS: 5
GE Outcomes: Global Understanding and Responsibility

BIO 1511 Life Science ................................. 4 Credit Hours
Equivalent: LSC 1510, GSC 1510
English/ESL Placement: Placement into ENG 1510.
The course will cover the basic concepts of biology. These include: the cellular basis of life, metabolic processes, genetics, diversity, evolution and ecology, with human applications. This is a laboratory course intended for non-science majors. BILLABLE CONTACT HOURS: 5
GE Outcomes: Scientific Literacy

BIO 1530 Molecular and Cellular Biology ............ 4 Credit Hours
Equivalent: BIO 1510
English/ESL Placement: Placement into ENG 1510.
Prerequisite: Placement into MAT 1100 or higher.
The course will cover the molecular and cellular basis of biological processes including metabolism, reproduction, genetics and evolution along with relevant applications of biotechnology. It is expected that students enrolling in this course will have successfully completed both high school biology and chemistry, or equivalent college preparatory work, within the previous five years. This course is the first in a two-semester sequence intended for biology majors. This course includes a laboratory component. BILLABLE CONTACT HOURS: 6
GE Outcomes: Scientific Literacy

BIO 1550 Organismal Biology - Biodiversity, Ecology and Evolution .............................. 4 Credit Hours
English/ESL Placement: Placement into ENG 1510 or higher.
Prerequisite: BIO 1511 or BIO 1530 with a 'C' or better within the last 5 years.
This organismal biology course will introduce the basic scientific principles underlying the biodiversity, ecology and evolution of representative species from various fungi, plant, animal and other eukaryotic taxa. Topics covered will include fundamentals of evolutionary theory; systematics and taxonomic classification; a comparative study of the structure, function and evolutionary relationships among eukaryotic species; and ecological topics including population biology, communities and ecosystems. This course is the second in a two-semester sequence intended for biology majors. This course includes a laboratory component. BILLABLE CONTACT HOURS: 6
GE Outcomes: Scientific Literacy

BIO 1557 Microbiology of Health and Disease .......................... 3 Credit Hours
Equivalent: BIO 1710
English/ESL Placement: Placement into ENG 1510 or higher.
Prerequisite: Satisfactory score on the OCC Biology Proficiency Test; or a grade of 'C' or better in BIO 1510 or BIO 1530 (or equivalent college transfer course) within the last 5 years.
Student will study the general nature and behavior of microbes as applied to human health and disease, including the dynamics of normal microbiota, the infectious process, microbes as causative agents of disease, host parasite relationships and development of immunity.
Particular emphasis will be placed on the study of various modes of transmission and proper management to prevent spreading of infectious disease. This natural science course is also required for many health-related fields. This is a non-lab course. BILLABLE CONTACT HOURS: 3
GE Outcomes: Scientific Literacy

BIO 1560 Human Anatomy and Physiology for the Emergency Medical Services Program .......................... 5 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: Completion of EMS 1010 EMS 1020 and EMS 1100 each with a grade of 'C' or better.
This course is designed to meet the needs of students in the Emergency Medical Services program. This course reinforces the fundamentals of human anatomy and physiology for all major body systems with a detailed laboratory experience. The goal of this course is to provide a detailed survey of human anatomy and physiology to students in the Emergency Medical Services program. Students will learn basic terminology associated with human anatomical structures and physiological processes. Students will apply terminology and physiological function through the use of models, plaques, microscopy, dissection and experimentation in lab. This course does not meet the requirements for most other health professional programs. BILLABLE CONTACT HOURS: 7

BIO 2540 General Zoology ................................. 4 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: BIO 1530 with a grade of 'C' or better within the last 5 years.
The course will explore representative protozoa and members of the animal kingdom, emphasizing their metabolism, anatomical structure and function, reproduction and development, evolution, diversity and ecology. The laboratory component of this course, which may include animal dissection, involves the application of the terminology and concepts presented in lecture. BILLABLE CONTACT HOURS: 6
GE Outcomes: Scientific Literacy

BIO 2560 Principles of Genetics .......................... 3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: BIO 1530 and any of the following: BIO 1560 BIO 2540 or BIO 2710 all with a grade of 'C' or better within the last 5 years or consent of instructor.
The course examines the Mendelian and non-Mendelian laws of inheritance, the chromosome theory, chromosomal and genetic mutations, mechanisms of gene action, the nature of genetic material, statistical analysis, and eugenics. This is a non-laboratory course. BILLABLE CONTACT HOURS: 3
BIO 2601  Special Topics in Biology  1-4 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: BIO 1500 BIO 1530 or BIO 1511.
This course will explore a special topic of current interest in biology. Such topics may include subjects in anatomy, physiology, botany, zoology, microbiology, environmental science or other areas of the life sciences. In studying these topics, the student will be introduced to current concepts and their applications. The course will include a lecture component and may also include laboratory experience, field trips or travel when appropriate. Refer to the specific section using OCC's online system for current topics. BILLABLE CONTACT HOURS: 1 - 4

BIO 2602  Special Topics in Biology: Biodiversity in the Tropics  2 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: BIO 1500 BIO 1530 or BIO 1511.
Biodiversity in the Tropics. BILLABLE CONTACT HOURS: 2

BIO 2603  Special Topics in Biology  1-4 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: BIO 1500 BIO 1530 or BIO 1511.
This course will explore a special topic of current interest in biology. Such topics may include subjects in anatomy, physiology, botany, zoology, microbiology, environmental science or other areas of the life sciences. In studying these topics, the student will be introduced to current concepts and their applications. The course will include a lecture component and may also include laboratory experience, field trips or travel when appropriate. Refer to the specific section using OCC's online system for current topics. BILLABLE CONTACT HOURS: 1 - 4

BIO 2604  Special Topics in Biology  1-4 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: BIO 1500 BIO 1530 or BIO 1511.
This course will explore a special topic of current interest in biology. Such topics may include subjects in anatomy, physiology, botany, zoology, microbiology, environmental science or other areas of the life sciences. In studying these topics, the student will be introduced to current concepts and their applications. The course will include a lecture component and may also include laboratory experience, field trips or travel when appropriate. Refer to the specific section using OCC's online system for current topics. BILLABLE CONTACT HOURS: 1 - 4

BIO 2630  Human Anatomy and Physiology I  4 Credit Hours
Equivalent: BIO 1630/BIO 1610
English/ESL Placement: Placement into ENG 1510.
Prerequisite: Satisfactory score on the OCC Biology Proficiency Test; or a grade of 'C' or better in BIO 1511 or BIO 1530 (or equivalent college transfer course) within the last 5 years.
This course will analyze the structural and functional relationships of the human body at the biochemical, cellular, tissue, organ and system level. Emphasis will be placed on the identification of the major anatomical parts and physiological activities of the integumentary, skeletal (including articulations), muscular, and nervous (including special senses) system. The laboratory component of this course involves application of the concepts presented in lecture. This natural science course is also required for many health-related fields. BILLABLE CONTACT HOURS: 6

BIO 2640  Human Anatomy and Physiology II  4 Credit Hours
Equivalent: BIO 1640/BIO 1620
English/ESL Placement: Placement into ENG 1510.
Prerequisite: BIO 2630 with a grade of 'C' or better within the last 5 years; or consent of department discipline designee.
Utilizing and building upon information covered in Human Anatomy and Physiology I (BIO 2630), this course will identify the major anatomical parts of the endocrine, cardiovascular, lymphatic, immune, respiratory, digestive, urinary, and reproductive systems of the human body and relate their structures to the physiological activities of these systems. This course will also analyze the homeostatic effects of fluids, electrolytes, acids and bases throughout the integrated human body. The laboratory component of this course involves application of the concepts presented in lecture. This natural science course is also required for most health profession and technology programs such as: dental hygiene, respiratory therapy, surgical technology and nursing. BILLABLE CONTACT HOURS: 6

BIO 2660  Pathophysiology  3 Credit Hours
Equivalent: BIO 2250
English/ESL Placement: Placement into ENG 1510.
Prerequisite: BIO 1500 BIO 1530 or BIO 1511.
This course teaches the fundamentals of pathophysiology as it relates to care of the chronic and emergent patient in home, pre-hospital, and hospital settings. Content includes an overview of normal body functions, the immune system and immune response, discussion of specific diseases, cellular injury and death, shock, and how disease and injury alter normal function. This course is intended to meet the requirements of the EMS National standard Curriculum on pathophysiology and is part of the Advanced EMT program. BILLABLE CONTACT HOURS: 3

BIO 2710  Microbiology  4 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: Both BIO 1530 and CHE 1000 or higher (or equivalent college transfer course) with a grade of 'C' or better within the last 5 years; or consent of department discipline designee.
The course concepts include microbial cell biology, microbial genetics, interactions and impact of microorganisms and humans, interactions and impact of microorganisms in the environment, and microbial diversity. Laboratory incorporates basic techniques and exercises to investigate course concepts. This natural science course is also required for many health profession and technology programs such as: respiratory therapy, surgical technology and nursing. BILLABLE CONTACT HOURS: 6

Business (BUS)

BUS 1100  Introduction to Business  4 Credit Hours
Equivalent: BUS 1010
English/ESL Placement: Placement into ENG 1510.
This introductory business class covers the fundamentals of business including free market economics, ethics/social responsibility, entrepreneurship, management, human resource management, marketing, supply chain, finance, information systems, accounting, and government’s role in business. All topics are approached in the context of a global business environment. BILLABLE CONTACT HOURS: 4
BUS 1210  Small Business Basics ....................... 3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
This course examines the factors necessary to start a small business and enhance the likelihood of its success. Topics of study include assessment of the entrepreneurial personality and the suitability of small business as a career, assessing market potential, conducting a feasibility analysis/writing a business plan, raising capital and managing both finances and credit, implementing marketing and management strategies (including risk management, taxes, and record-keeping), and responding to government regulation. BILLABLE CONTACT HOURS: 3

BUS 1310  Supervision ..................................... 3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: BUS 1100 or consent of instructor.
This course examines principles of supervision such as induction, training, disciplining, absenteeism, safety, waste, control, equipment layout, grievance control, production control, and time study. BILLABLE CONTACT HOURS: 3

BUS 1400  Investment Fundamentals .................... 3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
This course examines common and preferred stocks, corporate and municipal bonds, mutual funds, cash instruments, and U.S. Treasuries, as they relate to personal investing. Additionally, this course will also examine types of exchanges, ways to analyze corporate financial statements, and economic forecasting. BILLABLE CONTACT HOURS: 3

BUS 1410  Personal Finance ................................... 3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
This course examines financial planning principles and proper money management for wealth accumulation. Topics of study include saving and budgeting for the short and long term, managing debt and credit, making major purchases (e.g. auto, home), estate and retirement planning, and investing fundamentals. BILLABLE CONTACT HOURS: 3

BUS 1450  Internship/Co-op I .......................... 3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: BUS 1423 or consent of instructor.
The internship student will be employed in a position of responsibility as a supervisor or management trainee in a specific business within the student's career field. BILLABLE CONTACT HOURS: 3

BUS 2030  Business Law I ..................................... 3 Credit Hours
Equivalent: BUS 2010
English/ESL Placement: Placement into ENG 1510.
This course examines the legal environment of business including the nature of law and dispute resolutions in the United States. Specific topics include contract procedure, alternative dispute resolution, constitutional rights, intellectual property, torts, crimes, business ethics, contracts, and sales under the Uniform Commercial Code. BILLABLE CONTACT HOURS: 3

BUS 2040  Business Law II ................................... 3 Credit Hours
Equivalent: BUS 2020
English/ESL Placement: Placement into ENG 1510.
Prerequisite: BUS 2030
This course examines common law property rights, banking and finance (negotiable instruments, electronic transfers, secured transactions and creditors rights), agency and business organizations. BILLABLE CONTACT HOURS: 3

BUS 2150  Global Business ................................. 3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
The course will introduce the complexities of the global business environment and provide a knowledge base essential for employment in today's contemporary businesses. Global business fundamentals addressed in the course include culture, global economy, political and legal environments, theories of foreign trade, foreign investment, and monetary systems. Management, marketing, and financial business considerations are addressed as they interact in a dynamic global marketplace. BILLABLE CONTACT HOURS: 3

BUS 2450  Internship/Co-op II ........................... 3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: BUS 1450 or consent of instructor.
The advanced internship student will continue his or her employment in a position of responsibility as a supervisory or management trainee in a specific business within the student's career field. BILLABLE CONTACT HOURS: 3

BUS 2530  Management ........................................ 3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: BUS 1100 or consent of instructor.
This course examines generally-accepted, major management concepts. Students will individually and in groups demonstrate their understanding of planning, organizing, empowering, changing and controlling organizations. They will be exposed to current problems in business ethics and business practice in a global economy. Additionally, this course offers insights as to how and when these concepts might be practically applied in the workplace. BILLABLE CONTACT HOURS: 3

BUS 2700  Business and Labor Relations .................. 3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: BUS 1310 or BUS 2530
This course examines various labor acts and their impact on both labor and management, as well as significant philosophies pursued by both labor and management. Additionally, this course will also consider techniques employed by first-line supervisors who seek to implement labor contracts. Case studies will be used. BILLABLE CONTACT HOURS: 3

BUS 2800  Human Resource Management ................ 3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
This course introduces fundamental concepts of human resource management by examining employment law, recruitment and selection, compensation, performance appraisal, training and development, employee benefits and services, occupational health and safety, and personnel records and systems. BILLABLE CONTACT HOURS: 3

Chemistry (CHE)

CHE 1000  Introductory Chemistry .......................... 4 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: MAT 1100 or higher with a grade of 'C' or better within the last three years or placement into MAT 1150 or higher within the past two years.
This course introduces the language and central concepts of chemistry. Included are the meaning and use of the mole, atomic theory and structure, the periodic table, chemical nomenclature, bonding, chemical reactions and equations, stoichiometry and solution chemistry. These concepts are illustrated in the laboratory section of the course, in which experiments are done to observe the behavior or matter under controlled conditions. This course provides skills required for subsequent chemistry courses. BILLABLE CONTACT HOURS: 5

GE Outcomes: Critical Thinking, Quantitative Literacy
CHE 1320  Survey of Organic and Biochemistry  4 Credit Hours
English/ESL Placement: Placement into ENG 1510.
This course introduces the nomenclature, functional groups and skeletal structure of organic and biochemical compounds with particular emphasis on compounds of biological interest such as carbohydrates, lipids, proteins, nucleic acids and enzymes. The laboratory section of the course illustrates the characteristic properties and reactions of compounds of biological interest. This course builds on skills acquired in introductory chemistry. Satisfactory completion of high school chemistry or equivalent or completion of CHE 1000 or equivalent is recommended. BILLABLE CONTACT HOURS: 5
GE Outcomes: Critical Thinking, Scientific Literacy

CHE 1510  General Chemistry I  4 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: MAT 1150 or higher with a 'C' or better within the last three years or placement into MAT 1540 or higher within the past two years. Completion of secondary school chemistry or CHE 1000 or equivalent is recommended. This course explores the principles of atomic structure, chemical nomenclature, valence shell electron pair repulsion theory, chemical bonding, stoichiometry, acids and bases, thermo chemistry, gas laws and kinetic molecular theory. Both conceptual development and problem solving are emphasized. The laboratory section of the course involves application and amplification of the concepts developed in the course. This course provides skills required for subsequent chemistry courses. BILLABLE CONTACT HOURS: 6
GE Outcomes: Critical Thinking, Quantitative Literacy

CHE 1520  General Chemistry II  4 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: CHE 1510 with a 'C' or better within the last five years. This course explores the principles of solution chemistry, kinetics, chemical equilibria, thermodynamics, acid-base theory and electrochemistry. Other topics such as nuclear chemistry, coordination chemistry, transition metal chemistry and other timely topics may be included. Both conceptual development and problem solving are emphasized. The laboratory section of the course involves application and amplification of the concepts developed in the course, including qualitative analysis to illustrate equilibria concepts. This course provides skills required for Organic Chemistry. BILLABLE CONTACT HOURS: 6
GE Outcomes: Critical Thinking, Quantitative Literacy

CHE 2610  Organic Chemistry I  4 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: CHE 1520 with a 'C' or better within the last five years. This course builds on skills acquired in general chemistry. This course is the systematic study of the chemistry of carbon compounds. Topics include structure and properties of carbon containing compounds, nomenclature, acid-base theory, stereochemistry, nucleophilic substitution and elimination reactions, addition reactions involving alkenes and alkynes, radical chemistry, alcohols and ethers, reaction mechanisms, and an introduction to synthesis. This course provides skills required for subsequent chemistry courses. BILLABLE CONTACT HOURS: 4

CHE 2620  Organic Chemistry II  4 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: CHE 2610 with a 'C' or better within the last five years. Topics include the study of alcohols, carboxylic acids, aldehydes and ketones, amines, carboxylic acid derivatives, carbohydrates, amino acids and proteins, functional group transformations, electrophilic aromatic substitution and nucleophilic aromatic addition chemistry, nuclear magnetic resonance and infrared spectroscopy theories are introduced and structures are examined spectroscopically. BILLABLE CONTACT HOURS: 4

CHE 2650  Organic Chemistry Lab  3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: CHE 2610 with a 'C' or better within the last five years. Corequisite: CHE 2620 with a 'C' or better within the last five years if taken as a prerequisite.
This course provides the student with the basic microscale or macroscale laboratory skills in organic chemistry including techniques in recrystallization, melting point determination, distillation and chromatography. Organic compounds are synthesized and examined using the methods and principles learned in CHE 2610 and CHE 2620, such as Grignard reactions, substitution and elimination reactions, Aldol condensations and IR theory. This course may be taken concurrently with CHE 2620. BILLABLE CONTACT HOURS: 5

Chinese (CHI)

CHI 1510  Beginning Chinese I  4 Credit Hours
English/ESL Placement: Placement into ENG 1510.
This is an introductory course with special emphasis on the fundamentals of speaking, reading, writing and understanding Mandarin Chinese language and Chinese culture. The course will introduce basic Chinese linguistic structure in simplified character form according to functional models, which can be applied to everyday conversational situations. BILLABLE CONTACT HOURS: 4
GE Outcomes: Effective Communication

Collision Auto Repair (CAR)

CAR 1000  Damage Analysis, Estimating, and Customer Service  3 Credit Hours
English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1101 or higher for students taking the ESL sequence of courses.)
The course will cover how to define and identify various types of vehicular damage and utilize indicators of structural damage to create computer generated estimates of collision damaged vehicles. Customer satisfaction indicators will be explored to improve customer service in the collision repair industry. BILLABLE CONTACT HOURS: 3

CAR 1100  Automotive Detailing and Prep  4 Credit Hours
English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1101 or higher for students taking the ESL sequence of courses.)
This course provides the basic knowledge of automotive cleaning and preparation. The student will perform personal and environmental safety practices associated with buffing and polishing, removal of overspray, cleaning interior and exterior surfaces, and preparing a vehicle for delivery. Customer satisfaction will be emphasized during the performance of coursework and actual vehicle preparation activities. BILLABLE CONTACT HOURS: 5

CAR 1200  Auto Body Fundamentals  4 Credit Hours
English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1101 or higher for students taking the ESL sequence of courses.)
The course will cover how to repair damaged panels using: hammer and dolly, metal finishing procedures, resistance weld dent pullers, plastic filler to restore panel contours, and apply primer/fillers in preparation for paint. The course will investigate emerging vehicular structures and materials and explore various Original Equipment Manufacturers (OEM) repair procedures required. BILLABLE CONTACT HOURS: 5
CAR 1250  Plastic Repair and Refinishing ........4 Credit Hours
English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)
Corequisite: CAR 1200
The course will address how to identify characteristics of various types of plastics, such as: thermoset, thermoplastic, composites, and perform specific repair and refinishing processes on each type. Both hot air nitrogen welding and two-part adhesive bonding procedures will be performed. BILLABLE CONTACT HOURS: 5

CAR 1300  Collision Welding ......................4 Credit Hours
English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)
The student will perform specific GMAW (MIG) weld repairs on galvanized mild and high strength steel following the repair guidelines established by I-CAR and the collision repair industry. The student will identify and perform cutting processes for different materials and locations in accordance to manufacturer's specifications. BILLABLE CONTACT HOURS: 5

CAR 1350  Bolted-on Panel Replacement ........4 Credit Hours
English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)
Prerequisite: CAR 1200
The course will cover replacement and alignment of all types of outer body panels including aluminum and plastic composites. The course will explore advanced vehicle materials repair and mechanical attachment methods including: structural adhesives, rivet bonding, new types of mechanical fasteners such as Self-Piercing Rivets (SPR's), and other new Original Equipment Manufacturers (OEM) processes in this course. BILLABLE CONTACT HOURS: 5

CAR 1380  Aluminum Repair and Welding ..........4 Credit Hours
English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)
Prerequisite: CAR 1200 and CAR 1300
The course addresses how to identify alloys of aluminum used on modern vehicle components and perform OEM approved repair procedures on common alloys. Aluminum GMAW welding processes will be performed using pulse and synergistic welders to industry certification requirements. BILLABLE CONTACT HOURS: 5

CAR 1400  Welded-on Panel Replacement ........4 Credit Hours
English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)
Prerequisite: CAR 1350
Corequisite: CAR 1300
The course explores how to devise and follow a damage repair plan prior to repairing a collision damaged vehicle. The damage repair plan will include straightening and alignment of damaged body components, repair of body panels, and replacement of outer body panels using welding, bonding, self-piercing rivets (SPR), or other OEM approved methods, to ensure corrosion protection and returning the vehicle to the pre-accident condition. BILLABLE CONTACT HOURS: 5

CAR 1450  Non-Structural Analysis and Damage Repair: Co-Operative Internship ........................................2 Credit Hours
English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)
Corequisite: CAR 1400
The student will spend 90 supervised hours at a co-op approved collision repair facility working with a certified structural repair technician. The student will perform such duties as: remove damaged panels, replace and align new panels, restore corrosion protection, and other collision repair tasks. The student will report to the instructor on a weekly basis and will be evaluated by the instructor at the co-op collision site. BILLABLE CONTACT HOURS: 2

CAR 1600  Paint and Refinish I .....................4 Credit Hours
English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)
CAR 1600 provides the foundation skills for the application of automotive paint finishes. The student will mix and apply modern primers, primer/surfaces, sealers, and topcoats. Among the topics covered will be surface preparation for painting, environmental laws, personal safety protection, and modern paint spraying equipment. BILLABLE CONTACT HOURS: 5

CAR 1700  Paint and Refinish II ...................4 Credit Hours
English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)
Prerequisite: CAR 1600
The course will cover how to sand, mask, and tape vehicles in preparation for partial vehicle refinishing. The students will use computer-based mixing formulas to mix the paint color to a blendable match and will perform a paint repair on a late-model vehicle documented with a visual and digital portfolio. BILLABLE CONTACT HOURS: 5

CAR 1800  Paint and Refinish III ..................4 Credit Hours
English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)
Prerequisite: CAR 1700
The course will focus on color theory as it applies to mixing and tinting paint for proper color matching. Tri-coat and Multi-coat glamor finishes will be explored by spraying let-down panels and investigation special blending processes required. Emphasis will be placed on base coat blending techniques for both solvent and water-based paint. BILLABLE CONTACT HOURS: 5

CAR 1900  Paint and Refinish IV: Preparation for Certification .........................................................2 Credit Hours
English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)
Prerequisite: CAR 1800
Students will perform advanced paint application and repair processes while earning I-CAR ProLevel One Platinum Certification upon successfully passing the End Of Program (EOP) exam with 70% or above. Students will also review and prepare for the ASE Paint & Refinish Certification test using pre-testing and directed study techniques to prepare for certification. BILLABLE CONTACT HOURS: 3
Communication (COM)

COM 1290  Interpersonal Communication ............3 Credit Hours
Equivalent: SPE 1610, SPE 1370
English/ESL Placement: Placement into ENG 1510 or completion of ENG 1450.
This course will introduce the student to the principles of interpersonal communication.
Prerequisite: Consent of instructor.
The student will participate in a minimum of two inter-collegiate speech events.
Placement into ENG 1510.
SPE 1710  Forensic Activity ..........................1 Credit Hour
Equivalent: SPE 1710
English/ESL Placement: Placement into ENG 1510.
Prerequisite: Consent of instructor.
The student will participate in a minimum of two inter-collegiate speech events.
COM 2290  Intercultural Communication ............3 Credit Hours
Equivalent: SPE 2290
English/ESL Placement: Placement into ENG 1510.
Students are encouraged to take COM 1290 prior to taking this course.
This course is restricted to students in the Broadcast Arts Technology (BART.ALA) degree.
Prerequisite: Consent of instructor.
The course focuses on the study of persuasive and argumentation strategies.
COM 2610  Persuasion and Argumentation ............3 Credit Hours
Equivalent: SPE 2610
English/ESL Placement: Placement into ENG 1510.
Prerequisite: COM 1600 or consent of instructor.
The student will analyze and perform prose, poetry, dramatic literature, and other forms of written text.
This course explores the theories and practical applications of small groups and teams in a variety of settings, including employment, social, and volunteer organizations.
The student will participate in a minimum of two inter-collegiate speech events.
COM 2620  Oral Interpretation of Literature ............3 Credit Hours
Equivalent: SPE 2620
English/ESL Placement: Placement into ENG 1510.
Prerequisite: COM 1600 or consent of instructor.
The student will analyze and perform prose, poetry, dramatic literature, and other forms of written text.
Students will demonstrate effective vocal and nonverbal skills to convey the author’s meaning to the audience.
COM 2640  Leadership and Small Groups ............3 Credit Hours
Equivalent: SPE 2640
English/ESL Placement: Placement into ENG 1510.
The student will participate in a minimum of two inter-collegiate speech events.
This course may be elected four times for a total of four credits.
Placement into ENG 1510.
Billable Contact Hours: 1
Computer Aided Design and Engineering (CAD)

CAD 1050 Geometric Dimensioning and Tolerancing (GD&T) .............................................. 4 Credit Hours

English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).

This course is designed to cover the fundamentals as well as more advanced applications of geometric tolerancing. The student will learn the principles of Geometric Dimensioning and Tolerancing (GD&T) as applied to engineering design, manufacturing and quality control. The course includes geometric concepts and standards used to communicate engineering design intent and to provide a basis for design and production. The course also includes national and international geometric standards of symbols and terms, datum feature modifiers, types of tolerances, datum reference frames, material boundary modifiers and other related topics. Also included are concepts of basic part print reading as it relates to GD&T. BILLABLE CONTACT HOURS: 4

CAD 1101 Introduction to CAD ................................. 4 Credit Hours

English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)

This course is an introduction to computer aided design. Students will apply computer aided design techniques and principles to create drawings related to various architectural, mechanical, interior layout, landscape, and other applications. Students will be exposed to the basic concepts of three-dimensional modeling, design modification, basic computing, and become familiar with the system hardware and software related to CAD and rapid prototyping. In addition to formal classroom lecture and demonstrations, students will utilize CAD equipment in an interactive lecture environment. Refer to the specific section using OCC’s online system for software version(s). BILLABLE CONTACT HOURS: 4

CAD 1105 Animation Design .................................. 3 Credit Hours

English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)

Corequisite: CAD 1101 or consent of instructor.

This course utilizes 3D Studio Max to train students interested in design animation, scene reconstruction, architectural fly-through, machine simulation, and developing animated technical training materials. Students will create rendered models, drawings and presentations that come to life and communicate creative ideas, take industrial models and sell the concept before production, show a virtual model of a building and walk through and around it, and create characters that talk and move. Refer to the specific section using OCC’s online system for software version(s). BILLABLE CONTACT HOURS: 3

CAD 1151 CAD Architecture / Civil Engineering 3 Credit Hours

English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).

Prerequisite: CAD 1101 or consent of instructor.

This intermediate course emphasizes the use of CAD systems for architectural, civil engineering, and landscape design presentations. Topics include methods of creating site plans, floor plans, elevations, sections, photo-realistic renderings, dimensioning and related topics utilizing various Autodesk application software packages, including three-dimensional parametric modeling specific to architecture. Refer to the specific section using OCC’s online system for software version(s). BILLABLE CONTACT HOURS: 3

CAD 1160 Revit - Advanced Architectural Applications ..... 4 Credit Hours

English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).

Prerequisite: CAD 1151 or consent of instructor.

This course expands on the use of CAD software for the application of building information modeling (BIM) for architecture. Students will learn CAD techniques for advanced wall creation and manipulation, details, wall sections, multiple floor systems and stair development. The course also covers walkthrough techniques and the management of design revisions within CAD database. In addition to classroom lecture and demonstrations, students will utilize CAD equipment in an interactive lecture environment. Refer to the specific section using OCC’s online system for software version(s). BILLABLE CONTACT HOURS: 4

CAD 1201 Introduction to Engineering Graphics ........... 4 Credit Hours

English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)

Prerequisite: CAD 1101 or consent of instructor.

Corequisite: DDT 1000 (Recommended)

This course presents the techniques and principles for creating orthographic and auxiliary views on a CAD system. Students will create working detail drawings by adding the necessary sections, dimensions, tolerances, notes and specifications to multi-views. Given a work description or isometric view of a simple object, the student will be able to completely describe its shape in orthographic multi-view projection. This course develops skills in the use and selection of standard parts from the CAD database and creation of assembly drawings. Area of study will also include ANSI and ISO standards for dimensionalizing, geometric tolerance fundamentals, fasteners and symbols. Refer to the specific section using OCC’s online system for software version(s). BILLABLE CONTACT HOURS: 4

CAD 1450 Drafting and Design Co-op Internship ....... 3 Credit Hours

English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).

Prerequisite: CAD 2102 and consent of instructor.

This course provides the student with practical training in the field of drafting/design and Computer Aided Engineering (CAE) applications. The student will be employed in a supervised situation under the guidance of a qualified coordinator. During the co-op internship period, the student will identify and describe, through reports, technical problems encountered on the job. BILLABLE CONTACT HOURS: 3
CAD 1501  Special Topics in CAD: Fusion 360 Design .......................................................... 2 Credit Hours English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: CAD 1101 or MTT 1100
Placement into ESL 1011 or higher for students taking the ESL sequence of courses.
Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: CAD 1105 or consent of instructor.
This course is designed to build upon the foundation skills learned in Animation Design. Students will develop additional skills to create computer animations and models. Emphasis will be on character modeling, rigging and animation. Students will create animations for various applications for architectural, engineering, gaming, scientific and legal industries; crime scene reconstruction; and machine simulation.
Refer to current Schedule of Classes for software version(s). BILLABLE CONTACT HOURS: 3

CAD 2000  Animation Design II ................................. 3 Credit Hours English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: CAD 1101 or MTT 1100
This is an introductory course to NX software. The student will learn the techniques and concepts of finite element design and surfacing problems dealing with metals, plastics and composites. Refer to the specific section using OCC's online system for software version(s). BILLABLE CONTACT HOURS: 2

CAD 2002  Fundamentals of Part Design and Its Applications ......................................................... 4 Credit Hours English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses).
Corequisite: CAD 1201 (Recommended) or consent of instructor.
This course will cover the principles and techniques of creating parts in three dimensions and the basics of generative surface design. Emphasis is also placed on generation of views, text, dimensions and assembly techniques. Some of the topics include: sketcher, part design, drafting, complex and multiple sketch parts, assembly design and generative surface design. The student will use computer hardware and software to solve engineering-related problems using Computer Aided Engineering techniques (CAE). Refer to the specific section using OCC's online system for software version(s). BILLABLE CONTACT HOURS: 4

CAD 2110  NX I ......................................................... 3 Credit Hours English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses).
Corequisite: CAD 1201 (Required) or consent of instructor.
This is an introductory course to NX software. The student will learn how to navigate in NX using the Ribbon Bar Interface: WCS, Layers, Creation of Primitives, Form Features, Basic Curves and Miscellaneous Operators (Extrude, Taper Edge Blend, Chamfer, Trim Curves, Editing Features, Boolean Operations, Swept Features, Revolve, Sweep Along Guide, Shell, Instance Feature, Guide Curves and Sketcher). Refer to the specific section using OCC's online system for software version(s). BILLABLE CONTACT HOURS: 4

CAD 2131  Product Design .............................................. 4 Credit Hours English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: CAD 2102 or consent of instructor.
Using a computer aided design and engineering (CAD/CAE) software package, students will be presented with the principles and techniques of advanced part design for product development. Practical applications of parametric modeling are incorporated into this product oriented class. Students will use a CAD/CAE system to complete projects dealing with metals, plastics and composites. The course also includes knowledge, use of reference elements, assembly, relational formulas, reverse engineering and rapid prototyping. Refer to the specific section using OCC's online system for software version(s). BILLABLE CONTACT HOURS: 4

CAD 2141  Kinematics ............................................. 3 Credit Hours English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: CAD 2102 or consent of instructor.
The students will learn the techniques and concepts of two-dimensional and three-dimensional kinematics. The course involves geometric modeling, kinematic modeling and simulation of kinematic mechanisms, generation of traces and numerical outputs. The course also includes the study of multitude of joints and their limitations, analysis, modification and management of kinematic mechanisms. Refer to the specific section using OCC's online system for software version(s). BILLABLE CONTACT HOURS: 3

CAD 2151  Introduction to Generative Surface Design .................................................. 4 Credit Hours English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: CAD 2102 or consent of instructor.
Using a three-dimensional Computer Aided Design and Engineering System, students will be introduced to the concepts and techniques of creating curves and surfaces for product design and manufacturing. Topics included in the course are: simple and complex surfaces, wire frame features, swept and blend surfaces, surface fillets, analysis and repair, laws, and surface-solid integration. Students will solve three-dimensional engineering design and surfacing problems dealing with metals, plastics and composites. Refer to the specific section using OCC's online system for software version(s). BILLABLE CONTACT HOURS: 3

CAD 2161  Finite Element Modeling and Analysis ............................................. 4 Credit Hours English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: CAD 2102 and PHY 1610 (or higher) or APP 2170 or consent of instructor.
The student will learn the techniques and concepts of finite element modeling. The focus of the course is the preprocessing stage of preparing geometric models for analysis. The student will design geometry of parts, define mesh, properties, loads, restraints and constraints. An overview of finite element solver and post processor to visualize the model will be presented. The student will use CAD/CAE hardware and software to prepare finite element models. Refer to the specific section using OCC's online system for software version(s). BILLABLE CONTACT HOURS: 3
CAD 2190  NX II ............................................................3 Credit Hours
Equivalent: CAD 1350

English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: CAD 2110 or consent of instructor.
Corequisite: DDT 1150 (Recommended)
This course introduces students to a wide range of intermediate and advanced modeling techniques. Topics include constructing parametric models, understanding and using reference features, creating expressions, working with advanced concepts of Sketcher, properly organizing part files, and learning to use best modeling practices. This course also covers advanced concepts of curves: trimming, extracting, projecting, cutting sections and associativity concepts. All design concepts are applicable to tool/machine, product, and body design industries. Refer to the specific section using OCC’s online system for software version(s). BILLABLE CONTACT HOURS: 3

CAD 2201  Unigraphics Product Design and Assembly Layout .......................................................... 3 Credit Hours
Equivalent: CAD 2200

English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: CAD 2190 or consent of instructor.
This course provides students with opportunities for utilizing design concepts learned previously to create master assemblies, layouts and drawings related to body dies, fixtures and product designs. Students will use Sketcher, assemblies and components, basic geometric dimensioning and tolerancing (GD&T) concepts, and drafting processes to work through design changes, create mating parts within specifications, and learn to use the master model concept. Refer to the specific section using OCC’s online system for software version(s). BILLABLE CONTACT HOURS: 3

CAD 2340  Tool and Die Design ......................... 4 Credit Hours

English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).

Prerequisite: CAD 2110 or consent of instructor.
Corequisite: CAD 2190 or consent of instructor. (Recommended)
This course is designed to acquaint the student with the procedures involved in developing Tool and Die designs. The course covers jigs, fixtures, other tooling devices and includes the preparations of all necessary drawings and supporting documents. The course will also cover the various types of dies and standard die components and will learn basic techniques to design blanking, piercing, compound blanking, and progressive dies. Design considerations of parts to be stamped and reactions of stock material will be studied along with strip layout, shearing action and stripper construction. Refer to the specific section using OCC’s online system for software version(s). BILLABLE CONTACT HOURS: 4

CAD 2450  Advanced Drafting and Design Co-op Internship .................................................................3 Credit Hours

English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Corequisite: CAD 1450 and consent of instructor.
The Advanced Drafting and Design Co-op Internship students will continue practical training in the field of Drafting/Design and CAE (Computer Aided Engineering Applications). Students will be employed in a supervised situation under the guidance of a qualified coordinator. During the Advanced Co-op Internship period students will be involved in design activity relating to their specialty area, such as, but not limited to, body design, tool and fixture design, plastics design, etc. BILLABLE CONTACT HOURS: 3

CAD 2602  Vehicle Underbody Design and Assembly .....4 Credit Hours

English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).

Prerequisite: CAD 2151 or consent of instructor.
This course covers an automotive-based approach to developing a typical vehicle underbody. Including the creation of individual component parts, assemblies will be designed, positioned, and analyzed, using both student-created components and supplied parts to understand the interaction of multiple components within the full underbody assembly. Component development utilizing CATIA software will incorporate automotive practices and methods. Refer to the specific section using OCC’s online system for software version(s). BILLABLE CONTACT HOURS: 4

CAD 2702  Vehicle Upper Body Surface Design and Assembly .......................................................... 4 Credit Hours

English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).

Prerequisite: CAD 2151 or consent of instructor.
This course presents surfacing scenarios related to different design situations encountered. Students will create new parts from information such as: sections and reference surfaces; scan data; and modification of existing surfaces. Course also teaches the methodology of adding such features as flanges, stiffeners and holes. There will be extensive use of Freestyle and Generative Shape Design workbench programs. Assemblies will be created, positioned and analyzed, using both student-created components and supplied parts. Surface development utilizing CATIA software will incorporate automotive practices and methods. Refer to the specific section using OCC’s online system for software version(s). BILLABLE CONTACT HOURS: 4
Computer Information Systems (CIS)

CIS 1000 Computer Literacy .......................... 1 Credit Hour

English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)

Note: DUE TO FEDERAL REGULATION THIS COURSE MAY NOT BE ELIGIBLE FOR FEDERAL FINANCIAL AID. PLEASE CHECK WITH YOUR FINANCIAL AID OFFICE.

Students will be provided an understanding of fundamental computer concepts and personal computer operation. Students will utilize a personal computer to acquire basic skills necessary to power up a computer and access common computer programs. Topics to be covered include elementary word processing, system commands and operation, and general computer concepts. Students will be required to complete computer-based assignments outside of class. BILLABLE CONTACT HOURS: 1

CIS 1050 Personal Computer Productivity Tools ...... 4 Credit Hours

Equivalent: DPR 1030, DPR 1010

English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).

Students will be introduced to the essentials of personal computer usage. Students will explore and utilize software products such as business graphics, Internet usage, spreadsheets, databases, and word processing. Material in this course will assist students in the use of common desktop productivity tools used by most other disciplines. Refer to the specific section using OCC's online system for the software package being used. Students will be required to complete computer-based assignments inside/outside of class. BILLABLE CONTACT HOURS: 4

CIS 1060 Personal Computer Spreadsheet Concepts ...... 3 Credit Hours

Equivalent: DPR 1060

English/ESL Placement: Placement into ENG 1060.

Students will use a personal computer spreadsheet package to solve problems and develop solutions that lend themselves to the spreadsheet environment. Topics covered include spreadsheet menus, macros, charting, importing data files, graphics facilities, data tables and creating web pages. Refer to the specific section using OCC's online system for the software package being used. Students will be required to complete computer-based assignments inside/outside of class. BILLABLE CONTACT HOURS: 3

CIS 1070 Personal Computer Presentation Concepts ...... 3 Credit Hours

English/ESL Placement: Placement into ENG 1510.

Students will utilize a personal computer presentation package to create software-based slide show presentations. Topics covered include planning an effective slide presentation; creating and editing a presentation by adding, deleting and modifying slides and slide content; creating tables and charts; using design templates; adding transition, animation and sound effects; and inserting clip art. Linking and embedding objects from other programs, setting up a self-running presentation and setting up a presentation to run on another computer will also be covered. Refer to the specific section using OCC's online system for the software package being used. Students will be required to complete computer-based assignments inside/outside of class. BILLABLE CONTACT HOURS: 3

CIS 1080 Personal Computer Database Concepts ...... 3 Credit Hours

Equivalent: DPR 1080

English/ESL Placement: Placement into ENG 1510.

Students will use a personal computer database package to implement database solutions in common application areas involving personal computers. Topics covered include relational database concepts, menus, queries, report writing features, screen design, importing and exporting data files, macros and creating hyperlinks and web pages. Refer to the specific section using OCC's online system for the software package being used. Students will be required to complete computer-based assignments inside/outside of class. BILLABLE CONTACT HOURS: 3

CIS 1090 Web Graphic Concepts ......................... 3 Credit Hours

English/ESL Placement: Placement into ENG 1510.

This course will introduce students to the fundamental concepts, techniques and tools for understanding, creating and manipulating graphics (image files) suitable for use on web pages. Students will learn to use a graphics editor to create image based web components such as banners, buttons, GIP animation, splash page graphics, montages and will also learn to integrate those components to create an overall interface for a website. Students will learn about file formats, image compression techniques, web page typography, color choices for web pages as well as layout and composition for web-based projects. Students will create a web-based portfolio of all the graphics created during the course of the semester. BILLABLE CONTACT HOURS: 3

CIS 1200 Introduction to Database Systems .......... 4 Credit Hours

Equivalent: DPR 1200

English/ESL Placement: Placement into ENG 1510.

This course will focus on the fundamentals of database systems. Students will study the basics of database vs. file management systems; functions, components, and personnel involved in a database; database, client-server, and transaction processing architectures; and relational data models and operations. Students will also study business requirements analysis, perform data definition, manipulation, and queries using basic SQL, create forms and reports; and analyze macros, procedures and triggers. Concepts of database planning, design, and administration fundamentals, data warehousing, and data mining will be covered. Students will be required to complete computer-based assignments inside/outside of class. BILLABLE CONTACT HOURS: 4

CIS 1295 Voice and Data Cabling ....................... 4 Credit Hours

English/ESL Placement: Placement into ENG 1510.

Students will become familiar with cabling issues related to data and voice connections, media (copper and fiber) and transmissions practices, and cabling customer support. This course stresses documentation, design and installation issues, laboratory safety and on-the-job safety, as well as working effectively in group environments. BILLABLE CONTACT HOURS: 4
CIS 1300  Networking Concepts ........................................... 4 Credit Hours
Equivalent: CIS 2710

English/ESL Placement: Placement into ENG 1510.
Students will study the components of networks and network designs. Communications
hardware and the interconnection of servers and clients within LANs and WANs will be
presented. Network architectures, standards, protocols and access methods used within
intranets and the Internet will be described. The functions of network operating systems
such as Windows Server, Unix, and Novell NetWare will be explored. Centralized
computing, client/server and peer-to-peer environments, their services and their
program-to-program communication protocols will be presented. Data security and
system component protection will be studied. Students will be required to complete
computer-based assignments inside/outside of class. BILLABLE CONTACT HOURS: 4

CIS 1305  CCNA Studies I: Introduction to Networks ......4 Credit Hours

English/ESL Placement: Placement into ENG 1510.
This is the first of four courses training students on the topics tested in CCNA (Cisco
Certified Network Associate) certificate. Introduces the architecture, structure,
components, and models of the Internet and computer networks. The principles of IP
addressing and fundamentals of Ethernet concepts, media, and operations are
introduced to provide a foundation for the curriculum. By the end of the course,
students will be able to build simple LANs, perform basic configurations for
routers and switches, and implement IP addressing schemes. BILLABLE CONTACT HOURS: 4

CIS 1310  CCNA Studies II: Routing and Switching
Essentials ................................................................. 4 Credit Hours

English/ESL Placement: Placement into ENG 1510.
Prerequisite: CIS 1305 or consent of instructor.
This course is the second of four courses training students on the topics tested in
CCNA (Cisco Certified Network Associate) certificate. Describes the
architecture, components, and operations of routers and switches in a
small network. Students learn how to configure a router and a switch
for basic functionality. By the end of this course, students will be able
to configure and troubleshoot routers and switches and resolve common
issues with RIPv1, RIPv2, single-area and multi-area OSPF, virtual
LANs, and inter-VLAN routing in both IPv4 and IPv6 networks. BILLABLE CONTACT HOURS: 4

CIS 1320  CCNA Studies III: Scaling Networks ......4 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: CIS 1310
This course is the third of four courses training students on the topics tested in
CCNA (Cisco Certified Network Associate) certificate. Describes the
architecture, components, and operations of routers and switches in a
large and complex network. Students learn how to configure routers and
switches for advanced functionality. By the end of this course, students will
be able to configure and troubleshoot routers and switches and resolve
common issues with OSPF, EIGRP, STP, and VTP in both IPv4 and IPv6
networks. Students will also develop the knowledge and skills needed to
implement DHCP and DNS operations in a network. BILLABLE CONTACT HOURS: 4

CIS 1330  CCNA Studies IV: Connecting Networks ......4 Credit Hours

English/ESL Placement: Placement into ENG 1510.
Prerequisite: CIS 1320
This course is the fourth of four courses training students on the topics tested in
CCNA (Cisco Certified Network Associate) certificate. Discusses the
WAN technologies and network services required by converged applications in a
complex network. The course enables students to understand the selection
criteria of network devices and WAN technologies to meet network requirements.
Students learn how to configure and troubleshoot network devices and resolve common issues
with data link protocols. Students also develop the knowledge and skills
needed to implement IPsec and virtual private network (VPN) operations
in a complex network. BILLABLE CONTACT HOURS: 4

CIS 1400  Web Design I ...................................................... 4 Credit Hours
Equivalent: CIS 1510,CIS 1110

English/ESL Placement: Placement into ENG 1510.
This course focuses on the fundamentals of web site content
development. Students will be introduced to the fundamental HTML5
structure of a webpage and then proceed to creating pages using a
professional web editing tool. Students will create a fully functional original
website using the web design editing tool that has elements such as
designs, hyperlinks, cascading style sheets for formatting, tables and
integration of certain multimedia elements such as sound files, videos
and Flash objects. Discussions will include accessibility of the design,
overall site validation and publishing using FTP technologies. Students
taking this course should have working knowledge of Windows and basic
knowledge of the Internet. BILLABLE CONTACT HOURS: 4

CIS 1420  HTML5 Programming .......................................... 3 Credit Hours
Equivalent: CIS 2781

English/ESL Placement: Placement into ENG 1510.
This course focuses on designing and coding internet web pages using
HTML5. The student will develop web pages by designing, entering, and
testing code using this standard (with a simple text editor) rather than by
using web development tools. Topics include - HTML5 element structure,
web forms, multimedia, style sheets (CSS3) to apply formatting and layout
characteristics in addition to applying special effects. This course will also
include an introduction to the JavaScript programming language. Students
should be familiar with the basics of both word processing and Windows
file management techniques before enrolling in this course. BILLABLE CONTACT HOURS: 3

CIS 1440  JavaScript Programming for Websites ......4 Credit Hours
Equivalent: CIS 1125

English/ESL Placement: Placement into ENG 1510.
Prerequisite: CIS 1420
This course introduces the student to the fundamentals of JavaScript as
a client-side scripting language for the purpose of developing dynamic
Web-based applications that run within a Web browser. Emphasis is
placed on programming techniques and Web technology. Topics include
functions, data types, operators, strings, arrays, control structures, form
validation, event handling, the Document Object Model, and debugging.
Students should be familiar with fundamental computer usage, word
processing, and HTML prior to enrolling in this class. Students will be
required to complete computer-based assignments inside and outside of
class. BILLABLE CONTACT HOURS: 4
CIS 1500  Introduction to Programming (Java)  ........4 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Students should have elementary Algebra skills and be familiar with both elementary word processing and Windows file management techniques prior to enrolling in this class. Students will be introduced to the fundamental techniques and syntax for understanding, designing, constructing, debugging, and testing object-oriented programs by studying the Java programming language. The structured programming basics of process, selection and iteration will be covered as well as primitive and complex data typing, methods, parameters and input/output. The basics of graphical user interface (GUI) programming such as event handling, windows and widgets will be introduced. Fundamental object-oriented concepts of classes, methods, abstraction, encapsulation and inheritance will also be introduced. Students will be required to complete computer-based assignments inside/outside of class. BILLABLE CONTACT HOURS: 4

CIS 1512  Principles of Software Engineering ....3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
This course is focused on formal methods and approaches used in the design, development, testing and maintenance of computer software. Each stage of the software development life cycle (SDLC) will be studied in detail. Topics such as low-level design, high-level design, modeling with UML (Unified Modeling Language), iterative development models, rapid application development (RAD), formal testing methods, incremental deployment, formal metrics, as well as appropriate use of associated tools will be covered with practical applications. Students will be required to complete computer-based assignments inside/outside of class. BILLABLE CONTACT HOURS: 3

CIS 1550  Introduction to Secure Programming . 3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
This course presents cybersecurity content related to analyzing software risks, understanding likely points of application attack, and making preliminary decisions about how software applications mitigate attack. The student will learn how to identify systemic threats in any deployment environment, understand the vulnerabilities of common software applications, and how to construct software that are responsive to identified vulnerabilities. BILLABLE CONTACT HOURS: 3

CIS 1600  Fundamentals of Cybersecurity .......... 4 Credit Hours
Equivalent: CIS 2839,CIS 2839
English/ESL Placement: Placement into ENG 1510.
Prerequisite: CIS 1300
This course is designed for aspiring security professionals, system or network administrators, or other information technology professionals who want to learn about computer security. Students will be well prepared for the Security+ Exam after taking this class. This course focuses on General security concepts, Communication security, Infrastructure security, Basics of Cryptography, and Operational Organizational security. Students will be required to complete computer-based assignments inside and outside of class. BILLABLE CONTACT HOURS: 4

CIS 1610  Data Security .................................. 4 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: CIS 1600
This course is focused on the structure of data and database systems, their vulnerabilities to cyber attacks, and the proper techniques required to protect these systems from damage. Material covered will include: analysis of database-related malware; data system architecture; database system installation and configuration; data access controls and authentication; data security tools and devices; and security testing and auditing. Students will be required to complete computer-based assignments inside and outside of class. BILLABLE CONTACT HOURS: 4

CIS 1620  Introduction to Cryptography .......... 4 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: CIS 1600
This course is focused on basic techniques of encryption and decryption and their application to computer security. Topics covered will include: basic number theory and finite field arithmetic used in cryptography; symmetric ciphers; asymmetric ciphers; block and stream ciphers; implementation of popular encryption algorithms (e.g., AES); hash algorithms; digital signatures; and key management and distribution. Students will be required to complete computer-based assignments inside and outside of class. BILLABLE CONTACT HOURS: 4

CIS 1630  Security Policy, Legal, Ethics and Compliance ................................................. 3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: CIS 1600
This course provides a comprehensive introduction to the identification, selection, assessment, and continuous monitoring of management controls that provide a cyber security governance structure throughout an organization and its supply chain. The course will emphasize security policies and frameworks, their organizational implications, to the psychology, ethics, and legal considerations of their implementation. BILLABLE CONTACT HOURS: 3

CIS 1720  Multimedia Data Management .............. 4 Credit Hours
Equivalent: CIS 1001
English/ESL Placement: Placement into ENG 1510.
This course will give students a broad foundation in issues surrounding multimedia, including the role of and design of multimedia systems which incorporate digital audio, graphics and video, underlying concepts and representations of sound, pictures and video, data compression, transmission and storage, integration of media, multimedia authoring, and delivery of multimedia. Course will also include industry overview, societal issues, cultural implications, visual literacy and career opportunity. The students will be required to complete computer-based assignments inside/outside of class. BILLABLE CONTACT HOURS: 4

CIS 1721  Web Design II .................................. 3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: CIS 1400 or consent of instructor.
This course will provide students with intermediate to advanced skills in web publishing focusing on abilities to design web pages with variations in web browsers in mind. Students will continue to work with a web design editing tool and create pages that include forms, validation, and cascading style sheet based design layout. Students will create a website that is ADA (American Disabilities Act) compliant. Students should be familiar with elementary word processing and MS Windows file management techniques prior to enrolling in this class. Students will be required to complete computer-based assignments inside/outside of class. BILLABLE CONTACT HOURS: 3

CIS 1722  Web Animation .................................. 3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
This course will provide introductory level knowledge of effectively working with vector based design applications aimed at the creation of animation, games, and interactive components for use on the internet. Students will focus on the creation of basic animation and navigation components for use on web sites as well as for projects aimed at offline use. Students taking this course should have basic Windows background and general knowledge of internet technologies. BILLABLE CONTACT HOURS: 3
CIS 1801  Special Topics I: Network Remediation    3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: The prerequisite for a special topics section will depend
on the content of that section. Refer to the specific section using OCC's
online system for a description of the current course and its associated
prerequisites.
Network Remediation. BILLABLE CONTACT HOURS: 3

CIS 1802  Special Topics I: Introduction to Cybersecurity and
Risk Management 3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: The prerequisite for a special topics section will depend
on the content of that section. Refer to the specific section using OCC's
online system for a description of the current course and its associated
prerequisites.
Introduction to Cybersecurity and Risk Management. BILLABLE CONTACT HOURS: 3

CIS 1803  Special Topics I                      1-4 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: The prerequisite for a special topics section will depend
on the content of that section. Refer to the specific section using OCC's
online system for a description of the current course and its associated
prerequisites.
Students will be introduced to a particular contemporary topic or issue in
information science that is relevant in today's environment. Refer to the
specific section using OCC's online system for current topics. Students will
be required to complete computer-based assignments inside and outside
class. BILLABLE CONTACT HOURS: 1 - 4

CIS 1804  Special Topics I: Macro Media Director    4 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: The prerequisite for a special topics section will depend
on the content of that section. Refer to the specific section using OCC's
online system for a description of the current course and its associated
prerequisites.
Macro Media Director. BILLABLE CONTACT HOURS: 4

CIS 2111  Systems Analysis and Design (UML)    4 Credit Hours
Equivalent: CIS 2030, DPR 2030
English/ESL Placement: Placement into ENG 1510.
Students should be familiar with the basics of both word processing and
Windows file management techniques before enrolling in this course.
Students will survey and practice the techniques used by system analysts
and programmers in the analysis and design of computer-based business
information systems with focus on the Unified Modeling Language (UML).
Both traditional and object-oriented methods will be presented. System
and object-oriented development life cycles (SDLC and ODL) and
subjects in computer-aided software engineering (CASE) such as project
management, requirements modeling, data flow and entity relationship
diagrams (DFD and ERD) and data dictionaries are among the included
topics. Students will be required to complete computer-based assignments
inside/outside of class. BILLABLE CONTACT HOURS: 4

CIS 2115  Business Analysis and Processes    4 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: CIS 1050 CIS 1060 CIS 1200 and CIS 2111.
In this course emphasis will be placed on tools and techniques to help with
the analysis and process of solving business problems with technology.
This course will cover process analysis, process flow diagrams, data
analysis, predictive analysis and modeling, data modeling, Entity
Relationship Diagrams (ERD), data dictionary, data mapping and the
software tools available. Students will be required to complete computer-
based assignments inside and outside of class. BILLABLE CONTACT HOURS: 4

CIS 2120  Problem Solving and Information Technology    4 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: CIS 1050 and CIS 1060.
This course demonstrates how information technology impacts
organizations, with an emphasis on using information technology to
solve problems and introduces the need for business processes and
IT alignment. Topics include main concepts of information technology
at a general level, on-line collaboration tools, application software, and
information literacy as applied to searching and using the Internet. In
addition, students will use application software at an intermediate level and
apply it to problem solving scenarios. Students will be required to complete
computer-based assignments inside and outside of class. BILLABLE CONTACT HOURS: 4

CIS 2151  Object-Oriented Programming (Java)    4 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: CIS 1500
Students will be exposed to more complicated programming problems
and will study the techniques and structures used to solve these problems
with the Java language. Topics will include exception handling, file input
and output, composition, inheritance, polymorphism, abstract classes
and interfaces. Advanced Graphic User Interface (GUI) design and
implementation techniques will be covered. Students will be required to
complete computer-based assignments inside/outside of class. BILLABLE CONTACT HOURS: 4

CIS 2212  Project Management                     4 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Students should be familiar with the basics of both word processing and
Windows file management techniques before enrolling in this course.
This course focuses on management strategies and analysis of business
information systems projects. Project management issues and techniques
specific to projects will be emphasized. Emphasis is on creating plans
and implementing projects that are within budget, on time, and deliver
useful results. Technology and project management standards, design
tools (e.g., UML), product evaluation criteria, infrastructure integration,
and communication of technical implementation details will be covered in
group discussion and project work. Students will be required to complete
computer-based assignments inside and outside of class. BILLABLE CONTACT HOURS: 4
CIS 2232  Fundamentals of System Support  ....4 Credit Hours  
Equivalent: DPR 2050  
English/ESL Placement: Placement into ENG 1510.  
Students will be introduced to the basic software and hardware concepts and facilities needed for simple support tasks. Topics covered include system boot sequences, disk partitioning, disk fragmentation, system configuration files, types of memory and memory management, basic OS commands and batch file construction. Emphasis is given to the Windows OS relationships and facilities. Hardware factors related to system and software evaluation, selection, purchase and installation are presented. Students will be required to complete computer-based assignments inside/ outside of class. BILLABLE CONTACT HOURS: 4

CIS 2252  Object-Oriented Programming (C++)  .... 4 Credit Hours  
English/ESL Placement: Placement into ENG 1510.  
Students should have a basic understanding of general programming concepts and techniques prior to enrolling in this class. Students will be instructed in the syntax and semantics of the ANSI C++ language. Topics covered include control structures, arrays, pointers, strings, dynamic memory management, class definition and object-based development, file I/O, overloading, exception handling, and template libraries. Students will be required to complete computer-based assignments inside/outside of class. BILLABLE CONTACT HOURS: 4

CIS 2313  E-Business and E-Commerce  .......... 4 Credit Hours  
English/ESL Placement: Placement into ENG 1510.  
Students should have a basic knowledge of Internet technologies before enrolling in this course. Introduction is provided to a broad range of theories, practices, standards, and procedures related to the strategic implementation of e-commerce systems aimed at supporting one or more organizational business initiatives. A series of topics will be presented and cases analyzed that teach the student material ranging from: e-commerce business models, e-commerce technologies, supporting standards, to ecommerce analysis and design methodologies. The students will be required to complete computer-based assignments inside/outside of class. BILLABLE CONTACT HOURS: 4

CIS 2333  Web System Administration  .......... 4 Credit Hours  
English/ESL Placement: Placement into ENG 1510.  
Prerequisite: CIS 1300  
This course focuses on the operation and administration of Web application servers such as Apache HTTP, IIS, Tomcat and WebSphere. Students will study the basic structure and function of Web servers as well as the common tasks and services performed by administrators. Topics include Web protocols and related networking; Web server installation and configuration; integration with other essential services such as email, database management, file transfer, domain name services, and authentication; security; monitoring and performance; and virtualization. Students will be required to complete computer-based assignments inside and outside of class. BILLABLE CONTACT HOURS: 4

CIS 2353  Data Structures  ......................... 4 Credit Hours  
Equivalent: DPR 2810  
English/ESL Placement: Placement into ENG 1510.  
Prerequisite: CIS 1500  
Students will investigate the programming techniques and theories involved in implementing linked lists, queues, stacks and tree structures. Recursion, searching techniques and sorting algorithms will also be considered. Students will be required to complete computer-based assignments inside and outside of class. BILLABLE CONTACT HOURS: 4

CIS 2434  Introduction to Linux and Unix Administration  ......3 Credit Hours  
Equivalent: CIS 2332  
English/ESL Placement: Placement into ENG 1510.  
Students should be familiar with elementary word processing and basic computer concepts prior to enrolling in this course. This hands-on class covers the concepts related to Linux/Unix installation and system administration. Students will install and administer a Linux/Unix operating system using a virtual machine software product. It is intended for students who plan to take one or more certification tests as part of their professional preparation. Students will be required to complete computer-based assignments inside/outside of class. BILLABLE CONTACT HOURS: 3

CIS 2454  Web System Development (PHP, Java)  ......4 Credit Hours  
Equivalent: CIS 1930  
English/ESL Placement: Placement into ENG 1510.  
Prerequisite: CIS 1500 or CIS 2151  
This course focuses on design and implementation techniques for Web-based application software. Server-side software design and development techniques associated with Web Developer job skills will be emphasized. Topics to be covered will include: Web application architecture; design patterns and application frameworks; PHP language basics; Java technologies for server-side Web development; database access; Extensible Markup Language (XML) and Asynchronous JavaScript and XML (AJAX)-based request processing; and Web application security. Students will be required to complete computer-based assignments inside and outside of class. BILLABLE CONTACT HOURS: 4

CIS 2515  Database Design and Management with Oracle SQL  ............................................. 4 Credit Hours  
Equivalent: DPR 2830  
English/ESL Placement: Placement into ENG 1510.  
Prerequisite: CIS 1200 or consent of instructor.  
This course will focus on design and management of database environments using Oracle SQL and associated Oracle technologies. Topics include enterprise information resource planning and object-oriented and entity-relationship data modeling methodologies, normalization and the relational model, logical and physical database design, and implementation, population and processing of a relational database for data access, report generation, database definition, data manipulation, and access control. Oracle-specific materials used in this course are designed to prepare students for an Oracle Database SQL exam which is the first exam required to become an Oracle Certified Associate or Oracle Certified Professional. Students will be required to complete computer-based assignments inside and outside of class. BILLABLE CONTACT HOURS: 4
CIS 2535  Microsoft Windows Server Administration .... 3 Credit Hours

**English/ESL Placement:** Placement into ENG 1510.

Students should be familiar with the basics of both word processing and Microsoft Windows file management techniques and basic hardware, software, and network operating system, architecture, and protocol concepts needed for simple support tasks prior to enrolling in this course. Concepts of electronic business communications and local area networks will be covered. The Microsoft Windows Server operating system will be used and studied in this course. Installation of network operating system, setup of users and groups, files and folder trustee rights, and console management will be covered. Students will be required to complete computer-based assignments inside/outside of class. BILLABLE CONTACT HOURS: 4

CIS 2555  Web System Development (ASP.NET, C#) .... 4 Credit Hours

**English/ESL Placement:** Placement into ENG 1510.

**Prerequisite:** CIS 2757

Students should have a basic knowledge of Internet technologies before enrolling in this course. This course focuses on design and implementation techniques for Web-based application software. Server-side software design and development techniques associated with Web Developer job skills will be emphasized. Topics to be covered will include: Web application architecture; C# language basics; ASP.NET technologies for server-side Web development; database access; asynchronous JavaScript and JSON or XML-based request processing; and Web application security. Students will be required to complete computer-based assignments inside and outside of class. BILLABLE CONTACT HOURS: 4

CIS 2616  Database Application Design and Development with Oracle PL/SQL ........................................ 4 Credit Hours

**English/ESL Placement:** Placement into ENG 1510.

**Prerequisite:** CIS 1200 or consent of instructor.

This course will focus on design and development of database applications using Oracle PL/SQL, Oracle development tools, and use of Oracle XML data types for implementation of PL/SQL programs, procedures, functions, packages, and triggers. Oracle-specific materials used in this course are designed to prepare students for the Oracle Program with PL/SQL exam which is the second exam required to become an Oracle Certified Associate or Oracle Certified Professional. Students will be required to complete computer-based assignments inside and outside of class. BILLABLE CONTACT HOURS: 4

CIS 2636  Network Administration ...................... 4 Credit Hours

**English/ESL Placement:** Placement into ENG 1510.

**Prerequisite:** CIS 1300

This course is designed for Information Technology professionals who want to learn advanced topics in network administration. Areas covered include topics like routing protocols, congestion control algorithms, Quality of Service. The student will also be exposed to network security, trouble shooting networks, remote access technologies like VPN and some router switch configuration. Students will be required to complete computer-based assignments inside/outside of class. BILLABLE CONTACT HOURS: 4

CIS 2637  Big Data and NoSQL Systems .............. 3 Credit Hours

**English/ESL Placement:** Placement into ENG 1510.

**Prerequisite:** CIS 1200

This course is focused on the architecture, design, implementation and support of Big Data systems and non-traditional information retrieval techniques (i.e. techniques that do not use structured query languages). Topics covered include: characteristics and analysis of big data; big data life cycle; big data platforms and highly distributed file systems; big data processing and storage technologies; and NoSQL. Students will be required to complete computer-based assignments inside and outside of class. BILLABLE CONTACT HOURS: 4

CIS 2656  Visual Basic.NET Programming ........... 4 Credit Hours

**English/ESL Placement:** Placement into ENG 1510.

**Prerequisite:** CIS 1250, DPR 1250

This course focuses on software design and development techniques with the Visual Basic .NET programming language. Topics to be covered include: Overview of the Microsoft .NET architecture; user interface forms and controls; variables, arrays, procedures, and control structures; object-oriented programming techniques; exception handling; data access with ADO.NET; and simple integration with Web technologies. Students will be required to complete computer-based assignments inside and outside of class. BILLABLE CONTACT HOURS: 4

CIS 2737  Database Administration ....................4 Credit Hours

**English/ESL Placement:** Placement into ENG 1510.

**Prerequisite:** CIS 1200

The purpose of the Database Administration course is to train students on typical activities performed by a database administrator (DBA) and on issues important to efficient performance of a database. The course will involve significant hands-on and lab work using the Oracle and/or MySQL server DBMS. Students will be required to complete computer-based assignments inside/outside of class. BILLABLE CONTACT HOURS: 4

CIS 2757  C# Programming ....................... 4 Credit Hours

**English/ESL Placement:** Placement into ENG 1510.

**Prerequisite:** CIS 1200

Students should have a basic understanding of general programming concepts and techniques prior to enrolling in this class. This course focuses on the design and implementation of software using the C# programming language. Students will learn how to develop programs that utilize classes and objects, arrays, graphical user interfaces, event-driven programming and exception handling. Visual Studio .NET will be used as the primary integrated development environment. Students will be required to complete computer-based assignments inside and outside of class. BILLABLE CONTACT HOURS: 4

CIS 2818  Mobile Application Development (Android) .... 4 Credit Hours

**English/ESL Placement:** Placement into ENG 1510.

**Prerequisite:** CIS 1500 or consent of instructor.

This course focuses on the design and implementation of wireless hand held application software on the Android platform for business and personal use. Students will use the Android Studio integrated development environment (IDE) to develop and test application software. Development techniques will focus on operational aspects of mobile devices that distinguish them from PCs and general computing platforms. Students will be required to complete computer-based assignments inside and outside of class. BILLABLE CONTACT HOURS: 4
CIS 2819 Mobile Application Development (IOS) ..... 4 Credit Hours

English/ESL Placement: Placement into ENG 1510.

In this course, students will learn how to write computer software using the SWIFT programming language that runs on Apple iOS-based mobile devices. Topics covered will include: the iOS platform execution environment; basic SWIFT language features such as data types, conditional statements, iteration, data collections, classes, functions, and error handling; user interface design and event-based processing; persistent data management; and integration with local and remote services. Students will be required to complete computer-based assignments inside and outside of class. BILLABLE CONTACT HOURS: 4

CIS 2838 System Security .................................. 4 Credit Hours

Prerequisite: CIS 1600

This course is designed for aspiring security professionals, system or network administrators, or other information technology professionals who want to learn about computer security. Being a part of two courses, this part focuses on the security engineer who needs to worry about the attacks used by hackers and the defenses against them. The course makes an effort to understand defenses against Reconnaissance, Scanning, Gaining Access, Maintaining access and covering tracks. Last but not the least, the course covers computer ethics. The Students will be required to complete computer-based assignments inside/outside of class. BILLABLE CONTACT HOURS: 4

CIS 2845 Computer Forensics .................................. 4 Credit Hours

Prerequisite: CIS 1600

With ever growing reliance on computers for everyday life projects, and increased focus on security and breach of security and privacy, there is a need for a course which can help security professionals and law enforcement agencies learn ways to investigate security breaches. This course is designed to introduce a variety of operating systems investigation techniques, incident response tactics, and legal issues. The course helps learn forensic techniques and tools for both Windows and Linux investigations. Students will be required to complete computer-based assignments inside and outside of class. BILLABLE CONTACT HOURS: 4

CIS 2858 Web System Integration and Service Development .................................. 4 Credit Hours

Equivalent: CIS 2414

English/ESL Placement: Placement into ENG 1510.

Prerequisite: CIS 1500 or CIS 2151 or CIS 2454

This course focuses on design and implementation strategies for integration of distributed client-server software and development of Web application services. Topics to be covered will include: Web middleware-related technologies such as the Java Enterprise Edition platform (Java EE), multi-tier application frameworks; Extensible Markup Language (XML) processing; Simple Object Access Protocol (SOAP); Representational State Transfer (RESTful) Web services; Web Services Description Language (WSDL); and Cloud Computing services. Students will use a popular IDE tool to create and integrate Web application components. Completion of computer-based assignments inside and outside of class will be required. BILLABLE CONTACT HOURS: 4

CIS 2859 Foundations of Game Software Development ..... 4 Credit Hours

English/ESL Placement: Placement into ENG 1510.

Students should have a basic understanding of object-oriented programming prior to enrolling in this class. This course focuses on the fundamentals and techniques of game software development. Students will use a popular game engine and associated software tools to learn how various elements of games are created, integrated into a system, and used in game play. Game system elements include: game engine functions; scripts; graphical interface; models; terrains and worlds; textures; sound; and support infrastructure. Students will also apply mathematical foundations used in computer graphics. Students will be required to complete computer-based assignments inside and outside of class. BILLABLE CONTACT HOURS: 4

CIS 2862 Game Design ........................................... 3 Credit Hours

English/ESL Placement: Placement into ENG 1510.

This course is focused on the essential principles of designing game software. The philosophy of video games as a form of entertainment as well as important design concepts that feature player-centric approaches will be explored. Other topics to be covered include: the genres of games; design components and processes; game analysis frameworks; storyboarding; creative and expressive play; character development; storytelling and narrative; game play mechanics; defining appropriate physical models and game worlds; and level design. Students will be required to complete computer-based assignments inside and outside of class. BILLABLE CONTACT HOURS: 4

CIS 2860 Computer Service Technologies & Techniques A + ......................................................... 4 Credit Hours

Equivalent: ECT 2150

English/ESL Placement: Placement into ENG 1510.

Prerequisite: CIS 2232 or consent of instructor.

This course provides the necessary preparation to take the industry standard Core Hardware Certification exams. Topics include, but are not limited to: core hardware requirements, installation, configuration and upgrading, diagnosing and troubleshooting, preventive maintenance, motherboard/processors/memory, basic networking and security. Students will be required to complete computer-based assignments outside of class. Note: certification exams are administered and charged separately by an outside agency. BILLABLE CONTACT HOURS: 4

CIS 2891 Special Project in Software Engineering ...... 3 Credit Hours

English/ESL Placement: Placement into ENG 1510.

Prerequisite: Successful completion of all required core courses in the CIS.SWE.CT CIS Software Engineering Certificate program: CIS 1200 CIS 1500 CIS 1512 and CIS 2353. Complete a minimum of 6 credits in one focus area of the CIS.SWE.CT CIS Software Engineering Certificate program.

This course is focused on development of material for a personal 'software' portfolio that may be used to support employment opportunity applications. Common tools and techniques used in work environments as well as typical workplace processes will be explored with the purpose of preparing students for employment as software developers. Students will be required to complete computer-based assignments inside and outside of class. BILLABLE CONTACT HOURS: 3
Construction Management (CMN)

CMN 1100 Introduction to Construction Management ..... 3 Credit Hours
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: Attend a Construction Management Program Orientation or consent of program coordinator.
This is an introductory course designed to demonstrate the basic structure of, and management within, the construction industry. Class discussions will include, but are not limited to, construction project delivery systems, construction business environments, estimating, planning/scheduling, law and contracts. BILLABLE CONTACT HOURS: 3

CMN 1200 Construction Building Systems and Materials ..... 3 Credit Hours
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: Attend a Construction Management Program Orientation or consent of Program Coordinator.
This course is designed to convey the types of building systems found in the construction industry. Those systems include, but are not limited to structural, non-structural, and those considered necessary to mechanical, electrical, plumbing, and support equipment. This course will include both lecture and related laboratory experience. BILLABLE CONTACT HOURS: 3

CMN 1250 Construction Applications ................... 3 Credit Hours
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: CMN 1100 and CMN 1200
This course will investigate the various construction applications across the residential, commercial, industrial, heavy-highway and infrastructure industry sectors and will include: building codes, building permit processes, materials, building technologies, construction equipment and tools. BILLABLE CONTACT HOURS: 3

CMN 1300 Construction Surveying ...................... 3 Credit Hours
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: Attend a Construction Management Program Orientation or consent of Program Coordinator.
This course is designed to help the student recognize and apply procedures and technology to basic construction surveying. The student will experience both classroom and hands on experience with construction surveying equipment. BILLABLE CONTACT HOURS: 3

CMN 1400 Construction Safety ......................... 3 Credit Hours
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: CMN 1100 and CMN 1200 or consent of Program Coordinator.
This course is designed to discuss all aspects related to safety in the construction industry and how it applies to management. Through course activities and discussions, students will develop a safety program using existing OSHA and MIOSHA industry standards. BILLABLE CONTACT HOURS: 3

CMN 1500 Construction Drawings ..................... 3 Credit Hours
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: CMN 1100 and CMN 1200
This course is designed to outline the laws and regulations associated with the construction industry, construction contracts and administration. Areas of discussion will also include the implementation of defined laws to actual construction projects and the implications that may be included. BILLABLE CONTACT HOURS: 3

CMN 1700 Quantitative Analysis of Construction Drawings ........................................... 3 Credit Hours
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: CMN 1500 or consent of instructor.
This course is designed to teach students how to quantify and organize information needed for the construction bidding process. Emphasis is placed on how to quantify building materials, labor and equipment based on common industry practices. BILLABLE CONTACT HOURS: 3

CMN 2100 Construction Contracts and Administration ..... 3 Credit Hours
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: CMN 1500 or consent of Program Coordinator.
This course will outline the specific types of construction contracts and how they are used throughout the industry. Specification interpretation and its role in the contract process will also be defined. Students will be introduced to specific contract issues such as, but not limited to, the shop drawing process, bid packages, Master format, ethics, regulations and laws regarding different types of contracts and labor issues. BILLABLE CONTACT HOURS: 3

CMN 2300 Construction Law ......................... 3 Credit Hours
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: CMN 2100 or consent of Program Coordinator.
This course is designed to outline the construction industry, construction contracts and administration. Areas of discussion will also include the implementation of defined laws to actual construction projects and the implications that may be included. BILLABLE CONTACT HOURS: 3

CMN 2400 Construction Planning and Scheduling ...... 3 Credit Hours
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: CMN 1500 CMN 1700 and CMN 2100
This course is designed to introduce and demonstrate the various construction planning and scheduling techniques used by construction managers. BILLABLE CONTACT HOURS: 3
CMN 2500 Construction Estimating and Bidding Techniques ........................................ 3 Credit Hours

English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).

Prerequisite: CMN 1100 CMN 1200 CMN 1500 and CMN 1700 or consent of instructor.

This course will explore topics pertaining to the processes of construction estimating and bidding techniques. Those topics will include, but not limited to, the discussion and exploration of the identification and quantification of construction materials, labor and equipment for the construction bidding process. The use of computer estimating programs, industry standards and cost data publications will be used to develop estimates. BILLABLE CONTACT HOURS: 3

Counseling (CNS)

CNS 1100 Orientation to College ..................................................1 Credit Hour

Equivalent: GOR 0100

English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)

This course promotes a positive start to the college experience by providing opportunities to explore college while developing and practicing personal strategies for success. Students will gain an understanding of the skills necessary to make a successful transition to college. Students will establish personal and academic goals and become aware of the obstacles that may prevent them from reaching their goals. Students will learn about college life, internal and external resources and develop communication skills that promote success. Campus technology beneficial to the college learner will be explored. BILLABLE CONTACT HOURS: 1

CNS 1120 Enhancing Self-Esteem .............................................. 2 Credit Hours

English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)

This course is designed to assist students in improving their self-esteem. Through a series of individual and group experiences, students will have the opportunity to develop an understanding of what self-esteem is and how it is developed, assess their current level of self-esteem, identify thought and behavioral patterns that impact their sense of self-worth, and develop strategies to improve and maintain positive self-esteem. BILLABLE CONTACT HOURS: 2

CNS 1150 Career Planning ....................................................... 2 Credit Hours

English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses.)

This interactive career planning class will encourage students to explore their abilities, interests, skills, values, and other aspects of self. Emphasis is placed on understanding the career decision-making and goal-setting processes while utilizing current technology for career research and job search skills. In addition to educational planning, students may gain an understanding of how to apply this knowledge in an everchanging world. BILLABLE CONTACT HOURS: 2

CNS 1160 Personal Assertiveness .............................................. 2 Credit Hours

English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)

This course is designed to demonstrate techniques of direct, honest, and appropriate expression of feelings, opinions, and beliefs. Differences between aggressive, nonassertive, and assertive behaviors will be studied and practiced. Methods of self-expression that encourage direct, honest communication will be studied and practiced. BILLABLE CONTACT HOURS: 2

Criminal Justice (CRJ)

CRJ 1010 Introduction to Criminal Justice ............. 3 Credit Hours

English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).

The student will explain the role of the police, courts, and confinement facilities in modern society and discuss the need for criminal justice. He or she will identify constitutional restrictions placed on the law enforcement effort, study the organizational structure of police agencies, and define terms used in the processes of justice, the court system, and related agencies. In addition, the student will identify current police and community relations problems, recognize trends in modern policing, and methods applicable to improving the criminal justice system. Students will define their educational and employment objectives. BILLABLE CONTACT HOURS: 3

CRJ 1030 Police Communications ................................. 3 Credit Hours

English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).

The student will learn the importance of criminal justice communications. The course will include report writing and public speaking skills. The students will learn to prepare and write accurate incident reports. The course will include the procedure to follow when preparing for public presentation including crime prevention presentations and testifying in a moot court case. The course will also explore the value of the micro-computer in the communications process. Students will learn how to develop and improve their interpersonal communication skills. BILLABLE CONTACT HOURS: 3

CRJ 1050 Introduction to Security and Risk Management .......................... 3 Credit Hours

English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).

The student will describe the organization structure and function of industrial security units. The student will identify methods, procedures, and security operations used to protect plant employees, property, facilities, and defense industries. The student will also define legal and technical problems unique to physical security functions. BILLABLE CONTACT HOURS: 3
CRJ 1060  Introduction to Corrections  3 Credit Hours

English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).

This course is an introduction to the historical and philosophical development of corrections. The legal process will be defined at various levels, including the sentencing alternatives. The correctional process related to probation, imprisonment, and parole will be defined and critiqued. The rights of prisoners and major court cases relative to these rights will be explained. The history and status of community-based corrections will be explained. The role of the corrections officer and the future developments of the corrections system will be described.

BILLABLE CONTACT HOURS: 3

CRJ 1070  Introduction to Forensic Science  3 Credit Hours

English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).

This course will familiarize students with the basic principles and uses of forensic science in the investigation of criminal activity. This course will introduce various methodologies and applications used in the forensic context. The course will review the basic applications of the biological, physical, and chemical sciences to questions of evidence and law. Subject matter includes: crime scene investigation; collection; preservation and analysis of physical evidence. Students should gain a basic understanding of the capabilities and limitations of the forensic sciences as they are applied at the crime scene and the forensic laboratory.

BILLABLE CONTACT HOURS: 3

CRJ 1110  Police Patrol Administration and Procedures  3 Credit Hours

English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).

The student will explain the purposes and importance of police patrol operations and the reasons for patrol coverage. The student will identify and analyze types and methods of police patrols for patrol distribution. The student will study patrol functions as related to other police activities.

BILLABLE CONTACT HOURS: 3

CRJ 1120  Criminal Law and Administration of Justice  3 Credit Hours

English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).

Prerequisite: CRJ 1010

The student will identify and define the elements of proof required to develop a criminal case for violations against the criminal code. The student will identify processes, officials, and organizations involved in the administration of justice and define the elements of criminal intent, sources of law, and criminal responsibilities.

BILLABLE CONTACT HOURS: 3

CRJ 1220  Criminal Evidence and Procedure  3 Credit Hours

English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).

Prerequisite: CRJ 1010

The student will identify the basic rules of evidence applicable to the offender as related to the operational level of law enforcement. The student will draw a distinction between admissible and inadmissible evidence and apply the rules of admissibility to the laws of arrest, reasonable force, search and seizure, and other related legal procedures.

BILLABLE CONTACT HOURS: 3

CRJ 1400  Introduction to Homeland Security  3 Credit Hours

Equivalent: HLS 1000, HLS 1000

English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).

This course will focus on a comprehensive, up-to-date overview of homeland security from an all hazards perspective; to include man-made, natural and technological disasters, as well as intentional threats of domestic and international terrorism, and weapons of mass destruction. Students will review the roles and responsibilities of government agencies, non-governmental organizations and individual citizens in homeland security.

BILLABLE CONTACT HOURS: 3

CRJ 1401  School Safety and Homeland Security  3 Credit Hours

Equivalent: HLS 1002, HLS 1002

English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).

This course explores the unique role of the local first responder. This course covers the common elements of disaster response and the roles of each first responder discipline in the response and recovery process. Course emphasis is on the actions and procedures at the scene where decisions are made using the Incident Command System.

BILLABLE CONTACT HOURS: 3

CRJ 1402  Homeland Security and First Responders  3 Credit Hours

Equivalent: HLS 1003, HLS 1003

English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).

This course will define and discuss the US Intelligence Community and National Intelligence strategy. Topics include the intelligence process, collection, analysis, strategy, and impact on local, state, tribal, and federal authorities.

BILLABLE CONTACT HOURS: 3

CRJ 1403  Introduction to Intelligence for Homeland Security  3 Credit Hours

Equivalent: HLS 1004, HLS 1004

English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).

This course examines the phenomena of terrorism and its impact on the USA. The course examines the emergence of leaderless terrorism, a loose network of groups with common goals apparently acting in isolation towards similar ends. The course will conclude with discussions on fighting terrorism in the USA that include the potential loss of civil liberties and other obstacles.
This course will focus on the integration of emergency management & homeland security at the federal level and the impact of these changes at the state and local level. Students will look at various focus areas in the emergency management field. After a summary of each focus area, students will examine sources of detailed information including existing college courses, public domain reference materials, and online training available free of charge from the federal government. Students receive a broad understanding of the emergency management discipline and the knowledge which must be brought forward to function effectively in the homeland security discipline. BILLABLE CONTACT HOURS: 3

This course is designed to provide students with lessons from homeland security policies and analytical frameworks employed by other countries, and understand how threats overseas can impact the U.S. homeland. As the United States works to prevent and prepare for terrorist attacks, pandemics, and other disasters in the wake of 9/11, learning from the approaches of other countries becomes an important aspect of homeland security. The positive and negative practices of other nations help students gain knowledge of analytical frameworks and strategic-level homeland security policies practiced by other countries, which can be incorporated into the strategic policies of US agencies charged with homeland security missions at the federal, state, and local levels. The course will also examine transnational threats that impact homeland security. Examples include the al Qaeda base of operations in Pakistan and Afghanistan, as well as conflicts in Lebanon and in Palestinian territory. These conflicts may have a significant spillover effect on security in the United States. BILLABLE CONTACT HOURS: 3

This course provides an in-depth view of modern border and transportation security. Specific topics of study will include security for ships and seaports; aircraft and airports; trains, ground transportation, and their related terminals; commercial trucking; pipelines and power transmission; bridges and tunnels; and major border crossing control points. Existing and emergent technologies needed to detect terrorists, their weapons, and inherent vulnerabilities in infrastructure, will be a special emphasis of the course, along with discussion of the legal, economic, political, and cultural aspects of transportation safety and border security. BILLABLE CONTACT HOURS: 3

These courses provide students with an extra focus on major issues that have current visibility in debates about homeland security. Presentations and discussions will focus on the latest public debates, including legislative, and their impact on community awareness, preparation, and support for public health emergencies and recovery. Students will have an opportunity to develop ideas about cooperating with their counterparts across international borders and with the increasing social diversity of large and small immigrant communities. These courses are designed to provide students with an opportunity to read more in-depth on particular issues within these broad areas of homeland security policy debate. BILLABLE CONTACT HOURS: 3

These courses provide students with an extra focus on major issues that have current visibility in debates about homeland security. Presentations and discussions will focus on the latest public debates, including legislative, and their impact on community awareness, preparation, and support for public health emergencies and recovery. Students will have an opportunity to develop ideas about cooperating with their counterparts across international borders and with the increasing social diversity of large and small immigrant communities. These courses are designed to provide students with an opportunity to read more in-depth on particular issues within these broad areas of homeland security policy debate. BILLABLE CONTACT HOURS: 3

These courses provide students with an extra focus on major issues that have current visibility in debates about homeland security. Presentations and discussions will focus on the latest public debates, including legislative, and their impact on community awareness, preparation, and support for public health emergencies and recovery. Students will have an opportunity to develop ideas about cooperating with their counterparts across international borders and with the increasing social diversity of large and small immigrant communities. These courses are designed to provide students with an opportunity to read more in-depth on particular issues within these broad areas of homeland security policy debate. BILLABLE CONTACT HOURS: 3
CRJ 1411  Special Topics in Homeland Security  3 Credit Hours
Equivalent: HLS 1025
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
These courses provide students with an extra focus on major issues that have current visibility in debates about homeland security. Presentations and discussions will focus on the latest public debates, including legislative, and their impact on community awareness, preparation, and support for public health emergencies and recovery. Students will have an opportunity to develop ideas about cooperating with their counterparts across international borders and with the increasing social diversity of large and small immigrant communities. These courses are designed to provide students with an opportunity to read more in-depth on particular issues within these broad areas of homeland security policy debate. BILLABLE CONTACT HOURS: 3

CRJ 1412  Special Topics in Homeland Security  3 Credit Hours
Equivalent: HLS 1026
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
These courses provide students with an extra focus on major issues that have current visibility in debates about homeland security. Presentations and discussions will focus on the latest public debates, including legislative, and their impact on community awareness, preparation, and support for public health emergencies and recovery. Students will have an opportunity to develop ideas about cooperating with their counterparts across international borders and with the increasing social diversity of large and small immigrant communities. These courses are designed to provide students with an opportunity to read more in-depth on particular issues within these broad areas of homeland security policy debate. BILLABLE CONTACT HOURS: 3

CRJ 1720  Correctional Institutions and Facilities  ..... 3 Credit Hours
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: CRJ 1010 and CRJ 1060
The student will define the purpose of correctional institutions and prisons, including the differentiation between security levels and prisoner classifications. Treatment and rehabilitative programs will be discussed and evaluated. The management and organization of correctional institutions will be described, including the role of the warden, the deputy warden, and the corrections officer. The custodial care and concerns will be defined, including the food service, clothing requirements, and medical requirements of the institution. The safety and security issue will be described. The rights of prisoners and future concerns of incarceration will also be discussed. BILLABLE CONTACT HOURS: 3

CRJ 1820  Legal Issues in Corrections  ............ 3 Credit Hours
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: CRJ 1010 and CRJ 1060
The student will define the constitutional law that relates to search and seizure and warrants. The course will describe the difference between the federal and state constitution. The Bill of Rights and the 14th Amendment will be defined. The entire path of the criminal process will be traced from arrest to the appeal process. The U.S. and State court systems will be described. Various court cases involving corrections and prisoners’ rights will be identified. Section 42, 1983, of the U.S. Civil Rights Code will also be discussed. BILLABLE CONTACT HOURS: 3

CRJ 1830  Probation, Parole, and Community Corrections  ..... 3 Credit Hours
Equivalent: PLS 1920, PLS 1910, PLS 1510
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: CRJ 1010 and CRJ 1060
The course will examine the various concepts, theories, and programs relating to community corrections. The course will provide an understanding that community correction is a sentencing style that represents an increased dependence upon correctional resources which are available in the community, such as probation, parole, electronic monitoring of offenders, diversion projects, community-based release programs, and other matters relating to community corrections. The course will examine the theories, procedures, administration, and implementation of probation and parole as it relates to the correctional client. BILLABLE CONTACT HOURS: 3

CRJ 1840  Correctional Client  .................................. 3 Credit Hours
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: CRJ 1010 and CRJ 1060
The course will examine various concepts, theories, and practices relating to the study of human relations, such as the influences of environment, biological factors, and the family on an individual's behavior. The course allows students to develop an insight into the behavior and motivations of correctional clients. The course will examine the specific characteristics of male, female, and juvenile offenders as clients of the corrections process. The course will consider special category of offenders such as the mentally disordered, sexually deviant, elderly, and others that become part of the correctional system. The course will explore basic counseling techniques used to influence and guide the correction client. BILLABLE CONTACT HOURS: 3

CRJ 2120  Highway and Traffic Control  ............ 3 Credit Hours
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: CRJ 1010 and CRJ 1110
The student will identify and define the basic police and driver responsibilities for safe and efficient movement of vehicles and pedestrians. The student will apply education, enforcement, and engineering aspects to public services and traffic safety; the student will examine laws, ordinances, and new developments involved in traffic safety, enforcement procedures, and accident investigation. BILLABLE CONTACT HOURS: 3
CRJ 2154  Firearms, Ballistics and Explosives Identification  .. 4 Credit Hours

English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).

Prerequisite: CRJ 1010 and CRJ 1030

This is a course of study applying forensic science theory and concepts related to firearms, ballistics, and explosives evidence found during a criminal investigation. Course work and hands-on laboratory experiments will utilize modern scientific instruments and techniques for the preservation, analysis, and interpretation of this evidence within limits of safety requirements. BILLABLE CONTACT HOURS: 4

CRJ 2200  Criminal Investigation and Case Preparation  ..... 4 Credit Hours

English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).

Prerequisite: CRJ 1010 and CRJ 1030

The student will identify the investigative procedures and techniques used in the process of gathering facts, testing hypotheses, and the proof required in factually concluding that a crime was committed. The student will recognize, collect, and prepare physical evidence for transmission to courts and will prepare a report of an investigation as required in the prosecution of a criminal case. The student will examine physical evidence in a laboratory situation to determine scientific analysis required to assist in case preparation and forensic use. BILLABLE CONTACT HOURS: 4

CRJ 2220  Juvenile Procedures  .........................3 Credit Hours

English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).

Prerequisite: CRJ 1010

The student will identify youth bureau functions and recognize jurisdiction of juvenile agencies and will identify and define prevention methods, determine special reporting procedures, and discuss the theories that explain the problems of delinquency. BILLABLE CONTACT HOURS: 3

CRJ 2254  Fingerprint Classification and Identification  ..... 4 Credit Hours

English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).

Prerequisite: CRJ 1010 and CRJ 1030

This is a course of study dealing with fingerprint techniques, recording, and classifying fingerprints; identifying classification patterns and compositions; learning the Henry System of classification and variations to the system; developing, recording, photographing, comparison, and identification of latent fingerprints. Laboratory procedures will be studied in the use of developing power, chemical development of latent prints, and preparation of evidence for court presentation. BILLABLE CONTACT HOURS: 4

CRJ 2260  Substance Abuse Investigation  ..........3 Credit Hours

English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).

Prerequisite: CRJ 1010

This is a course of study relating to the problems of drug abuse (alcohol, dangerous drugs, narcotics). The student will acquire knowledge concerning the issues involved in social impact, physical and psychological results of drugs and alcohol, and the facilities and treatment methods being used to cope with the problems. An identification and recognition of habit-forming drugs will be made by the student associated with criminal law applicable to legal restrictions. Law enforcement and investigation procedures will be presented to maintain an acceptable social control on the substance abuse problem. BILLABLE CONTACT HOURS: 3

CRJ 2310  Interview and Interrogation Techniques  ..... 3 Credit Hours

English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).

Prerequisite: CRJ 1010

The student will perform the basic steps involved in interviewing a witness and interrogating a suspect of complaints referred to enforcement agencies. The student will classify witnesses and subjects into categories of behavioral characteristics and psychological reactions, describe methods for taking statements, identify recording devices, and methods for detection of deception. Further, the student will describe the law governing the admissibility of this type of evidence. BILLABLE CONTACT HOURS: 3

CRJ 2320  Police Administration  ......................3 Credit Hours

English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).

Prerequisite: CRJ 1010

The student will identify and explain the functions, activities, and administrative procedures of a police agency. The student will review operational techniques used by police administrators and convert this information into an adequate utilization of resources. Also, the student will examine the executive responsibilities, provide for implementation of command policy, and study auxiliary services in support of police operations. BILLABLE CONTACT HOURS: 3

CRJ 2403  Field Project  ................................3 Credit Hours

English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).

Prerequisite: CRJ 1010 CRJ 1030 and 30 credits or more.

The student will analyze a major research project in the criminal justice or security field collecting data from related references and agencies. Observations will be made on the data collected in a criminal justice agency or a private community-based program. Periodic progress reports will be submitted on the project. At the end of the semester, the student will prepare a research paper outlining the material collected from the agencies, documented from selected references, and indicate the relationship of practical field application to prior courses studied in the associate degree program. BILLABLE CONTACT HOURS: 3
Culinary Arts (CUL)

Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.

CUL 1010  Food Standards, Sanitation and Hygiene  ...... 2 Credit Hours
Equivalent: FST 1220
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: CRJ 1010
The student will study social relations as they relate to the criminal justice processes. The student will develop case studies to analyze basic psychological problems as they relate to the police, courts, and corrections, while coping with changes in social controls over human behavior. Major emphases will be placed on the role of the criminal justice practitioner as he/she deals with such problems as crises intervention, public relations, community based corrections, crime prevention, and conflict with current management policies. BILLABLE CONTACT HOURS: 3

CUL 1050  Beginning Cake Decorating  ............... 2 Credit Hours
Equivalent: FST 1090
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: CUL 1010 with a minimum grade of 'C' or consent of instructor.
Corequisite: CUL 1011
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
Students will prepare, color, and blend buttercream and royal icings used in the making of figures, borders, flowers, letters, and script for special occasion cakes. Piping gel and sugar molds will also be used. BILLABLE CONTACT HOURS: 3

CUL 1060  Theme Cakes  .................................. 2 Credit Hours
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: CUL 1050 or consent of instructor.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
This course will provide students with knowledge and techniques to produce theme and / or special occasion cakes. Emphasis will be on design, color and production of tier cakes. Figure piping and advanced floral design will be practiced. BILLABLE CONTACT HOURS: 3

CUL 1011  Culinary Skills  ................................. 2 Credit Hours
Equivalent: CUL 1000
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: Attendance at a Culinary Arts orientation; ServSafe Manager Certificate within 2 years or completion of CUL 1010 with a minimum grade of 'C' or consent of instructor.
Corequisite: CUL 1111
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
This course will provide the foundation knowledge and techniques practiced in professional cookery. Students will prepare all mediums food product in kitchen lab. Classic methods of cookery will be prepared and evaluated to develop proper skills required of cooks. Emphasis will be on the foundation preparation process of stocks, mother sauces, soups, vegetables, poultry, finfish, small sauces, pork, lamb, beef, shellfish, starches and variety meats. BILLABLE CONTACT HOURS: 6
CUL 1120  Butchery and Fabrication  ..................... 2 Credit Hours  
Equivalent: FST 2380  
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).  
Prerequisite: Serve Safe Certificate within 2 years or completion of CUL 1010 with a minimum grade of ‘C’.  
Corequisite: CUL 1101  
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.  
This course is designed to teach the student how to cut wholesale and restaurant cuts of beef, veal, lamb, pork, poultry, and fish as well as how to properly store these products. Students will prepare fresh and smoke sausage. Proper handling, sanitation techniques, and meat terminology will be emphasized. BILLABLE CONTACT HOURS: 3

CUL 1130  Garde Manger I  ......................... 2 Credit Hours  
Equivalent: FST 1101  
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).  
Prerequisite: CUL 1010 with a minimum grade of 'C' and CUL 1101.  
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.  
This course will provide the student with the foundation knowledge and skills necessary for a garde manger cook. Emphasis will be on dressings, emulsions, salad ingredients and preparation techniques. Garnishes and plate presentation will be practiced. Organizational skills, team building, independent learning and critical thinking are practiced in this course. BILLABLE CONTACT HOURS: 3

CUL 1150  Baking  ......................... 2 Credit Hours  
Equivalent: FST 1110  
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).  
Corequisite: CUL 1101  
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.  
Students will be introduced to the theory and practice used in a commercial bakery. Students will prepare and evaluate the quality of baked goods including the use of mixes, frozen dough, and scratch methods. Preparations will include breads, rolls, danish, coffee cakes, puddings, pies, cookies, cakes, custards, and puff pastry. BILLABLE CONTACT HOURS: 3

CUL 1180  Hospitality Careers  ..................... 1 Credit Hour  
Equivalent: FST 1180  
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).  
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.  
This course will provide students an insight to the career opportunities within the hospitality industry. Through a series of field trips, the students will visit various styles of hospitality operations and meet with industry leaders. Discussion will focus on business operations, current trends, and maintaining success in a competitive industry. Field trips are required. BILLABLE CONTACT HOURS: 1

CUL 1200  Restaurant Cookery  ...................... 4 Credit Hours  
Equivalent: FST 1104  
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).  
Prerequisite: CUL 1010 with a minimum grade of 'C' and CUL 1101.  
Corequisite: CUL 1230  
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.  
This course provides the students knowledge and techniques necessary to prepare food in a working restaurant operation. Students will rotate through multiple cook stations of the kitchen to experience the preparation procedures of each station utilizing a market menu. Students will prepare various soups, sauces, meat, fish, poultry, and starches for a full-service restaurant. BILLABLE CONTACT HOURS: 6

CUL 1210  Dining Room I  .................... 2 Credit Hours  
Equivalent: FST 1112  
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).  
Prerequisite: CUL 1010 with a minimum grade of 'C' and CUL 1101.  
Corequisite: CUL 1210  
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.  
This course will provide students an in-depth understanding of proper dining service and guest relations through performance in dining room operation. Emphasis will be on guest and employee relations, proper etiquette, industry terminology and proper use and care of equipment. Merchandising techniques will be discussed. BILLABLE CONTACT HOURS: 3

CUL 1230  Front House Management  .......................... 2 Credit Hours  
Equivalent: FST 1106  
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).  
Prerequisite: CUL 1010 with a minimum grade of 'C' and CUL 1101.  
Corequisite: CUL 1210  
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.  
This course is designed to introduce students to supervisory principles and practices in food and beverage operations. Coursework includes role-playing and practicing as a front house supervisor in the on-premise restaurant operation. Students will practice the skills of proper guest services, supervisor and employee relations, and financial aspects of the front house operation. BILLABLE CONTACT HOURS: 3

CUL 1250  Pastry I  .......................... 4 Credit Hours  
Equivalent: FST 1112  
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).  
Prerequisite: CUL 1151  
Corequisite: CUL 1111  
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.  
The student will learn to produce contemporary pastries that would appear on the menus of finer restaurants. Emphasis is placed on preparation of petits fours and French pastry, puff pastry and paté choux specialties, gateaux and tarts, ice cream, and includes an introduction to plated desserts. BILLABLE CONTACT HOURS: 6
CUL 1300  Garde Manger  4 Credit Hours
Equivalent: CUL 2130
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: CUL 1111 and CUL 1120 or consent of instructor.
Corequisite: CUL 2200
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
This course provides the knowledge and skills required of the garde manger kitchen. Study begins with discussion and preparation of various styles of cold sauces, dressing, salads, sandwiches as prepared in today's kitchens. Students will setup and properly execute food items from the cold food station of the restaurant. Course will advance student to include preparation of force-meats, cured and smoked foods, pickling and preserves, garnishes and cold platter presentation. BILLABLE CONTACT HOURS: 6

CUL 1400  Front House Operations I  4 Credit Hours
Equivalent: FST 2020
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: Serve Safe Certificate within 2 years or completion of CUL 1010 with a minimum grade of 'C' or consent of instructor.
Corequisite: CUL 1011
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
This course will introduce students to food purchase systems used in food and beverage service in restaurant operations. Emphasis will be on the principles and practices of dining room service. Proper steps of service, use of industry software, guest etiquette and sales merchandising will be practiced. Students will learn and practice skills required of the dining room manager including supervisory techniques, labor relations, understanding sales reports and guest relations. Lifesaving techniques practiced in dining guest emergencies will be demonstrated. BILLABLE CONTACT HOURS: 6

CUL 1520  Bakery Merchandising  2 Credit Hours
Equivalent: CUL 1250
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: CUL 1050 and CUL 1151
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
This course provides students an opportunity to observe and analyze current competitive practices of merchandising techniques used in the retail baking industry. Students will plan and execute themed sales utilizing various bakery products. Techniques of creating dynamic display cases for profitability will be covered. BILLABLE CONTACT HOURS: 3

CUL 1850  Bakery Sales and Merchandising  4 Credit Hours
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: CUL 1011 CUL 1050 and CUL 1151 or consent of instructor.
Corequisite: CUL 1250
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
This course will focus on the importance of control in the modern food service industry. Food, labor and beverage costs will be examined in depth as well as the relationship these costs have to the profitability of the operation. Students will practice calculating cost-to-sales ratios and cost/volume/profit equations. BILLABLE CONTACT HOURS: 6

CUL 2020  Food Service Cost Management  3 Credit Hours
Equivalent: FST 2030
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: CUL 1111 and CUL 1400 or consent of instructor.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
This course will provide students an in-depth understanding of food and beverage service in restaurant operations. Emphasis will be on the principles and practices of dining room service. Proper steps of service, use of industry software, guest etiquette and sales merchandising will be practiced. Students will learn and practice skills required of the dining room manager including supervisory techniques, labor relations, understanding sales reports and guest relations. Lifesaving techniques practiced in dining guest emergencies will be demonstrated. BILLABLE CONTACT HOURS: 6

CUL 2200  Food Purchasing and Storage  2 Credit Hours
Equivalent: FST 2030
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: CUL 1111 or consent of instructor.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
This course will introduce students to food purchase systems used in food and beverage operations. Emphasis will be on developing food product specifications for quality control. Methods of inventory used for food and beverage, bid buying, purveyor selection, receiving and product storage will be discussed and practiced. BILLABLE CONTACT HOURS: 2
CUL 2040  Menu Development and Design       3 Credit Hours
Equivalent: CUL 1240,FST 1240
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: CUL 1111 and CUL 1230 or consent of instructor.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
This course provides insight to successful contemporary restaurant operations emphasizing the proper steps of menu development and its impact on an operation's profitability. This project-based course will require the student to create a commercial restaurant business plan with the appropriate menu for an identified guest market. Product development, labor, costing, pricing, menu design, merchandising and control methods will be discussed. BILLABLE CONTACT HOURS: 3

CUL 2130  Garde Manger II                4 Credit Hours
Equivalent: CUL 1300,CUL 1300,FST 2360
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: CUL 1120 CUL 1130 and CUL 1200 or consent of instructor.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
This course emphasizes the design and preparation of cold food platters, garnishes, and buffets used in the modern food service industry. Production will include galantines, en croutes, terrines, cold sauces, and appetizers. Presentation techniques will be practiced for visual impact with buffet platters and table centerpieces. BILLABLE CONTACT HOURS: 6

CUL 2200  Modern Buffet Techniques      4 Credit Hours
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: CUL 1111 and CUL 1200
Corequisite: CUL 1300
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
This course presents knowledge and skills necessary to plan and execute volume banquet service. Emphasis will be on menu planning and presentation for banquets and buffets. Methods and techniques of modern and traditional cookery will be practiced while producing theme events for the dining public. Appetizers and breakfast cookery will also be included.
BILLABLE CONTACT HOURS: 6

CUL 2210  Dining Room II              2 Credit Hours
Equivalent: CUL 2410,FST 1204
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: CUL 1210 and CUL 1230
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
This course will provide students with a fine dining practice experience including wine and beverage service. The students will be introduced to team service, tableside service food preparation, wine varietals and food and wine pairing. BILLABLE CONTACT HOURS: 3

CUL 2220  Equipment Planning and Layout  3 Credit Hours
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: CUL 1400 and CUL 2020
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
This course will provide students with information required for proper design of food and beverage operations. Course will include discussion on work flows, commercial kitchen equipment, and proper specifications for purchase of equipment and front house design. With reference to menu and style of restaurant operation, students will design a kitchen with consideration for food production, service, and work flow. BILLABLE CONTACT HOURS: 3

CUL 2240  Hospitality Marketing        3 Credit Hours
Equivalent: FST 2240
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: CUL 1400 or consent of instructor.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
This course will give the student the opportunity to develop sales and marketing skills through analysis of the competition and the market in which they are operating. Using merchandising methods, the student will be expected to create promotional project for various styles of hospitality business operations. BILLABLE CONTACT HOURS: 3

CUL 2250  Pastry II                    4 Credit Hours
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: CUL 1250
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
The student will practice advanced techniques used in pastry production. Emphasis will be placed on holiday pastries, confectionery products, tortes, composed desserts, sugar, and chocolate work. BILLABLE CONTACT HOURS: 6

CUL 2300  Ice Carving                 2 Credit Hours
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: CUL 1250
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
This hands-on course will include knowledge and skills necessary to produce a sculpted ice carving for table centerpieces used in special events. Safety with power hand tools will be discussed and practiced in this course. BILLABLE CONTACT HOURS: 3
CUL 2301  Ice Carving Competition  ......................... 2 Credit Hours
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: CUL 2300 or consent of instructor.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
Students will be provided an opportunity to learn ice carving techniques used in national competitions. Planning, timing and execution of innovative concepts will be discussed. Organizational skills for successful ice carving entry will be practiced. Travel to events may be required. BILLABLE CONTACT HOURS: 3

CUL 2311  International Cuisine-Italian  .............. 2 Credit Hours
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: CUL 1111 or consent of instructor.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
This course provides knowledge of geography, culture, and foods indigenous to the focused area. Students will discuss and prepare appetizers, entrees, and desserts common to homes and restaurants. Use of specialty equipment will be included when applicable. BILLABLE CONTACT HOURS: 3

CUL 2312  International Cuisine - Asian  .............. 2 Credit Hours
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: CUL 1111 or consent of instructor.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
This course provides knowledge of geography, culture, and foods indigenous to the focused area. Students will discuss and prepare appetizers, entrees, and desserts common to homes and restaurants. Use of specialty equipment will be included when applicable. BILLABLE CONTACT HOURS: 3

CUL 2320  Wine and Spirits  ............................. 3 Credit Hours
Equivalent: FST 2320
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
The student will develop an overall knowledge of the beverage industry as it relates to food and beverage operations. A full line of liquor, beer, and wine will be discussed along with standard practices in the service and mixology of these. The student will be exposed to the importance of professional management and the application of management functions in the areas of staffing, product control, accounting, legal liability, and merchandising. BILLABLE CONTACT HOURS: 3

CUL 2330  Artisan Breads  ................................. 2 Credit Hours
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Corequisite: CUL 1151
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
This course presents advanced theory and techniques of producing artisan breads and will include developing and maintaining cultures used in sourdough. Correct choice of flours and ingredients for specific flavor development will be covered. Students will participate in flavor and product evaluations. BILLABLE CONTACT HOURS: 3

CUL 2350  Culinary Competition  ...................... 2 Credit Hours
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: CUL 1111 or consent of instructor.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
This course is design to prepare the student for culinary competition both as a team and individual entry. American Culinary Federation culinary standards will be discussed and practiced for product development. Students will be required to enter an actual culinary competition to be determined by the instructor. Practice will be required outside of class time. BILLABLE CONTACT HOURS: 3

CUL 2360  Soups and Sauces  ....................... 2 Credit Hours
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: CUL 1111 or consent of instructor.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
This course will provide students an in-depth study of soups and sauces, both classical and nouvelle. Discussion and preparation of unique sauces will allow students to hone skills in sauce making techniques. Various styles of seasonal soups and garnishes will be prepared. BILLABLE CONTACT HOURS: 3

CUL 2391  Sugar Artistry  ............................. 2 Credit Hours
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: CUL 1250 or consent of instructor.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
This course provides knowledge, skills and techniques to produce elaborate and contemporary sugar showpieces. Students will work with multiple sugar mediums while learning various techniques such as pulled, blown, cast and bubble sugar. Pastillage, molding, piping and construction of showpieces will be presented. BILLABLE CONTACT HOURS: 3
CUL 2392 Chocolate Artistry .......................... 2 Credit Hours

English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).

Prerequisite: CUL 1250 or consent of instructor.

Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.

This course provides knowledge, skills and techniques to produce elaborate and contemporary chocolate amenities and showpieces. Students will work with multiple chocolate mediums while learning various techniques. Ice chocolate, molding, silk-screening, piping and construction of showpieces will be practiced. BILLABLE CONTACT HOURS: 3

CUL 2400 Classical Restaurant ...................... 4 Credit Hours

English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).

Prerequisite: CUL 1200 CUL 1300 and CUL 2200

Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.

This course will build on foundation skills from previous courses in cooking. The course will introduce the student to classical and international cuisine, and students will practice preparation and service of these cuisines in a fine dining setting. BILLABLE CONTACT HOURS: 6

CUL 2410 Front House Operations II .................... 2 Credit Hours

Equivalent: CUL 2210,FST 1204

English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).

Prerequisite: CUL 1400 or consent of instructor.

Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.

This course will provide students with the knowledge and refined skills required in a fine dining operation. Wine varietals, food and wine pairing will be discussed and practiced. The student will be introduced to team service and table-side food preparation pairing. BILLABLE CONTACT HOURS: 3

CUL 2420 Plated Dessert I ................................ 2 Credit Hours

English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).

Corequisite: CUL 1250 (Recommended) or consent of instructor.

Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.

This course builds upon the fundamentals of pastry creations in the form of plated desserts. Design, plate component, and style dynamics will be discussed. The student will practice advanced techniques in plate design to create trend-setting presentations. BILLABLE CONTACT HOURS: 3

CUL 2430 Plated Dessert II ............................... 2 Credit Hours

English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).

Prerequisite: CUL 2420 or consent of instructor.

Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.

The student will practice advanced techniques used in designing contemporary plated desserts. Concepts of fusionism, impressionism, and architecturalism to create signature desserts will be presented. American Culinary Federation Pastry Competition techniques and guidelines will be discussed. BILLABLE CONTACT HOURS: 3

CUL 2450 Leadership Management .................... 3 Credit Hours

English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).

Prerequisite: CUL 1400 or consent of instructor.

Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.

This course will expand upon supervisory skills necessary for a successful leadership role in the food service industry. Team building, leadership skills and human resource skills will be emphasized including coaching hiring and training. BILLABLE CONTACT HOURS: 3

CUL 2480 Event and Catering Management ............ 3 Credit Hours

Equivalent: FST 2404

English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).

Prerequisite: CUL 1200 CUL 1400 CUL 2020 or consent of instructor.

Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.

The student will experience skills required of a leadership position in hospitality as they plan, organize, and execute on-premise dinner events. Emphasis is on organizational skills, leadership, and labor relations and creativity required of event planning. The students will work as a team while leading student volunteers to perform the various functions required to execute a successful event for the dining public. BILLABLE CONTACT HOURS: 3

CUL 2490 Hospitality Legal Issues ...................... 3 Credit Hours

English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).

Prerequisite: CUL 1400 or consent of instructor.

Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.

This course will introduce students to legal issues facing food service managers and supervisors, to recognize legal ramifications of policies and practices and be able to apply legal principles to everyday operations. This course will encompass employment law, human resource skills, the Americans with Disabilities Act, discrimination, negligence and dram shop liability. BILLABLE CONTACT HOURS: 3
CUL 2500 Culinary Internship .......................2 Credit Hours
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: CUL 1200 and consent of instructor.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution. This course will provide the student with a work-based learning experience in an approved restaurant setting. The intern will be evaluated on work performance. BILLABLE CONTACT HOURS: 2

CUL 2510 Restaurant Management Internship ....1 Credit Hour
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: CUL 1210 and CUL 1230 and consent of instructor.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution. This course will provide the student with a practical application of the skills and knowledge presented in their coursework. Students will be required to complete 120 hours working in an approved restaurant facility. Students will rotate through various management positions such as floor manager, kitchen manager and beverage manager. BILLABLE CONTACT HOURS: 1

CUL 2530 Wedding Cake Design ......................2 Credit Hours
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: CUL 1050
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution. The student will design and produce traditional and contemporary wedding cakes. The process of creating cakes for special events, including choice of themes and client relations, will be discussed. BILLABLE CONTACT HOURS: 3

CUL 2531 Special Techniques for Cakes ............2 Credit Hours
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: CUL 2530 or consent of instructor.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution. This course will provide students with knowledge and techniques used with sugar paste. The course will cover both traditional and contemporary techniques used in sugar art for cake decoration. Course will include use of gumpaste, nontoxic paste, and fondant. BILLABLE CONTACT HOURS: 3

CUL 2610 Front Office Operations ....................3 Credit Hours
Equivalent: CUL 2615,FST 2430
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: CUL 1180 and CUL 1230 or consent of instructor.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution. This course will identify and define the organizational structure of a front office and how it relates to the overall objectives of the hotel operation. The course will define principles of management practices, routine procedures of the front office including reservation systems, guest room services, check-in / check-out, accounting practices, and proper emergency response procedures. Field trips will be required. BILLABLE CONTACT HOURS: 3

CUL 2615 Lodging Operations .......................3 Credit Hours
Equivalent: CUL 2610,FST 2430,
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Corequisite: CUL 1400 or consent of instructor.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution. This course will identify and define the organizational structure of hotel and full service lodging operations. Emphasis will be on the front office, sales, and housekeeping departments. The course will define the responsibilities of each department and how they interact to meet the objectives of the operation. The course will define principles of hospitality management practices, procedures of the front office including reservation systems, guest room services, and the role of the sales and events department. Field trips will be required. BILLABLE CONTACT HOURS: 3

CUL 2620 Housekeeping Operations .................3 Credit Hours
Equivalent: FST 2450
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: CUL 1180 and CUL 1230; or consent of instructor.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution. This course will provide insight into the responsibilities and daily practices of housekeeping operations within a full service hotel. Discussion on the roles and responsibilities of the housekeeping department supervisor will include: leadership, inter-department communication and how they may differ in various styles of lodging operations. Emphasis will be on the daily procedures employees use in turning guest rooms and maintaining on-premise laundries. Methods in hiring, training, and maintaining staff will also be discussed. Field trips will be required. BILLABLE CONTACT HOURS: 3
Dental Hygiene (DHY)

DHY 1140  Dental Office Procedures  .....................  3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
The student will develop skills relative to planning, organizing and controlling the dental office. This course will include dental office procedures such as reception duties, record control, bookkeeping and banking procedures, credit and collecting, insurance forms, supplies and inventory control and patient recall. BILLABLE CONTACT HOURS: 3

DHY 1230  Oral, Head and Neck Anatomy  ..........  3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
This course provides a comprehensive study of oral, head and neck anatomy including: skeletal, nerves, circulatory, lymphatic, muscular systems, and the relationship to dental hygiene clinical procedures, including local anesthetics. A comprehensive study of the oral and dental anatomy as it relates to oral disease and dental hygiene care. BILLABLE CONTACT HOURS: 4

DHY 1240  Dental Embryology and Histology  ....  3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: Admission into program.
This course familiarizes students with the ontogeny of humans with emphasis on the development of the maxillofacial area and dental structures. Skill is developed in the correct use of a microscope and recording of embryological and histological tissue sections. BILLABLE CONTACT HOURS: 4

DHY 1250  Clinical Techniques  .........................  5 Credit Hours
English/ESL Placement: Placement into ENG 1510.
This course provides an introduction to the profession of dental hygiene. Students are instructed in the concepts and techniques essential in providing comprehensive dental hygiene care. Through a simulated clinical laboratory experience, the students practice operative preparation, infection control procedures, patient assessment, and periodontal instrumentation. All procedures are taught to clinical competence. BILLABLE CONTACT HOURS: 8

DHY 1260  Dental Radiography  .........................  3.5 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: DHY 1230 and DHY 1250
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
Theories and principles of the X-ray, its nature and properties and recognition of the normal anatomical structures present in a properly exposed set of periapical and interproximal radiographic images. Practice is provided in exposure, development and mounting of dental radiographic images using a variety of techniques. BILLABLE CONTACT HOURS: 5

DHY 1281  Clinical Dental Hygiene I  .................  4 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: DHY 1250
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
This course is a continuation of Clinical Techniques, providing a transition from the pre-clinic setting to planning and providing dental hygiene care. The emphasis is on applying the knowledge and skills that will foster problem solving and evidence-based decision making as it is related to both oral and physical health. The course will explore concepts and techniques of dental care with patients to increase their awareness of dental health including radiographic technique, administering Nitrous Oxide/Oxygen Sedation and Local Administration, and dental anxiety reduction. All facets of clinical dental hygiene processes and procedures are taught to clinical competence. BILLABLE CONTACT HOURS: 7

DHY 1282  Clinical Dental Hygiene II  .................  2.5 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: DHY 1281
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
This course is a continuation of Clinical Dental Hygiene I, with the added skills of placing sealants, polishing amalgams, placing a rubber dam, and taking diagnostic study models. The student learns care specific to the pediatric and geriatric dental patient. The development of critical thinking skills enables the student to analyze the components in the dental hygiene process of care. Additional theory and techniques in advanced periodontal and ultrasonic instrumentation are included. All facets of clinical dental hygiene processes and procedures are taught to clinical competence. BILLABLE CONTACT HOURS: 5.5

DHY 1283  Clinical Dental Hygiene III  ...............  5 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: DHY 1282 and DHY 1350 with a 'C' or better.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
This course is a continuation of Clinical Dental Hygiene II, with an emphasis on treating special needs patients. The course develops abilities to assess, plan, implement and evaluate all types of dental hygiene procedures and treatment care plans for patients of all ages and special needs. The course will use information synthesis, critical thinking, and evidence-based decision making skills to apply to all facets of clinical dental hygiene processes and procedures. All procedures are taught to clinical competency with development in caring for more periodically involved patients with focus on increasing their efficiency and clinical instrumentation ability. BILLABLE CONTACT HOURS: 8
DHY 1284 Clinical Dental Hygiene IV 5 Credit Hours

English/ESL Placement: Placement into ENG 1510.
Prerequisite: DHY 1283
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.

This course is a continuation of Clinical Dental Hygiene III, with an emphasis placed on preparation of the student for completing the national and clinical boards. This course includes a comprehensive case study presentation that is the culmination of all the prior Clinical Technical courses. The course is designed to continue to increase the student's efficiency and clinical abilities. All facets of clinical dental hygiene processes and procedures are taught to clinical competence. BILLABLE CONTACT HOURS: 8

DHY 1310 Periodontics 2 Credit Hours

English/ESL Placement: Placement into ENG 1510.
Prerequisite: DHY 1282
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.

The etiology, signs, symptoms and processes of pathological conditions, especially those related to the periodontium, are emphasized. Clinical experience is provided in charting the mouth and completing a routine prophylaxis. BILLABLE CONTACT HOURS: 2

DHY 1330 Therapeutics 2 Credit Hours

English/ESL Placement: Placement into ENG 1510.
Prerequisite: DHY 1282
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.

This course provides a basic knowledge of the names, uses and beneficial and detrimental effects upon the body of drugs commonly used in dentistry. Students learn how to use standard references and apply rules for proper administration, measurement, and storage. BILLABLE CONTACT HOURS: 2

DHY 1350 Local Anesthesia 1.5 Credit Hours

English/ESL Placement: Placement into ENG 1510.
Prerequisite: DHY 1281
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.

This course provides a basic knowledge of neuroanatomy and neurophysiology, pain control, the pharmacology of local anesthetics, techniques of maxillary and mandibular anesthesia, infection control, systemic complications, and local anesthesia medical emergencies. BILLABLE CONTACT HOURS: 2

DHY 2210 General and Oral Pathology 3 Credit Hours

English/ESL Placement: Placement into ENG 1510.
Prerequisite: DHY 1250
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.

This course provides a basic knowledge of the etiology, signs and symptoms, and treatment of systemic and oral pathological conditions. Emphasis is placed on the detection and treatment of diseases of the oral region. BILLABLE CONTACT HOURS: 3

DHY 2220 Dental Public Health 1 Credit Hour

English/ESL Placement: Placement into ENG 1510.
Prerequisite: DHY 1283
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.

This course provides a study of organizational structure and functions of various local, state, and federal agencies concerned with public health and aspects of dentistry carried out on a community basis. The course will explore concepts of oral epidemiology, statistical methods, community assessment, program planning, program implementing, and strategies in evaluating programs. The ability to apply evidence-based decision making in review of scientific literature will be covered in the course. BILLABLE CONTACT HOURS: 1

DHY 2240 Dental Specialties 2 Credit Hours

 Equivalent: DHY 2230

English/ESL Placement: Placement into ENG 1510.
Prerequisite: DHY 1283
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.

Students are familiarized with the chemical, physical, and manipulative characteristics of various restorative and procedural materials used in dentistry. Laboratory experiences develop skill in working with these materials and recording results of experiments which illustrate their uses or characteristics. BILLABLE CONTACT HOURS: 2

DHY 2250 Dental Materials 3 Credit Hours

English/ESL Placement: Placement into ENG 1510.
Prerequisite: DHY 1281
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.

Students are familiarized with the chemical, physical, and manipulative characteristics of various restorative and procedural materials used in dentistry. Laboratory experiences develop skill in working with these materials and recording results of experiments which illustrate their uses or characteristics. BILLABLE CONTACT HOURS: 6

DHY 2280 Dental Health Education 2 Credit Hours

English/ESL Placement: Placement into ENG 1510.
Prerequisite: DHY 1282 and HEA 1510
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.

This course provides the study of dental health education theories and methods in providing preventive educational strategies for patients and community groups. The course requires students to develop the ability to assess, plan, implement and evaluate a dental health education project for a specific target population. Emphasis is placed on developing interventions, educational materials, and educational based methods to improve preventive oral health in populations. BILLABLE CONTACT HOURS: 2

DHY 2320 Dental Law 1 Credit Hour

English/ESL Placement: Placement into ENG 1510.
Prerequisite: DHY 1283
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.

Students are familiarized with the principles of professional ethics and laws, rules, and regulations relative to the practice of dental hygiene. BILLABLE CONTACT HOURS: 1
DHY 2340 Dental Hygiene Board Review ............2 Credit Hours

English/ESL Placement: Placement into ENG 1510.
Prerequisite: DHY 1283

This course provides the students with a review of all the dental hygiene courses and successfully prepares the students for taking the National Board Dental Hygiene Examination, Regional Clinical Board Examinations, and the Local Anesthesia and Nitrous Oxide Administration Examinations. The students will complete a self-inventory, develop a study plan, implement practice exercises, and complete a mock board examination. The course will conclude with the students building professional skills in resume writing and interviewing techniques to further the transition from student to the dental hygiene professional. BILLABLE CONTACT HOURS: 2

Diagnostic Medical Sonography (DMS)

DMS 1000 Orientation to Sonography ............. 3 Credit Hours

English/ESL Placement: Placement into ENG 1510.
Prerequisite: Admission into the Diagnostic Medical Sonography Program.
Corequisite: DMS 1020 DMS 1030 DMS 1100.

This course will provide an overview of the field of diagnostic medical sonography, the associated professional organizations and the sonographer's legal/ethical duties and responsibilities. The course will also include sonographer safety issues, communication, patient sonographer interactions and patient care techniques. BILLABLE CONTACT HOURS: 3

DMS 1010 Fundamentals of Sonography .......... 4 Credit Hours

English/ESL Placement: Placement into ENG 1510.
Prerequisite: DMS 1000 DMS 1020 DMS 1030 and DMS 1100; each with a grade of 'C' or better.
Corequisite: DMS 1040 DMS 1100 DMS 1420.

This course is designed to provide the student with a foundation of understanding the human physiological processes as they relate to ultrasound imaging of the organs of the abdominal, urological, obstetrical, gynecological and superficial structures (thyroid, breast, testes). Sonographic imaging procedures, lab values and clinical symptoms will be correlated with the diagnostic exam. BILLABLE CONTACT HOURS: 4

DMS 1020 Cross-Sectional Anatomy .......... 4 Credit Hours

English/ESL Placement: Placement into ENG 1510.
Prerequisite: Admission into the Diagnostic Medical Sonography program or consent of instructor.
Corequisite: DMS 1000 DMS 1030 DMS 1100.

This course will present human cross-sectional anatomy relative to both the normal body structures and pathologic changes that will be demonstrated in multiple scan planes and directly associated with sonographic imaging. This is a lecture class that will utilize textbook material, sonographic terminology and sonograms to identify sectional anatomy of the abdomen, superficial structures, male and female pelvis and obstetrics. BILLABLE CONTACT HOURS: 4

DMS 1030 Sonography Lab I ..................2 Credit Hours

English/ESL Placement: Placement into ENG 1510.
Prerequisite: Admission to the DMS program.
Corequisite: DMS 1000 DMS 1020 DMS 1100.

This lab course will introduce concepts and principles of sonographic imaging with emphasis on the application of instrumentation, basic scanning techniques and identification of cross sectional anatomy in the appropriate scan planes. BILLABLE CONTACT HOURS: 2

DMS 1040 Sonography Lab II ..................2 Credit Hours

English/ESL Placement: Placement into ENG 1510.
Prerequisite: Admission to the DMS program.
Corequisite: DMS 1000 DMS 1020 DMS 1100.

This lab course will introduce scanning techniques and sonographic principles as they relate to producing a diagnostic exam. Emphasis is placed on proper transducer manipulation, the use of anatomical windows to produce quality images, following a prescribed protocol and writing a technical impression. Students will scan the abdomen, pelvis and small part structures. BILLABLE CONTACT HOURS: 2

DMS 1050 Sonography Lab III ................ 1 Credit Hour

English/ESL Placement: Placement into ENG 1510.

This lab course will provide the student with the opportunity to gain experience in advanced scanning skills in the performance of vascular studies and musculoskeletal exams. BILLABLE CONTACT HOURS: 1

DMS 1100 Sonography Principles and Instrumentation I ................................................3 Credit Hours

English/ESL Placement: Placement into ENG 1510.
Prerequisite: Admission into the Diagnostic Medical Sonography Program.
Corequisite: DMS 1000 DMS 1020 DMS 1030.

This course will provide the student with the fundamental principles of acoustical physics with a primary focus on wave propagation, interaction with tissue, instrumentation, transducer construction and application, and modes of operation including basic Doppler principles. Topics of discussion will also include artifacts, quality control and bio-effects. BILLABLE CONTACT HOURS: 3

DMS 1110 Sonography Principles and Instrumentation II ................................................2 Credit Hours

English/ESL Placement: Placement into ENG 1510.

This course will provide the student with advanced acoustical physics principles including hemodynamics, diagnostic Doppler applications, quality control test validation and introduction to emerging sonographic technologies. Topics of discussion will include a review of SPI I in preparation for the Sonography Principles and Instrumentation registry exam. BILLABLE CONTACT HOURS: 2

DMS 1200 OB Pathological Imaging ............ 3 Credit Hours

English/ESL Placement: Placement into ENG 1510.
Prerequisite: DMS 1000 DMS 1010 DMS 1020 DMS 1030 DMS 1040 DMS 1100 DMS 1110 DMS 1300 DMS 1420 and DMS 2400; each with a grade of 'C' or better.
Corequisite: DMS 1040 DMS 1300 DMS 2400.

This course will provide the student with a comprehensive exploration of pathological processes specifically related to obstetrical ultrasound imaging and procedures. The student will learn to assess total fetal well-being, to recognize fetal anomalies identified by ultrasound and to evaluate fetal measurements. Case studies will be presented. BILLABLE CONTACT HOURS: 3

DMS 1220 GYN Pathological Imaging .......... 2 Credit Hours

English/ESL Placement: Placement into ENG 1510.

This course will provide the student with a comprehensive exploration of pathological processes specifically related to gynecological ultrasound imaging and procedures. Gyn topics such as the post-menopausal uterus, endometrial disorders, pelvic masses, transvaginal imaging procedures and case studies will be presented. BILLABLE CONTACT HOURS: 2
DMS 1300  Abdominal Pathological Imaging  ........... 3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: DMS 1010 DMS 1040 DMS 1110 and DMS 1420; each with a grade of 'C' or better.
Corequisite: DMS 2400.

This course is designed to provide the student with a comprehensive exploration of pathological processes that occur within the organs and major vessels of the upper abdomen and small parts as seen with diagnostic ultrasound imaging. Normal sonographic appearances will be presented and stressed versus sonographic appearances of pathological conditions. The student will apply knowledge gained in previous sonography courses of study to identify and describe normal versus abnormal findings. BILLABLE CONTACT HOURS: 3

DMS 1420  Sonography Practicum I  ................... 4 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: DMS 1000 DMS 1020 DMS 1030 and DMS 1100; each with a grade of 'C' or better.
Corequisite: DMS 1010 DMS 1040 DMS 1110.

Supervised clinical experiences will be provided in the application of basic sonographic scanning techniques that incorporate patient care, safe use of equipment, body mechanics and proper infectious control practices. This practicum will take place in an approved clinical education center and requires the achievement of proficiency evaluations of the student performance. BILLABLE CONTACT HOURS: 7

DMS 2200  Advanced Sonography  ...................... 2 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: DMS 1000 DMS 1010 DMS 1020 DMS 1030 DMS 1040 DMS 1100 DMS 1110 DMS 1200 DMS 1220 DMS 1300 DMS 1420 DMS 2400 and DMS 2420; each with a grade of 'C' or better.
Corequisite: DMS 1050 DMS 2430.

This course provides concepts of advanced imaging techniques primarily musculoskeletal and peripheral vascular imaging. In addition, pediatric ultrasound imaging including neonatal neurosonography are presented. Preparation for the ARDMS specialty exam(s) will be emphasized. BILLABLE CONTACT HOURS: 2

DMS 2400  Sonography Practicum II .................... 8 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: DMS 1000 DMS 1010 DMS 1020 DMS 1030 DMS 1040 DMS 1100 DMS 1110 and DMS 1420; each with a grade of 'C' or better.
Corequisite: DMS 1300.

Supervised clinical experience will be provided to strengthen primary skills of sonographic scanning techniques and patient care. Students will have the opportunity to practice to achieve competency in a variety of cases that support the general sonography curriculum. This practicum will take place in an approved clinical education center and requires the achievement of proficiency evaluations of the student performance. BILLABLE CONTACT HOURS: 11

DMS 2420  Sonography Practicum III .................... 8 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: DMS 1000 DMS 1010 DMS 1020 DMS 1030 DMS 1040 DMS 1100 DMS 1110 DMS 1300 DMS 1420 and DMS 2400; each with a grade of 'C' or better.
Corequisite: DMS 1200 DMS 1220.

Supervised experience will be provided as the student continues to refine and broaden technical skills of sonographic scanning techniques, evaluating image quality and formulating a technical impression. This practicum will take place in an approved clinical education center and requires the achievement of proficiency evaluations of the student's performance. BILLABLE CONTACT HOURS: 11

DMS 2430  Sonography Practicum IV .................... 4 Credit Hours
English/ESL Placement: Placement into ENG 1510.

The student will continue to gain proficiency in the performance of diagnostic ultrasound exams by scanning complete studies. Supervised advanced clinical experiences will be provided in an approved clinical education center where the student will participate in a variety of advanced scanning procedures such as amniocentesis, cyst drainage, biopsy, rotator cuff, transplant exams and when accessible, the student will perform advanced studies such as vascular exams and neonatal neurosonography. BILLABLE CONTACT HOURS: 7

DSE Technology (DHE)

DHE 1104  Fundamentals of Diesel Engines ............ 4 Credit Hours
Equivalent: DHE 1100
English/ESL Placement: Placement into ENG 1050 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).

This course is designed to provide the students with the theory of operation of basic, two and four stroke cycle engines. Six and eight cylinder engines will be completely dismantled and reassembled according to the manufacturers' specifications. Diesel engines will be partially dismantled, assembled and run on test stands. This procedure will enable the students to identify the operation of various engines in current use. BILLABLE CONTACT HOURS: 5

Drafting and Design Technology (DDT)

DDT 1000  Fundamentals for the Drafting Industry ....... 3 Credit Hours
Equivalent: APD 8130, DRT 1110

English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)

A course which introduces the student to the drafting industry. Emphasis is placed on the fundamentals so as to help students in their chosen technical program and/or for those who wish to pursue other classes in drafting and design. The course will focus on geometric construction, view interpretation, scales, orthographic and pictorial projection. The basics of dimensioning, lettering, first auxiliary, and sectional views, identification and classification of lines and planes will also be covered. Students will be required to do both freehand and instrument drawings. BILLABLE CONTACT HOURS: 3

DDT 1150  Descriptive Geometry  ..................... 3 Credit Hours
Equivalent: DRT 1160

English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).

Descriptive geometry is a course that focuses on using orthographic projection, auxiliary views, and standard drawing conventions for the two-dimensional graphic solutions to three-dimensional spatial problems. First, second and third auxiliary views will be used for solving typical applied projection problems. Some of the topics covered will be the defining of planes, parallelism, perpendicularity, cutting planes, piercing points, and this the intersection of solids as required on layout drawings. Projection accuracy and problem solving will be stressed during the course. BILLABLE CONTACT HOURS: 3
Early Childhood Education (ECE)

ECE 1404  Introduction to Early Childhood Careers  .......3 Credit Hours
Equivalent: ECD 1404
English/ESL Placement: Placement into ENG 1510.
This course explores the various early childhood education settings available, the child development theorists, and developmentally appropriate practices. The course focuses on child growth and learning, developmental stages, types of play, ethics, professionalism, and historical and contemporary key issues in early childhood development. Child Care Licensing regulations for the State of Michigan will be highlighted. BILLABLE CONTACT HOURS: 3

ECE 1414  Early Childhood Activities  .................4 Credit Hours
Equivalent: ECD 1414
English/ESL Placement: Placement into ENG 1510.
This course places emphasis on teaching methodology and curriculum. It concentrates on the developmentally appropriate practices with children from three to five years of age. It includes concepts of active learning, adult-child interactions, daily routines, classroom arrangement, developing goals and objectives and planning, early learning standards, observation and assessment, team teaching, and parent involvement. Utilization of a holistic, research-based curriculum approach to teaching is emphasized. Requires 22.5 fieldwork hours in an assigned preschool setting including a pre-set orientation day and a pre-set evaluation day. Students must work out schedule for their hours with site supervisors. BILLABLE CONTACT HOURS: 4

ECE 1424  Early Childhood Education Curriculum Content  .................................................. 2 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Corequisite: ECE 1414 (Required)
This course concentrates on key developmental indicators of learning for children from three to five years of age. Emphasis is placed on developing goals and objectives; planning for intentional, child-centered teaching; as well as implementing small and large group instruction. BILLABLE CONTACT HOURS: 2

ECE 1500  Infant and Toddler Curriculum  ...........4 Credit Hours
Equivalent: ECD 1500
English/ESL Placement: Placement into ENG 1510.
This course is designed to familiarize the student with the various infant/toddler child care settings in the community; formal and informal assessment, brain development, developing appropriate physical environments, planning daily schedules, creating and implementing developmentally appropriate curriculum, health and safety issues and supporting families. Michigan’s Infant/toddler licensing regulations will be featured. Requires 22.5 fieldwork hours in an assigned infant/toddler setting including a pre-set orientation day and a pre-set evaluation day. Students must work out schedule for their hours with site supervisors. BILLABLE CONTACT HOURS: 4

ECE 1505  Early Childhood Nutrition, Health and Safety  .................................................. 3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
This course focuses on best practices in nutrition, health, and safety for young children, including equipment safety, communicable diseases, nutrition programs, health issues and community resources. Emphasis is placed on establishing and maintaining a healthy, safe early childhood education program, planning nutritious meals and snacks for young children, and educating young children on health, safety and nutrition. BILLABLE CONTACT HOURS: 3

ECE 1515  Family and Community Connections  3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
This course focuses on understanding and appreciating the importance of children’s families and communities. Students learn ways to facilitate connections with diverse families and the community. This course will also focus on the role of the early childhood educator as an advocate and how to use advocate action plans. BILLABLE CONTACT HOURS: 3

ECE 1525  School-age Care and Curriculum  .......2 Credit Hours
English/ESL Placement: Placement into ENG 1510.
This course is designed to develop student’s skills in planning, implementing, and evaluating developmentally appropriate experiences in children from kindergarten to age eight. Pedagogical skills, curriculum concepts, resource materials are explored. Community involvement, school partnerships and standards for school-age childcare programs are also covered. BILLABLE CONTACT HOURS: 2

ECE 2405  Professional Issues in Early Childhood Education  ..................................................3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: ECE 1404 ECE 1414 and ECE 1424.
This course focuses on the professional aspects of early childhood education. Topics include job readiness, lesson plans, appropriate assessment, ethics, community agencies and advocacy. BILLABLE CONTACT HOURS: 3

ECE 2407  Early Childhood Internship Capstone  .......3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: ECE 1404 ECE 1414 ECE 1424; and Consent of ECE Coordinator.
Corequisite: ECE 2405 (Recommended).
In this course, students will work under supervision of ECE faculty and an approved cooperating teacher in a preselected and assigned Head Start agency to gain practical experience. 135 hours of internship will be required including a pre-set orientation day and a pre-set evaluation day. Students must work out schedule for their hours with site supervisors. BILLABLE CONTACT HOURS: 3

ECE 2415  Administration of Early Childhood Education Programs  ..................................................3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: ECE 1404 and consent of ECE Coordinator.
This course focuses on principles of designing and administering a center-based and home-based child care facility, as well as the ability to work effectively as a director and teacher in a child care program. Topics featured are business proposals, funding, curriculum philosophies, parent and staff policies, financial management, advertising, and parent involvement. BILLABLE CONTACT HOURS: 3

ECE 2450  Educating the ’at Risk’ Child in an Early Childhood Environment  ..................................................3 Credit Hours
Equivalent: ECD 2450
English/ESL Placement: Placement into ENG 1510.
This course provides the student an opportunity to become familiar with the unique needs of teaching the at risk children in an early childhood environment. This population includes children of teen parents, children born addicted to alcohol and/or crack cocaine and children of low-income families. The focus will include characteristics of the at risk population, environmental controls and strategies necessary to adapt curriculum to better facilitate learning. Also addressed will be assessment processes and available community resources to work effectively with parents and young children considered at risk. BILLABLE CONTACT HOURS: 3
This course provides students with an intensive hands-on experience and opportunity to conduct independent studies and research on a variety of topics in child development. The number of credits selected determines the length and depth of the research or project. The instructor’s approval of course of study is required. A maximum of six credits may be earned for these courses. BILLABLE CONTACT HOURS: 6

**Economics (ECO)**

**ECO 2610**  Economics I  3 Credit Hours  Placement into ENG 1510.

Students will explain macroeconomic concepts and theories including national income and employment determination, the mechanics of money, banking and credit creation, and business cycles. They will apply this information to the analysis of various government spending, taxing, and monetary policies of current importance. BILLABLE CONTACT HOURS: 3

**GE Outcomes:** Critical Thinking

**ECO 2620**  Economics II  3 Credit Hours  Placement into ENG 1510.

Prerequisite: ECO 2610

This course examines basic microeconomic theories with respect to the pricing of resources and final products under various competitive conditions. This information is applied to the analysis of current domestic and international economic problems. BILLABLE CONTACT HOURS: 3

**GE Outcomes:** Critical Thinking

**Education (EDU)**

**EDU 1600**  Introduction to Education  3 Credit Hours  Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).

This course is a general and exploratory course in the field of education. Students will study topics selected from the following: current job market, teacher roles, educational philosophy, psychology, sociology, history, methods of instruction, curriculum, disciplinary practices, and current issues in education. It is suitable for students seeking instruction about professional or paraprofessional (Nursery Schools, Day Care Centers, Teacher Aides, etc.) activities in the field. BILLABLE CONTACT HOURS: 3

**Electrical / Electronics Technology (EEC)**

**EEC 1020**  DC Fundamentals  3 Credit Hours  Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).

Prerequisite: MAT 1100 with a grade of ‘C’ or better within the last three years or placement into MAT 1150 within the last two years; or consent of instructor.

This course introduces the basic theories of electricity as they relate to Direct Current such as: the electron theory, Ohm’s Law, conductors and insulators, series circuits, parallel circuits, series/parallel circuits, magnetism, electromagnetic devices, electrical nomenclature, units of measurement, resistors, graphic and electrical symbols. Practical laboratory exercises are integrated with the theory to acquaint the student with the basic processes of constructing functional circuits and the correct use of basic measuring instruments, such as analog and digital multimeters. Refer to the specific section using OCC’s online system for software version(s). BILLABLE CONTACT HOURS: 4

**EEC 1040**  AC Fundamentals  3 Credit Hours  Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).

Prerequisite: EEC 1020 MAT 1150 or higher (except MAT 1525) with a grade of ‘C’ or better in both classes or consent of instructor.

This course will introduce the student to the basic concepts of AC circuit analysis. Topics will include: Alternating current and voltage, capacitors, RC circuits, inductors, RL circuits, transformers, time-response of reactive circuits, and basic 3-phase circuits. The course will include simulation projects and physical labs. BILLABLE CONTACT HOURS: 4

**EEC 1060**  Digital Electronics  4 Credit Hours  Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).

Prerequisite: MAT 1100 with a grade of ‘C’ or better within the last three years or placement into MAT 1150 or higher within the last two years; or consent of instructor.

This course will introduce the student to the basics of digital electronics as they relate to computer electronics. Topics include: number systems, binary codes, logic gates, logic gates, simplifying logic circuits using Boolean algebra and Karnaugh Maps, code conversion, binary arithmetic and arithmetic circuits, flip-flops, counters, and shift registers. The course will include simulation projects. BILLABLE CONTACT HOURS: 4

**EEC 1080**  Introduction to Microcontrollers  4 Credit Hours  Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).

Prerequisite: MAT 1150 or higher (except MAT 1525) with a grade of ‘C’ or better or consent of instructor.

This course will introduce the student to the fundamentals of microcontrollers utilizing assembly level programming. Topics include: microcontroller hardware overview, overview of assembly level instruction set and programming. An industry standard microcontroller will be utilized. The course will include simulation projects. BILLABLE CONTACT HOURS: 4
**Electrical Trades Technology (ETT)**

**ETT 1110 Industrial Electrical Systems** .......... 3 Credit Hours

**English/ESL Placement:** Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).

**Prerequisite:** EEC 1040 or consent of instructor.

This course is designed to introduce the student to the analysis of basic electronic circuits. Topics include: diodes and applications, special-purpose diodes, bi-polar junction transistors (BJT), transistor bias circuits, BJT amplifiers, power amplifiers, field-effect transistors (FET), and FET amplifier and switching circuits. The course will include simulation projects. BILLABLE CONTACT HOURS: 4

**ETT 1250 National Electrical Code** .......... 3 Credit Hours

**English/ESL Placement:** Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).

**Prerequisite:** EEC 1020 and EEC 1040 or consent of instructor.

This course is designed for industrial electrical apprentices, presenting the broad spectrum of industrial systems that might be encountered in a typical industrial environment. Based on an intensive study of AC polyphase circuits, (reinforced by some laboratory experimentation), the course content is expanded to include: (1) electrical energy sources for industry; (2) distribution systems; (3) industrial control systems; (4) industrial electrical loads; and (5) indicating systems for industry. Field trips to local industries may be incorporated according to relevancy and availability. BILLABLE CONTACT HOURS: 3

**ETT 2500 Electrical Machines** .......... 4 Credit Hours

**English/ESL Placement:** Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).

**Prerequisite:** EEC 1040 or consent of instructor.

This course is designed to investigate the theory and application of rotating machines commonly found in industrial, commercial, and residential applications: single-phase AC motors, three-phase AC electric motors, and DC electric motors. Students will learn industry relevant skills including operation, installation, analyzing performance, and selecting electric machines for various applications. This is a 'hands-on' course including physical labs. BILLABLE CONTACT HOURS: 5

**ETT 2700 Electrical Control Wiring** .......... 4 Credit Hours

**English/ESL Placement:** Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).

**Prerequisite:** EEC 1040 or consent of instructor.

This course is designed to prepare students for the installation, maintenance and repair of industrial controls. Students will install control wiring in an electrical panel; installing wiring into limit switches, solenoids, pressure switches, variable-frequency-drive and PLC. Students will work with a 3-phase motor, pushbuttons, switches, valves and a VDC power supply. Finally, students will write some PLC software to verify wiring. This is a 'hands-on' course including labs. BILLABLE CONTACT HOURS: 5

**Emergency Medical Services (EMS)**

**EMS 1010 EMT I** .......... 5 Credit Hours

**English/ESL Placement:** Placement into ENG 1510.

**Prerequisite:** EMS Orientation and placement into ENG 1510 or higher or successful completion of ENG 1510 or equivalent with a GPA of 2.0 or better.

**Corequisite:** EMS 1020 EMS 1100 and EMS 1200.

**Note:** Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution. This course, in conjunction with EMS 1020, EMS 1100 and EMS 1200, is designed to teach the knowledge, skills, and appropriate behavior to prepare students for the National Registry Certification examinations which will enable them to obtain a Michigan Emergency Medical Technician (EMT) license. The focus of this particular course is related to the medical aspect of patient care. Students will be under the direct supervision of a licensed EMS Instructor-Coordinator. Successful completion of this course requires the student to pass a written and practical examination consistent with State and National standards. This class contains an on-line component. BILLABLE CONTACT HOURS: 6

**EMS 1020 EMT II** .......... 5 Credit Hours

**English/ESL Placement:** Placement into ENG 1510.

**Prerequisite:** EMS Orientation and placement into ENG 1510 or higher or successful completion of ENG 1510 or equivalent with a GPA of 2.0 or better.

**Corequisite:** EMS 1010 EMS 1100 and EMS 1200 (Recommended).

**Note:** Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution. This course, in conjunction with EMS 1010, EMS 1100 and EMS 1200, is designed to teach the knowledge, skills, and appropriate behavior to prepare students for the National Registry Certification examinations which will enable them to obtain a Michigan Emergency Medical Technician (EMT) license. The focus of this particular course is related to the trauma aspect of patient care. Students will be under the direct supervision of a licensed EMS Instructor-Coordinator. Successful completion of this course requires the student to pass both written and practical skill examinations consistent with state and national standards. This class contains an on-line component. BILLABLE CONTACT HOURS: 6
EMS 1010  Basic EMT Clinical  1 Credit Hour

English/ESL Placement: Placement into ENG 1510.
Prerequisite: EMS Orientation.
Corequisite: EMS 1010 EMS 1020 and EMS 1200.

Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution. This course, in conjunction with EMS 1010, EMS 1100 and EMS 1200, is designed to teach the knowledge, skills, and appropriate behavior to prepare students for the National Registry Certification examinations which will enable them to obtain a Michigan Emergency Medical Technician (EMT) license. The focus of this particular course is related to the trauma aspect of patient care. Students will be under the direct supervision of a licensed EMS Instructor-Coordinator. Successful completion of this course requires the student to pass both written and practical skill examinations consistent with state and national standards. This class contains an on-line component. BILLABLE CONTACT HOURS: 1

EMS 1200  Rescue and Extrication  1 Credit Hour

English/ESL Placement: Placement into ENG 1510.
Prerequisite: EMS Orientation.
Corequisite: EMS 1010 EMS 1020 and EMS 1100.

Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution. The course emphasizes the methods of gaining entry, freeing, and removing an injured and trapped individual from a vehicle without causing further harm. The class is taught by state certified instructors utilizing multiple methods of instruction. The second day is scheduled at an appropriate outdoor site and includes actual hands-on experience with light and medium extrication tools. This course is intended to be taken as part of the Basic EMT Program. BILLABLE CONTACT HOURS: 1

EMS 2001  Basic Skills Competencies for Paramedic  1 Credit Hour

English/ESL Placement: Placement into ENG 1510.
Prerequisite: EMS 1010 EMS 1020 and EMS 1100 or consent of EMS Department. Placement into ENG 1510 or successful completion of ENG 1510 or equivalent with a GPA of 2.0 or better and minimum math placement into MAT 1100 within the past 2 years.

Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution. The emphasis of this course is to confirm and document competency for all basic EMT psychomotor skills according to National Registry skills sheets. This must be completed prior to performing any higher level skills. BILLABLE CONTACT HOURS: 2

EMS 2005  Paramedic I Clinical  3 Credit Hours

Equivalent: EMS 1400, EMS 1400

English/ESL Placement: Placement into ENG 1510.
Prerequisite: EMS 1010 EMS 1020 and EMS 1100 or consent of EMS Department and EMS 2001, placement into ENG 1510 or successful completion of ENG 1510 or equivalent with a GPA of 2.0 or better and minimum math placement into MAT 1100 within the past 2 years.
Corequisite: EMS 2020 and EMS 2025

Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution. This course is designed to provide the student with hospital and ambulance skill experience beyond the minimum 60 hours provided in EMS 1100. Students will continue to acquire a working knowledge of practices and procedures in the field of emergency care, and experience other areas of health care in other hospital and pre-hospital settings. Through hands-on training, the student will complete specified performance objectives to the satisfaction of their hospital/ambulance evaluator. BILLABLE CONTACT HOURS: 3

EMS 2010  EMS Communications  2 Credit Hours

Equivalent: EMS 1500, EMS 1500

English/ESL Placement: Placement into ENG 1510.
Prerequisite: EMS 1010 EMS 1020 and EMS 1100 or consent of EMS Department. Placement into ENG 1510 or successful completion of ENG 1510 or equivalent with a GPA of 2.0 or better and minimum math placement into MAT 1100 within the past 2 years.
Corequisite: EMS 2020 and EMS 2025

Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution. This course is designed to provide the student with the techniques of communications within the emergency medical system including general communication skills, medical terminology, technical report writing, written verbal and radio communications using classroom lectures, situation drills and on-site visitation of appropriate functioning communications centers when available. BILLABLE CONTACT HOURS: 2

EMS 2020  Paramedic I Lecture  4 Credit Hours

English/ESL Placement: Placement into ENG 1510.
Prerequisite: EMS 2001
Corequisite: EMS 2005 EMS 2025 and BIO 1650 (or BIO 2640 for those taking the BIO 2630 and BIO 2640 sequence).

Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution. This course is designed to provide Emergency Medical Technicians (EMTs) the knowledge necessary to efficiently function within a limited advanced life support system and/or to continue on to Paramedic courses. Students are expected to attend weekly sessions in the classroom under the direct supervision of a licensed EMS Instructor-Coordinator for lecture and didactic testing. The advanced life support skills of intravenous therapy and endotracheal intubation as they relate to emergency field use are discussed. Additionally, this course will enable the student to upgrade and refine their EMT knowledge. This class also contains an online component. BILLABLE CONTACT HOURS: 4
EMS 2025  Paramedic I Lab  .........................  1 Credit Hour

**English/ESL Placement:** Placement into ENG 1510.

**Prerequisite:** EMS 2001 and BIO 1650 (or BIO 2630 for those taking the BIO2630 and BIO 2640 sequence).

**Corequisite:** EMS 2005, EMS 2020 and BIO 1650 (or BIO 2640 for those taking the BIO 2630 and BIO 2640 sequence).

**Note:** Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution. This course is designed to provide Emergency Medical Technicians (EMTs) the practical skills necessary for the students to perform within a limited advanced life support system and/or to continue on to Paramedic courses. Students are expected to attend weekly sessions in the lab under the direct supervision of a licensed EMS Instructor-Coordinator for hands-on applications and practical testing. The advanced life support skills of intravenous therapy and endotracheal intubation as they relate to emergency field use are introduced. Additionally, this course will enable the student to upgrade and refine their EMT skills. This class also contains an online component. BILLABLE CONTACT HOURS: 2

EMS 2100  Paramedic II Clinical  .......................  4 Credit Hours

**Equivalent:** EMT 2400

**English/ESL Placement:** Placement into ENG 1510.

**Prerequisite:** EMS 2020 and EMS 2025

**Corequisite:** EMS 2220 EMS 2225 EMS 2320 and EMS 2325

**Note:** Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution. This course is designed to provide the student with opportunities in a clinical setting within the hospital and EMS system. Focus will be on performing IV therapy and medication administration on actual patients to obtain competency. Specific criteria and documentation will be required in order to successfully complete this level of clinical experience. Student will be supervised and evaluated by professional personnel who will facilitate verification of competency. BILLABLE CONTACT HOURS: 4

EMS 2220  Paramedic II Lecture  .......................  4 Credit Hours

**English/ESL Placement:** Placement into ENG 1510.

**Prerequisite:** EMS 2005 EMS 2020 EMS 2025 and BIO 1650 or BIO 2630

**Corequisite:** EMS 2100 and EMS 2225 or BIO 2640 for those taking the BIO2630 and BIO 2640 sequence.

**Note:** Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution. The emphasis of this course is on teaching the principles of the electrocardiogram, the cardiac conduction system and the techniques of interpretation and treatment of cardiac dysrhythmias. In addition, paramedic care of the trauma patient including appropriate advanced level interventions will be discussed. This course is designed to provide the paramedic student with a body of knowledge to assist in preparing them for the National Registry Paramedic Certification examination and enable them to assess and treat acutely ill and seriously injured patients under the control and supervision of a medical control physician. This class contains an online component. BILLABLE CONTACT HOURS: 4

EMS 2225  Paramedic II Lab  .........................  1 Credit Hour

**English/ESL Placement:** Placement into ENG 1510.

**Prerequisite:** EMS 2005 EMS 2020 EMS 2025 and BIO 1650 or BIO 2630

**Corequisite:** EMS 2100 and EMS 2220 or BIO 2640 for those taking the BIO 2630 and BIO 2640 sequence.

**Note:** Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution. The emphasis of this course is pharmacology and drug therapy as they relate to advanced pre-hospital emergency care. Aspects of drug administration such as mechanisms of action, indications, contraindications, metabolism, excretion, and side effects of a wide range of drugs will be reinforced during practical application. In addition, paramedic care of the medical patient including appropriate advanced level interventions will be practiced. This class contains an online component. BILLABLE CONTACT HOURS: 2

EMS 2320  Paramedic III Lecture  .....................  4 Credit Hours

**English/ESL Placement:** Placement into ENG 1510.

**Prerequisite:** EMS 2005 EMS 2020 EMS 2025 and BIO 1650 or BIO 2630

**Corequisite:** EMS 2100 and EMS 2325 or BIO 2640 for those taking the BIO2630 and BIO 2640 sequence.

**Note:** Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution. The emphasis of this course is on interpreting and applying advanced treatment of cardiac dysrhythmias. In addition, paramedic care of the trauma patient including appropriate advanced level interventions will be discussed. This course is designed to provide the paramedic student with the skills to assist in preparing them for the National Registry Paramedic Certification examination and enable them to assess and treat acutely ill and seriously injured patients under the control and supervision of a medical control physician. This class contains an online component. BILLABLE CONTACT HOURS: 4

EMS 2325  Paramedic III Lab  .........................  1 Credit Hour

**English/ESL Placement:** Placement into ENG 1510.

**Prerequisite:** EMS 2005 EMS 2020 EMS 2025 and BIO 1650 or BIO 2630

**Corequisite:** EMS 2100 and EMS 2320 or BIO 2640 for those taking the BIO 2630 and BIO 2640 sequence.

**Note:** Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution. The emphasis of this course is on the ability to interpret and apply correct treatment of cardiac dysrhythmias. In addition, paramedic care of the trauma patient including appropriate advanced level interventions will be practiced. This course is designed to provide the paramedic student with the skills to assist in preparing them for the National Registry Paramedic Certification examination and enable them to assess and treat acutely ill and seriously injured patients under the control and supervision of a medical control physician. This class contains an online component. BILLABLE CONTACT HOURS: 2
Pre-Engineering (EGR)

EMS 2450    Paramedic Internship  .................2 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: EMS 2005 EMS 2100 EMS 2220 EMS 2225 EMS 2320 and EMS 2325
Corequisite: EMS 2600
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
This course is designed to provide a means for paramedic students to experience actual clinical settings where they will function as the team leader and have team leader expectations. Students entering this stage of their training must be fully competent in their paramedic skills. Preceptors will monitor each student's progress through this experience and communicate directly with the course instructor. Final completion of this course and competency will be determined by the EMS Program Director and the Program Medical Director. Successful completion of this course will allow the student to apply for the National Registry certification exams. BILLABLE CONTACT HOURS: 2

EMS 2500    Paramedic III Internship II  ............3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: EMS 2400
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
This course is designed to provide a means for paramedic students to experience actual clinical settings where they will function as a team member and have team leader expectations. Students entering this stage of their training must be fully competent in their paramedic skills. Preceptors will monitor each student's progress through this experience and communicate directly with the course instructor. Final completion of this course and competency will be determined by the EMS Program Director and the Program Medical Director. Successful completion of this course will conclude the paramedic program and allow the student to apply for the National Registry certification exams. BILLABLE CONTACT HOURS: 3

EMS 2600    National Registry Paramedic Exam Prep  .....2 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: EMS 2320 and EMS 2325 or consent of instructor.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
This course prepares prospective paramedic student candidates for the National Registry Paramedic practical skills examination. The 6 skill stations tested at the NR exam will be practiced until mastery is achieved and students will complete a performance examination of each skill modeling the National Registry practical exam. This course is a requirement for completion of the OCC paramedic program or may be a stand-alone course for candidates who have completed their training outside of OCC and are preparing to take the National Registry practical exam. BILLABLE CONTACT HOURS: 2

Pre-Engineering (EGR)

EGR 1100    Introduction to Engineering  ............3 Credit Hours
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: MAT 1150 or high school Trigonometry.
This is an introductory engineering course designed to familiarize students with various engineering disciplines. Emphasis is on realization of engineering problems and methods of finding solutions, manipulation and computation of data and results, and applied engineering concepts.
BILLABLE CONTACT HOURS: 3

EGR 2100    Statics  ..................................3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: MAT 1730 and PHY 2400
This course will cover vector description of forces and moments; two- and three-dimensional equilibrium of particles and rigid bodies, using free-body diagrams; analysis of trusses, frames, and machines; Coulomb friction; centroids and moments of inertia. BILLABLE CONTACT HOURS: 3

EGR 2200    Mechanics of Materials  ..................3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: EGR 2100 and MAT 1740
This course will cover elastic relationships between external forces acting on deformable bodies and the associated stresses and deformations; structural members subjected to axial load, torsion, and bending; deflection of beams; column buckling; combined stresses; repeated loads; stress and strain transformation, unsymmetrical bending. BILLABLE CONTACT HOURS: 3

EGR 2500    Dynamics  ................................3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: EGR 2100 and MAT 2810
The course will cover basic concepts and principles of dynamics with application of Newton's Laws of Motion to engineering problems; kinematics and kinetics of particles and rigid and variable-mass bodies; equations of motion, impulse-momentum, impact and work-energy principles. BILLABLE CONTACT HOURS: 3

English (ENG)

ENG 1055    Academic Literacy I  ......................4 Credit Hours
Equivalent: ENG 1050
Prerequisite: Appropriate reading and writing placement.
Note: DUE TO FEDERAL REGULATION THIS COURSE MAY NOT BE ELIGIBLE FOR FEDERAL FINANCIAL AID. PLEASE CHECK WITH YOUR FINANCIAL AID OFFICE.
This course enables students to acquire academic literacy by engaging in reading and writing processes for specific audiences and purposes. Students will also learn to correct their own patterns of error, employ comprehension and learning strategies, and use computer technology as a literacy tool. BILLABLE CONTACT HOURS: 4

GE Outcomes: Effective Communication
ENG 1060 Academic Literacy II .................................. 6 Credit Hours
Equivalent: ENG 1310
Prerequisite: Appropriate reading and writing placement.
Students in this course acquire academic literacy skills (or continue their studies after having completed Academic Literacy I, ENG 1055) by engaging in reading and writing as a holistic process. Further, students will apply reading and writing as processes, working with higher level reading material, and producing academic writing. Students will also demonstrate knowledge of the conventions of the English language, develop strategies for locating and correcting their own pattern of error, demonstrate literacy skills appropriate for different audiences and purposes, and use computer technology as a literacy tool. BILLABLE CONTACT HOURS: 6
GE Outcomes: Effective Communication

ENG 1075 English Essentials .................................. 1 Credit Hour
Prerequisite: Appropriate reading and writing placement.
This course will provide an intensive introduction to reading and writing strategies to prepare students to succeed in Composition I (ENG 1510). Students will prepare a portfolio to demonstrate their mastery of these reading and writing strategies. BILLABLE CONTACT HOURS: 1

ENG 1350 Business Communications .......................... 3 Credit Hours
Equivalent: ENG 1360
Prerequisite: Placement into ENG 1060.
Students will prepare a variety of written and oral business messages with attention to audience, purpose, organization, grammar, spelling, and punctuation. BILLABLE CONTACT HOURS: 3
GE Outcomes: Effective Communication

ENG 1450 Writing and Reading for Problem Solving .................................. 3 Credit Hours
Prerequisite: Placement into ENG 1060 or higher (or placement into ESL 2520 or higher for students taking the ESL sequence of courses). This course focuses on effective workplace (industrial, technical, retail, service and health professions) and academic communication in the context of the problem solving process. Working collaboratively and individually, students will practice strategies for identifying and defining problems, establishing criteria for effective decision-making, generating solutions, implementing plans and evaluating outcomes. Students will apply these tools to problems drawn from everyday life, academic contexts and the workplace. At every stage of the problem solving process, students will use specific, appropriate written, graphic and/or oral forms of communication. BILLABLE CONTACT HOURS: 3
GE Outcomes: Critical Thinking

ENG 1510 Composition I .................................. 3 Credit Hours
Prerequisite: Successful completion of ENG 1060 or ENG 1075 or ESL 2520 (or satisfactory score on placement test).
Focusing on the multi-stage writing process, students will read, analyze, and write expository essays. BILLABLE CONTACT HOURS: 3
GE Outcomes: Critical Thinking, Effective Communication

ENG 1520 Composition II .................................. 3 Credit Hours
Prerequisite: ENG 1510
Students will write persuasive and argumentative papers. They will acquire skills in library research and use a process that includes critical thinking, logical reasoning, and the investigation of primary and/or secondary sources. Students will write a documented, academic research paper. BILLABLE CONTACT HOURS: 3
GE Outcomes: Critical Thinking, Effective Communication, Information Literacy

ENG 1610 Women in Literature .................................. 3 Credit Hours
Prerequisite: ENG 1510
The student will learn to analyze in selected literature the images, archetypes, and stereotypes of women characters and to discover the effects of these literary images upon actual women. The purpose of the course is to indicate the various definitions and roles suggested for women in literature and to increase the student's consciousness of the role women play in society. BILLABLE CONTACT HOURS: 3
GE Outcomes: Aesthetic Awareness

ENG 1710 Introduction to Literature: Short Story and Novel .................................. 3 Credit Hours
Prerequisite: ENG 1510
The student will read selections of literature with equal emphasis on two genres: short story and novel. The student will establish the identifying characteristics of each genre and the literary principles which underlie both. BILLABLE CONTACT HOURS: 3
GE Outcomes: Aesthetic Awareness

ENG 1720 Introduction to Literature: Poetry and Drama .................................. 3 Credit Hours
Prerequisite: ENG 1510
The student will read selections of literature with equal emphasis on two genres: poetry and drama. The student will establish the identifying characteristics of each genre and the literary principles which underlie both. BILLABLE CONTACT HOURS: 3
GE Outcomes: Aesthetic Awareness

ENG 2200 Professional Communication .................................. 4 Credit Hours
Equivalent: ENG 2210, ENG 2110
Prerequisite: Completion of ENG 1350 or ENG 1510; or consent of instructor.
This course will focus on communication skills (writing, speaking, reading, listening) for technical and business fields. Students will use critical thinking skills and various forms of technology to analyze, design, produce, and present written and oral projects individually and in groups. Projects (detailed descriptions, directions, process analysis, memos, letters, proposals, summaries, instructions) will be technical, business, or career-oriented in nature. BILLABLE CONTACT HOURS: 4
GE Outcomes: Effective Communication, Information Literacy

ENG 2300 Science Fiction and Fantasy .................................. 3 Credit Hours
Prerequisite: ENG 1510
Students will distinguish between science fiction and fantasy. In addition to reading a variety of texts from each genre, students will consider the history of science fiction and fantasy, their cultural role and impact, and critical approaches by which they can be interpreted. Selected trends and schools of thought, such as hard and soft science fiction, anthropological, speculative, cyberpunk, quest fantasy, dark fantasy, and alternative history will be considered within the context of global environment. BILLABLE CONTACT HOURS: 3
GE Outcomes: Aesthetic Awareness

ENG 2510 American Literature Before the Civil War .................................. 3 Credit Hours
Prerequisite: ENG 1510
Students will read selections from American literature from colonial times to the Civil War. They will trace the cultural roots of the literature and analyze major themes, styles, and characteristics. BILLABLE CONTACT HOURS: 3
GE Outcomes: Aesthetic Awareness
ENG 2520  American Literature Since the Civil War  3 Credit Hours
Prerequisite: ENG 1510
Students will read selections of American literature from the Civil War to the present. They will trace the cultural roots of the literature and analyze major themes, styles, and characteristics. BILLABLE CONTACT HOURS: 3
GE Outcomes: Aesthetic Awareness

ENG 2540  World Literature II  3 Credit Hours
Prerequisite: ENG 1510
The student will read literary masterpieces written since the Renaissance. BILLABLE CONTACT HOURS: 3
GE Outcomes: Aesthetic Awareness

ENG 2550  British Literature Before 1700  3 Credit Hours
Prerequisite: ENG 1510
The student will survey British Literature written up to 1700. BILLABLE CONTACT HOURS: 3
GE Outcomes: Aesthetic Awareness

ENG 2560  British Literature After 1700  3 Credit Hours
Prerequisite: ENG 1510
The student will survey British Literature from 1700 to the present. BILLABLE CONTACT HOURS: 3
GE Outcomes: Aesthetic Awareness

ENG 2570  Survey of African American Literature  3 Credit Hours
Prerequisite: ENG 1510.
This course surveys the African American literary tradition from its beginning through contemporary writing. Students will trace the cultural, social, and political roots of the literature and analyze major themes, styles, and characteristics. BILLABLE CONTACT HOURS: 3
GE Outcomes: Aesthetic Awareness

ENG 2580  English as a Second Language (ESL)  3 Credit Hours
Equivalent: ESL 1011
English as a Second Language (ESL) is designed for students whose first language is not English. It focuses on developing effective communication skills, including greetings, leave taking, invitations, and apologizing in English. BILLABLE CONTACT HOURS: 3

ENG 2650  William Shakespeare: Comedies, Histories and Sonnets  3 Credit Hours
Prerequisite: ENG 1510 or consent of instructor.
This course introduces the student to the culture, life, and works of William Shakespeare, with a concentration on two genres: comedies and history plays. Students will study his comedies, his history plays, and selected sonnets. BILLABLE CONTACT HOURS: 3
GE Outcomes: Aesthetic Awareness

ENG 2760  William Shakespeare: Tragedies, Romances and Selected Poems  3 Credit Hours
Prerequisite: ENG 1510 or consent of instructor.
This course introduces the student to the culture and literature of Early Modern England through focused study of Shakespeare's Tragedies, his late career plays which are usually classified as 'Romances,' and related poetry. BILLABLE CONTACT HOURS: 3
GE Outcomes: Aesthetic Awareness

ENG 2770  Contemporary Literature  3 Credit Hours
Prerequisite: ENG 1510
This course will focus on representative works of literature written during the last 20 years from a variety of genres. The course will explore commonalities of technique, theme and style, examine the innovations and trends of contemporary literature, and consider how these works reflect social and cultural trends in the contemporary world. BILLABLE CONTACT HOURS: 3
GE Outcomes: Aesthetic Awareness

ENG 2780  Introduction to Playwriting and Screenwriting  3 Credit Hours
Prerequisite: ENG 1510
This course will explore the essential elements of playwriting and screenwriting: plot strategy, authentic dialogue, character development, format, publication and production. After reading numerous plays and film scripts, students will compose original creations, receive and provide constructive feedback, and revise their work. BILLABLE CONTACT HOURS: 3
GE Outcomes: Aesthetic Awareness

ENG 2800  Creative Writing  3 Credit Hours
Prerequisite: ENG 1510
Students will develop a personal writing style by analyzing various genres, such as fiction, poetry, and drama, and by responding critically to the work of other students. BILLABLE CONTACT HOURS: 3
GE Outcomes: Aesthetic Awareness

ENG 2820  Advanced Creative Writing  3 Credit Hours
Prerequisite: ENG 2800
Students will continue development of original fiction, poetry, and drama. Emphasis will be placed on developing the individual's artistic vision. BILLABLE CONTACT HOURS: 3

English as a Second Language (ESL)

ESL 1011  English Conversation  4 Credit Hours
Equivalent: ESL 1010
Prerequisite: Appropriate MTEL scores. Enrollment is limited to students whose first language is not English.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
This course enhances beginning ESL students' functional language skills, including greetings, leave taking, invitations, and apologizing in addition to agreeing and disagreeing. Students will also learn to organize and express ideas using simple language in imitative and rehearsed oral activities and short extemporaneous presentations dealing with personal topics. Stress, rhythm, and other pronunciation patterns will be introduced. Conversational and basic academic vocabulary will be introduced. BILLABLE CONTACT HOURS: 4
GE Outcomes: Effective Communication
ESL 1021 Intermediate Oral Communication ..... 4 Credit Hours
Equivalent: ESL 1020
Prerequisite: ESL 1011 or appropriate placement scores. Enrollment is limited to students whose first language is not English.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
This course enhances ESL speaking and cross-cultural communication through guided and extemporaneous oral activities focusing on personal and academic topics. Students are introduced to the phonetic alphabet and to reduced speech; additional practice with stress, rhythm, and intonation will be provided. Students will continue to develop conversational and academic vocabulary and be introduced to word forms, synonyms, and antonyms. BILLABLE CONTACT HOURS: 4
GE Outcomes: Effective Communication

ESL 1410 English Grammar and Listening Communication Skills I
Prerequisite: ESL 1021 or appropriate ACT scores within the past two years or appropriate MTELP scores. Enrollment is limited to students whose first language is not English.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
This course focuses primarily on improving students' understanding and contextual use of basic grammatical structures in both spoken and written English. Additional work on improving listening strategies for the purpose of following main ideas of conversations and lectures is also included. Strategies for understanding and using vocabulary from various academic disciplines are introduced. BILLABLE CONTACT HOURS: 4
GE Outcomes: Effective Communication

ESL 1510 Writing and Reading for Academic Purposes
Prerequisite: ESL 1011 or MTELP scores. Enrollment is limited to students whose first language is not English.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
This course focuses on reading and writing activities for fluency development. The processes of writing will be introduced or reviewed. Identifying main ideas through skimming and scanning, and vocabulary development will be introduced through readings and applied in writing assignments. Resources such as computers, dictionaries, and libraries will be introduced as tools for language development. BILLABLE CONTACT HOURS: 4
GE Outcomes: Effective Communication

ESL 1420 English Grammar and Listening Communication Skills II
Prerequisite: ESL 1410 or appropriate ACT scores within the past two years or appropriate MTELP scores. Enrollment is limited to students whose first language is not English.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
This course introduces intermediate grammatical features and reviews basic structures while continuing work on listening strategies for the purpose of following main ideas of conversations and lectures. Grammar work focuses on the contextual use and understanding of the language, both in oral and in written communication. Strategies for understanding and using vocabulary from various academic disciplines are introduced. BILLABLE CONTACT HOURS: 4
GE Outcomes: Effective Communication

ESL 1520 Writing and Reading for Academic Purposes II
Prerequisite: ESL 1510 or appropriate MTELP scores. Enrollment is limited to students whose first language is not English.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
This course introduces strategies for improving reading comprehension of academic texts and developing compositions using a variety of organizational structures. The logic patterns of English and the processes of writing for academic purposes will be introduced or reviewed. Learning resources such as the dictionary, computers, and the library will be introduced through class activities. BILLABLE CONTACT HOURS: 4
GE Outcomes: Effective Communication

ESL 2011 Advanced Oral Communication ..... 4 Credit Hours
Prerequisite: ESL 1021 or appropriate MTELP scores. Enrollment is limited to students whose first language is not English.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
This course enhances speaking and cross-cultural communication skills through active participation in group projects, presentations, and extemporaneous oral activities focusing on academic concerns. Students will refine their pronunciation through work on vowels, consonants, and complex suprasegmentals. Vocabulary focus is completely academic, including advanced work with word forms, synonyms/antonyms, and active/passive vocabulary. This course will explore in-depth the following general education attribute: to think critically and creatively when working on projects, presentations, and extemporaneous oral activities. BILLABLE CONTACT HOURS: 4
GE Outcomes: Effective Communication
**ESL 2410**  English Grammar and Listening Communication Skills

Prerequisite: ESL 1420 or appropriate ACT scores within the past two years or appropriate MTELP scores. Enrollment is limited to students whose first language is not English.

Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.

This course emphasizes the understanding and use of increasingly advanced grammar structures while reviewing more basic structures. Grammar work focuses on the contextual use of the English language in both written and oral communication. Listening strategies for the purpose of synthesizing information from academic lectures and texts will be introduced and practiced. Students will practice various techniques for note-taking and listen to lectures on various topics. Strategies for understanding and using vocabulary from various academic disciplines are introduced. BILLABLE CONTACT HOURS: 4

**GE Outcomes:** Effective Communication

**ESL 2420**  English Grammar and Listening Communication Skills

Prerequisite: ESL 2410 or appropriate ACT scores within the past two years or appropriate MTELP scores. Enrollment is limited to students whose first language is not English.

Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.

Understanding and using advanced, academic grammatical structures are emphasized in this course. Grammar elements are practiced through contextualized written and oral work. Additionally, attention is given to listening strategies, including note-taking, for the purpose of applying information from academic lectures to assigned tasks such as objective and essay exams. Strategies for utilizing resources in preparation for academic lectures and for understanding and using vocabulary from various academic disciplines are introduced. BILLABLE CONTACT HOURS: 4

**GE Outcomes:** Effective Communication

**ESL 2510**  Writing and Reading for Academic Purposes

Prerequisite: ESL 2520 or appropriate MTELP scores. Enrollment is limited to students whose first language is not English.

Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.

This course enhances students' abilities to efficiently approach academic reading and writing tasks. Particular attention is given to improving coherence and style in multi-paragraph compositions. Grammatical features will be introduced based on individual needs. Skills such as analyzing literature, writing technical reports, summarizing and interpreting diverse opinions, researching, and documenting opinions from primary and secondary sources will be developed through integrated reading and writing activities about cross-cultural topics from various academic disciplines. Students will practice adapting reading and writing rate for various purposes. (After completing this course, students will be eligible to take the appropriate campus exit test to enroll in ENG 1510). BILLABLE CONTACT HOURS: 4

**GE Outcomes:** Effective Communication

**ESL 2520**  Writing and Reading for Academic Purposes

Prerequisite: ESL 2510 or appropriate MTELP scores. Enrollment is limited to students whose first language is not English.

Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.

The student will learn: the role of the fire science/safety specialist in enforcement of solutions. BILLABLE CONTACT HOURS: 3

**GE Outcomes:** Effective Communication

**Fire Fighter Technology (FFT)**

**FFT 1510**  Introduction to Fire Protection  .......... 3 Credit Hours

English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)

The student will review the historical practices of fire prevention, identify the roles of fire service in society, both in the public and private sector. The structure of fire service organizations and basic field equipment will be identified through lecture and discussion methods as well as field trips. Job opportunities and necessary qualifications will be addressed. BILLABLE CONTACT HOURS: 3

**FFT 1520**  Fundamentals of Fire Prevention  .......... 3 Credit Hours

English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)

The student will learn inspection, surveying and mapping techniques; recognition of fire hazards; ways of engineering solutions to hazards; and enforcement of solutions. BILLABLE CONTACT HOURS: 3

**FFT 1530**  Fire Arson Investigation  ................. 3 Credit Hours

English/ESL Placement: Placement into ENG 1510.

The student will learn: the role of the fire science/safety specialist in arson investigation; methods and mechanics of protecting, searching and controlling fire scenes; rules of determining point of origin and ignition sources; preservation of evidence; case preparation and court testimony; and Michigan and national arson codes. BILLABLE CONTACT HOURS: 3

**FFT 1540**  Hazardous Materials  ......................... 3 Credit Hours

English/ESL Placement: Placement into ENG 1510.

The student will learn various fire fighting methods relating to hazardous materials, including solids, liquids and gases. Students will also be able to identify the proper storage facilities for these materials. Consideration will be given to the laws, standards and handling techniques of hazardous materials. BILLABLE CONTACT HOURS: 3
Fluid Power Technology (ATF)

ATF 1400  Introduction to Hydraulics  ...............  3 Credit Hours
Equivalent: APT 8400
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
This course illustrates the application of physical concepts such as Boyle's Law, Charles' Law, Bernoulli's Theorem, Torrecellie's Law, Pascal's Law, K'Arch's Equation, Reynold's Number, pressure drop, density, specific gravity, efficiency and horse power, through basic hydraulic circuitry. Emphasis is placed on circuit components and how they work. BILLABLE CONTACT HOURS: 4

Foundational Studies (FSH)

FSH 1500  Foundations of Humanities  ...............  4 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Students explore ways in which humanity has sought meaning and purpose in life, particularly as reflected in the visual, performing, and literary arts. The course examines interrelations between diverse cultural traditions and artistic expressions. It also introduces elements, concepts and terminology of the various humanistic disciplines studied. BILLABLE CONTACT HOURS: 4
GE Outcomes: Aesthetic Awareness

Foundational Studies (FSN)

FSN 1500  Foundations of Natural and Life Sciences  ..........................................................  4 Credit Hours
English/ESL Placement: Placement into ENG 1510.
A basic course designed to emphasize the nature of and interdependency of important concepts in astronomy, biology, chemistry, ecology, geology, mathematics and physics. The content will be chosen so that the methods of inquiry and the modes of understanding required by the discipline being studied become known to the student. BILLABLE CONTACT HOURS: 4
GE Outcomes: Critical Thinking, Scientific Literacy

French (FRE)

FRE 1510  Beginning French I  ...............  4 Credit Hours
English/ESL Placement: Placement into ENG 1510.
This is an introductory course with special emphasis on the fundamentals of speaking, listening, reading, writing and understanding French language and the cultures of French-speaking countries. The course will introduce basic French linguistic structure according to functional models, which can be applied to everyday conversational situations. BILLABLE CONTACT HOURS: 4
GE Outcomes: Effective Communication

FRE 1530  Beginning French II  ...............  4 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: FRE 1510 or departmental approval.
This course, which is a continuation of FRE 1510, comprises the second half of the introduction to basic French. The course will emphasize the fundamentals of speaking, listening, reading, writing and understanding of French language and the cultures of French-speaking countries according to functional models, which can be applied to everyday conversational situations. BILLABLE CONTACT HOURS: 4
GE Outcomes: Effective Communication
General Science (GSC)

Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor’s degree or higher from a U.S. institution.

GSC 1530 Introductory Geology ..................4 Credit Hours
English/ESL Placement: Placement into ENG 1510.
This laboratory science course examines the processes that shape the Earth. Topics addressed include plate tectonic theory; rock and mineral formation and identification, igneous, metamorphic and sedimentary rock forming processes; weathering and soils; mass wasting; groundwater and stream processes; deserts and glaciers; global change; rock deformation, and energy and mineral resources. Two field trips, one half-day and one full-day are required. BILLABLE CONTACT HOURS: 5
GE Outcomes: Critical Thinking, Scientific Literacy

GSC 1580 Astronomy ..........................4 Credit Hours
English/ESL Placement: Placement into ENG 1510.
This is a science lecture demonstration course with accompanying lab experiences and field trips. This course involves the study of the earth, the moon, the planets, the solar system, the sun, the stars, the galaxy, galaxies, the universe, and related topics of special interest. BILLABLE CONTACT HOURS: 6
GE Outcomes: Critical Thinking, Scientific Literacy

GSC 1590 Cosmology ..........................4 Credit Hours
English/ESL Placement: Placement into ENG 1510.
The student will be able to apply basic astronomical concepts and relevant mathematics to acquire more in-depth knowledge about some of the following topics: the solar system, stellar formation and evolution, galactic evolution extraterrestrial intelligence and cosmology. BILLABLE CONTACT HOURS: 4
GE Outcomes: Critical Thinking, Scientific Literacy

GEO 1510 Physical Geography .........................3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
The course will explain the spatial dimensions of Earth’s dynamic system, its energy, air, water, weather, climate, tectonics, landforms, rocks, plants, ecosystems, and biomes. The course examines human-Earth relationships using maps to create a holistic view of the planet and its inhabitants. BILLABLE CONTACT HOURS: 3
GE Outcomes: Social Responsibility

GEO 1520 World Geography .........................3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
The course will explain the modern geographic realms and their physical and human contents through a spatial approach. Contents of the course will include study of human societies and natural environments from environmental determinism to expansion and diffusion from devolution. BILLABLE CONTACT HOURS: 3
GE Outcomes: Global Understanding and Responsibility

German (GER)

GER 1510 Beginning German I .........................4 Credit Hours
English/ESL Placement: Placement into ENG 1510.
This is an introductory course with special emphasis on the fundamentals of speaking, listening, reading, writing and understanding German language and culture. The course will introduce basic German linguistic structure according to functional models, which can be applied to everyday conversational situations. BILLABLE CONTACT HOURS: 4
GE Outcomes: Effective Communication

GER 1530 Beginning German II .........................4 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: GER 1510
This course, which is a continuation of GER 1510, comprises the second half of the introduction to basic German. The course will emphasize the fundamentals of speaking, listening, reading, writing and understanding of German language and culture according to functional models, which can be applied to everyday conversational situations. BILLABLE CONTACT HOURS: 4
GE Outcomes: Effective Communication
Global Studies (GLS)

GLS 2510 Introduction to Global Studies .......... 3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
This course will introduce students to the field of global and inter-cultural studies. The course will explore how human experiences are expressed in various areas such as the arts, media, communication, food, family, religion, economics, politics, healthcare, or technology. Students will participate in local global-focused cultural activities and/or a virtual international exchange. BILLABLE CONTACT HOURS: 3

GLS 2520 Global Issues and Challenges .......... 3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
This course offers an overview of the current social, cultural, economic, political, technological, health, or environmental issues resulting from globalization, to understand the relationships and dependencies between individuals, communities, and states. Students will have the opportunity to participate in global life experiences that could include study abroad or local global-focused experiences. BILLABLE CONTACT HOURS: 3

GLS 2900 Topics in Global Studies: Economic Crisis, Global Consequences ........................................ 3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Economic Crisis, Global Consequences. BILLABLE CONTACT HOURS: 3

GLS 2901 Topics in Global Studies: The Global Politics of Food ........................................ 3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
The Global Politics of Food. BILLABLE CONTACT HOURS: 3

GLS 2902 Topics in Global Studies: The Culture of Terrorism ........................................ 3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
The Culture of Terrorism. BILLABLE CONTACT HOURS: 3

GLS 2903 Topics in Global Studies: History of Science ........................................ 3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
History of Science. BILLABLE CONTACT HOURS: 3

GLS 2904 Topics in Global Studies .......... 3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
This interdisciplinary course focuses on a problem of global concern or concentrations on a geographic area of interest. It provides opportunities to examine issues from multiple points of view. The specific topics vary from semester to semester but are intended to enable students to analyze the issues from several perspectives including those of politics, economics, history, environment and biology, sociology, business and/or the humanities. Experiences in this course will vary by semester and include a service learning, study abroad, or domestic study away component as well as a group project. Refer to the specific section using OCC's online system for current topics. BILLABLE CONTACT HOURS: 3

GLS 2905 Topics in Global Studies .......... 3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
This interdisciplinary course focuses on a problem of global concern or concentrations on a geographic area of interest. It provides opportunities to examine issues from multiple points of view. The specific topics vary from semester to semester but are intended to enable students to analyze the issues from several perspectives including those of politics, economics, history, environment and biology, sociology, business and/or the humanities. Experiences in this course will vary by semester and include a service learning, study abroad, or domestic study away component as well as a group project. Refer to the specific section using OCC's online system for current topics. BILLABLE CONTACT HOURS: 3

GLS 2906 Topics in Global Studies .......... 3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
This interdisciplinary course focuses on a problem of global concern or concentrations on a geographic area of interest. It provides opportunities to examine issues from multiple points of view. The specific topics vary from semester to semester but are intended to enable students to analyze the issues from several perspectives including those of politics, economics, history, environment and biology, sociology, business and/or the humanities. Experiences in this course will vary by semester and include a service learning, study abroad, or domestic study away component as well as a group project. Refer to the specific section using OCC's online system for current topics. BILLABLE CONTACT HOURS: 3

GLS 2907 Topics in Global Studies .......... 3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
This interdisciplinary course focuses on a problem of global concern or concentrations on a geographic area of interest. It provides opportunities to examine issues from multiple points of view. The specific topics vary from semester to semester but are intended to enable students to analyze the issues from several perspectives including those of politics, economics, history, environment and biology, sociology, business and/or the humanities. Experiences in this course will vary by semester and include a service learning, study abroad, or domestic study away component as well as a group project. Refer to the specific section using OCC's online system for current topics. BILLABLE CONTACT HOURS: 3

GLS 2908 Topics in Global Studies .......... 3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
This interdisciplinary course focuses on a problem of global concern or concentrations on a geographic area of interest. It provides opportunities to examine issues from multiple points of view. The specific topics vary from semester to semester but are intended to enable students to analyze the issues from several perspectives including those of politics, economics, history, environment and biology, sociology, business and/or the humanities. Experiences in this course will vary by semester and include a service learning, study abroad, or domestic study away component as well as a group project. Refer to the specific section using OCC's online system for current topics. BILLABLE CONTACT HOURS: 3

GLS 2909 Topics in Global Studies .......... 3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
This interdisciplinary course focuses on a problem of global concern or concentrations on a geographic area of interest. It provides opportunities to examine issues from multiple points of view. The specific topics vary from semester to semester but are intended to enable students to analyze the issues from several perspectives including those of politics, economics, history, environment and biology, sociology, business and/or the humanities. Experiences in this course will vary by semester and include a service learning, study abroad, or domestic study away component as well as a group project. Refer to the specific section using OCC's online system for current topics. BILLABLE CONTACT HOURS: 3

GLS 2910 Topics in Global Studies: Revolutions & Social Networking ........................................ 3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
This interdisciplinary course focuses on a problem of global concern or concentrations on a geographic area of interest. It provides opportunities to examine issues from multiple points of view. The specific topics vary from semester to semester but are intended to enable students to analyze the issues from several perspectives including those of politics, economics, history, environment and biology, sociology, business and/or the humanities. This course will include a service learning component as well as a group project. Refer to the specific section using OCC's online system for current topics. BILLABLE CONTACT HOURS: 3
Graphic Design (GRD)

**GRD 1100**  Graphic Design  3 Credit Hours  
Equivalent: GCA 1100  
**English/ESL Placement**: Placement into ENG 1510.  
**Corequisite**: GRD 1120  
This course covers the fundamental elements of design and visual communication. With the use of art tools, students will be introduced to creating projects that solve design problems and are aesthetically appealing. The study of color and value begin in this course. Other topics include scale, proportion, rhythm, motion, balance, shape, line and texture as they apply to a variety of design projects.  
BILLABLE CONTACT HOURS: 3

**GRD 1120**  Typography in Design  3 Credit Hours  
Equivalent: GCA 1120, ART 1030  
**English/ESL Placement**: Placement into ENG 1510.  
**Corequisite**: GRD 1100  
This course introduces the fundamentals of letterforms and typography design using manual processes through multiple exercises. This course introduces the study of letterforms, their differences of style and how to apply typographical solutions to graphic design projects. The course also covers type history and its cultural impact.  
BILLABLE CONTACT HOURS: 3

**GRD 1160**  Advertising Design  3 Credit Hours  
**English/ESL Placement**: Placement into ENG 1510.  
**Prerequisite**: GRD 1100 and GRD 1120; or departmental approval.  
This course instructs students on both traditional advertising techniques that include the ‘art of persuasion’ and experiential advertising. Students will learn how to problem solve and create advertising solutions with the use of conceptual thinking skills. This class involves brainstorming in teams and alone to create advertising messages with the use of visuals that motivate consumers to purchase products or a service. Projects are applied in digital platforms, print, public environments, and social media.  
BILLABLE CONTACT HOURS: 3

**GRD 1210**  Rendering Techniques  3 Credit Hours  
**English/ESL Placement**: Placement into ENG 1510.  
**Prerequisite**: GRD 1100  
This course explores a variety of rendering applications used in advertising, graphic design and the multimedia profession. Rendering style concentration is bold, crisp and direct that produce creatively render projects such as objects, surfaces, and motion graphics. The course covers visual storytelling.  
BILLABLE CONTACT HOURS: 3

**GRD 1310**  Graphic Design User Interface  3 Credit Hours  
**English/ESL Placement**: Placement into ENG 1510.  
**Prerequisite**: GRD 1210 and GRD 1850  
This course offers instruction in user interface (UI) and user experience (UX) design platforms for the graphic designer. With the use of design skills, students will create visual communication in digital platforms. Students will be responsible to read wire frames and with the use of typography, color, imagery and composition bring a digital experience to life.  
BILLABLE CONTACT HOURS: 3

**GRD 1320**  Digital Typography  3 Credit Hours  
Equivalent: GRD 2220, GCA 2220, GCA 1220, ART 1620  
**English/ESL Placement**: Placement into ENG 1510.  
**Prerequisite**: GRD 1120 and GRD 1850  
This course builds on the foundation of basic typography skills and introduces students into the digital perspective. Emphasis is on developing graphic design projects using type in real-world applications such as signage programs, packaging and vehicle graphics. This course introduces aesthetic types use within motion graphics.  
BILLABLE CONTACT HOURS: 3

**GRD 1401**  Graphic Design Internship  1 Credit Hour  
**English/ESL Placement**: Placement into ENG 1510.  
**Prerequisite**: GRD 1750 GRD 1850 GRD 2450 and consent of instructor.  
Work experience is arranged at an appropriate job location providing the student with an opportunity to apply skills and refine techniques in the actual work environment. Student self assessment and supervisory evaluations will be the basis for determining student performance. A minimum of 45 hours of work experience will be required for each hour of credit earned.  
BILLABLE CONTACT HOURS: 3

**GRD 1402**  Graphic Design Internship  2 Credit Hours  
**English/ESL Placement**: Placement into ENG 1510.  
**Prerequisite**: GRD 1750 GRD 1850 GRD 2450 and consent of instructor.  
Work experience is arranged at an appropriate job location providing the student with an opportunity to apply skills and refine techniques in the actual work environment. Student self assessment and supervisory evaluations will be the basis for determining student performance. A minimum of 45 hours of work experience will be required for each hour of credit earned.  
BILLABLE CONTACT HOURS: 3

**GRD 1403**  Graphic Design Internship  3 Credit Hours  
**English/ESL Placement**: Placement into ENG 1510.  
**Prerequisite**: GRD 1750 GRD 1850 GRD 2450 and consent of instructor.  
Work experience is arranged at an appropriate job location providing the student with an opportunity to apply skills and refine techniques in the actual work environment. Student self assessment and supervisory evaluations will be the basis for determining student performance. A minimum of 45 hours of work experience will be required for each hour of credit earned.  
BILLABLE CONTACT HOURS: 3

**GRD 1404**  Graphic Design Internship  4 Credit Hours  
**English/ESL Placement**: Placement into ENG 1510.  
**Prerequisite**: GRD 1750 GRD 1850 GRD 2450 and consent of instructor.  
Work experience is arranged at an appropriate job location providing the student with an opportunity to apply skills and refine techniques in the actual work environment. Student self assessment and supervisory evaluations will be the basis for determining student performance. A minimum of 45 hours of work experience will be required for each hour of credit earned.  
BILLABLE CONTACT HOURS: 3

**GRD 1450**  Brand Identity Design  3 Credit Hours  
**English/ESL Placement**: Placement into ENG 1510.  
**Prerequisite**: GRD 1160 GRD 1750 and GRD 1850  
This course offers an in-depth look at the brand identity design process from research, strategic planning through concept design to an integrated brand campaign. The course also explores the elements of a successful brand and how a brand identity works across different applications.  
BILLABLE CONTACT HOURS: 3
GRD 1750  Computer Design  ......................4 Credit Hours
Equivalent: GCA 1750
English/ESL Placement: Placement into ENG 1510.
Prerequisite: GRD 1100 and GRD 1120
This course provides students with an introduction to the computer
techniques used by professional graphic designers in the creation of
catalogs, campaigns, posters, logos, newsletters, business graphics, and
similar publications. The course covers how to design and apply grids for
consistent professional layouts. Students will be introduced to the use
of electronic peripherals, such as scanners and printers, to prepare their
work correctly for reproduction. BILLABLE CONTACT HOURS: 4

GRD 1850  Digital Illustration  ....................4 Credit Hours
Equivalent: GCA 1850
English/ESL Placement: Placement into ENG 1510.
Prerequisite: GRD 1100 and GRD 1120
This course covers the techniques employed by professional designers
and illustrators in the creation of digitally generated illustrations. These
techniques include application of Bezier curves, gradients, auto tracing
and other image manipulation tools, importation of external images, and
preparation for artwork output for processing by service bureaus and
printers. Prior Macintosh experience is recommended but not required.
BILLABLE CONTACT HOURS: 4

GRD 2100  Graphic Systems Design  ............3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: GRD 1210 and GRD 1850
This course offers instruction in user experience design. Students will
build integrated creative campaigns using way-finding systems, icons and
avatars. Students will learn how to navigate a user through a critical path
with the use of custom graphic systems. Projects are blended with both
traditional and digital platforms in many different applications. BILLABLE
CONTACT HOURS: 3

GRD 2350  Graphic Design Strategies ...........3 Credit Hours
Equivalent: GCA 2350, GCA 1350
English/ESL Placement: Placement into ENG 1510.
Prerequisite: GRD 1450
This course is an introduction to brand building and how to create a
 corporate identity. This includes designing a trademark that matches
corporate values and applying it on a variety of surfaces such as signage,
uniforms, vehicles and stationery. It also covers conceptual thinking skills
by creating a comprehensive advertising campaign. BILLABLE CONTACT
HOURS: 3

GRD 2401  Advanced Design Projects ............1 Credit Hour
English/ESL Placement: Placement into ENG 1510.
Prerequisite: GRD 1160 GRD 1750 GRD 1850 and consent of instructor.
This course builds on graphic design content that covers software skills
and visual communication to design campaigns that connect to real-world
design. Concentration will be on problem solving using critical thinking
skills to create projects that connect a customer to a targeted theme.
Course work requires students to work independently and in teams.
BILLABLE CONTACT HOURS: 1

GRD 2402  Advanced Design Projects ..........2 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: GRD 1160 GRD 1750 GRD 1850 and consent of instructor.
This course builds on graphic design content that covers software skills
and visual communication to design campaigns that connect to real-world
design. Concentration will be on problem solving using critical thinking
skills to create projects that connect a customer to a targeted theme.
Course work requires students to work independently and in teams.
BILLABLE CONTACT HOURS: 1

GRD 2403  Advanced Design Projects .........3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: GRD 1160 GRD 1750 GRD 1850 and consent of instructor.
This course builds on graphic design content that covers software skills
and visual communication to design campaigns that connect to real-world
design. Concentration will be on problem solving using critical thinking
skills to create projects that connect a customer to a targeted theme.
Course work requires students to work independently and in teams.
BILLABLE CONTACT HOURS: 1

Health (HEA)

HEA 1510  Nutrition  .........................3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
This course will identify the various essential nutrients, describe their
physical, chemical and biological characteristics and describe the effects
dietary deficiencies and excesses. This course is recommended for
Health Professions and Technologies students. BILLABLE CONTACT
HOURS: 3

Health Care Administration (HCA)

HCA 1000  Introduction to Health Care Administration ......3 Credit Hours
Prerequisite: Completion of ENG 1510 or ENG 1520 or ENG 2200 with a
grade of 'C' or better; or consent of program coordinator.
The student will be introduced to the basic administrative aspects of health
care facilities. The student will discuss the roles of Medicare and Medicaid,
components of licensing and certification; administrative responsibilities,
physical plant design, patient safety and social services. The various
types of health care facilities will also be examined. BILLABLE CONTACT
HOURS: 3

HCA 1110  Health Facility Maintenance and Sanitation ......3 Credit Hours
Prerequisite: HCA 1000 with a grade of 'C' or better and completion of
ENG 1510 ENG 1520 or ENG 2200 with a grade of 'C' or better or consent
of program coordinator.
The student will become familiar with state and federal requirements and
regulations, certificate of need requirements, preventive maintenance,
safety programs, physical plant requirements, sanitation and infection
control as they relate to the welfare of patients. Field trips will be included.
BILLABLE CONTACT HOURS: 3

HCA 1210  Principles of Nursing Home Operations ......3 Credit Hours
Prerequisite: HCA 1000 with a grade of 'C' or better and completion of
ENG 1510 ENG 1520 or ENG 2200 with a grade of 'C' or better or consent
of program coordinator.
The student will acquire an understanding of levels of patient care,
staffing requirements, psychological aspects of patient care, recreational
programming including occupational therapy, purchasing and inventory
control, medical record systems and food service management. BILLABLE
CONTACT HOURS: 3
HCA 1230  Patient Care and Auxiliary Relationships in Health Care Facilities ........................................3 Credit Hours
Prerequisite: HCA 1000 with a grade of 'C' or better and completion of ENG 1510 ENG 1520 or ENG 2200 with a grade of 'C' or better or consent of program coordinator.
The student will gain insight into the problems and practices of patient care, state regulations, rehabilitation concepts, environmental health, food administration, recreational programming, and utilization review. BILLABLE CONTACT HOURS: 3

HCA 2100  Personnel Management in Health Care Facilities ........................................................................3 Credit Hours
Prerequisite: HCA 1000 with a grade of 'C' or better and completion of ENG 1510 ENG 1520 or ENG 2200 with a grade of 'C' or better or consent of program coordinator.
The student will gain an understanding of management principles and skills practiced for the health care industry. The student will apply these principles to recruitment and personnel selection, training and development, organization, labor relations, techniques of motivation and communication and appraisal programs. BILLABLE CONTACT HOURS: 3

HCA 2150  Labor Practices in Health Care Facilities ..........2 Credit Hours
Prerequisite: HCA 1000 with a grade of 'C' or better and completion of ENG 1510 ENG 1520 or ENG 2200 with a grade of 'C' or better or consent of program coordinator.
The student will develop skills and techniques needed in employer/employee relations unique to the health care field. The student will be able to design grievance procedures, interact with union representatives, negotiate and implement contracts and mediate disputes. BILLABLE CONTACT HOURS: 2

HCA 2200  Fiscal Management in Health Care Facilities ...........................................................................3 Credit Hours
Prerequisite: HCA 1000 with a grade of 'C' or better and completion of ENG 1510 ENG 1520 or ENG 2200 with a grade of 'C' or better or consent of program coordinator.
The student will learn and apply accounting techniques to budgeting, cost controls and cost analysis in the health care facility. The student will also become familiar with the principles of the reimbursement formulas and various types of insurance coverage. BILLABLE CONTACT HOURS: 3

HCA 2250  Legal Aspects of Health Service Mgt ..............3 Credit Hours
Prerequisite: HCA 1000 with a grade of 'C' or better and completion of ENG 1510 ENG 1520 or ENG 2200 with a grade of 'C' or better or consent of program coordinator.
The student will become familiar with the legal and historical background of the health care field, corporate liability, negligence, and malpractice concepts. Emphasis will be placed on methods of preventing legal action rather than on defense. The student will also gain an understanding of ethical conduct related to patient care. BILLABLE CONTACT HOURS: 3

HCA 2300  Problems and Policies of Health Care Facilities ...........................................................................3 Credit Hours
Prerequisite: HCA 1000 with a grade of 'C' or better and completion of ENG 1510 ENG 1520 or ENG 2200 with a grade of 'C' or better or consent of program coordinator.
The student will gain insight into the role of the health care facility in relation to the patient, the patient's family, the community and other related facilities. The student will discuss problems and policies relating to medical staff relationships, absenteeism, vandalism and patient abuse. The student will also be able to write a typical policy manual. BILLABLE CONTACT HOURS: 3

HCA 2401  HCA Externship ........................................1 Credit Hour
English/ESL Placement: Placement into ENG 1510.
Prerequisite: Completion of Major Requirements in Health Care Administration Program and consent of instructor.
An externship will be required for students. The students will be assigned to selected health care facilities. A weekly seminar will be required to assess goals and discuss progress. BILLABLE CONTACT HOURS: 1

HCA 2402  HCA Externship ........................................2 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: Completion of Major Requirements in Health Care Administration Program and consent of instructor.
An externship will be required for students. The students will be assigned to selected health care facilities. A weekly seminar will be required to assess goals and discuss progress. BILLABLE CONTACT HOURS: 2

HCA 2403  HCA Externship ........................................3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: Completion of Major Requirements in Health Care Administration Program; and consent of instructor.
An externship will be required for students. The students will be assigned to selected health care facilities. A weekly seminar will be required to assess goals and discuss progress. BILLABLE CONTACT HOURS: 3

HCA 2404  HCA Externship ........................................4 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: Completion of Major Requirements in Health Care Administration Program; and consent of instructor.
An externship will be required for students. The students will be assigned to selected health care facilities. A weekly seminar will be required to assess goals and discuss progress. BILLABLE CONTACT HOURS: 4

HCA 2405  HCA Externship ........................................5 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: Completion of Major Requirements in Health Care Administration Program; and consent of instructor.
An externship will be required for students. The students will be assigned to selected health care facilities. A weekly seminar will be required to assess goals and discuss progress. BILLABLE CONTACT HOURS: 5

HCA 2406  HCA Externship ........................................6 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: Completion of Major Requirements in Health Care Administration Program; and consent of instructor.
An externship will be required for students. The students will be assigned to selected health care facilities. A weekly seminar will be required to assess goals and discuss progress. BILLABLE CONTACT HOURS: 6

HCA 2407  HCA Externship ........................................7 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: Completion of Major Requirements in Health Care Administration Program; and consent of instructor.
An externship will be required for students. The students will be assigned to selected health care facilities. A weekly seminar will be required to assess goals and discuss progress. BILLABLE CONTACT HOURS: 7

HVA 1114  Introduction to Refrigeration ......................4 Credit Hours
Equivalent: TER 1114, TER 1110
English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)
The student will learn the basic principles of 25 current refrigeration systems and their application to the refrigeration cycle. Each type of unit is examined to determine function, best operating procedures and physical requirements. BILLABLE CONTACT HOURS: 4
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
<th>Equivalent</th>
<th>English/ESL Placement</th>
<th>Prerequisite</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>HVA 1120</td>
<td>Sheet Metal Layout and Fabrication</td>
<td>3</td>
<td>TER 1120</td>
<td>Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HVA 1150</td>
<td>Basic Principles of HVACR Controls</td>
<td>0.4</td>
<td>TER 1150</td>
<td>Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HVA 1210</td>
<td>Domestic and Commercial Refrigeration</td>
<td>4</td>
<td>TER 1210</td>
<td>Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HVA 1220</td>
<td>Commercial Refrigeration II</td>
<td>3</td>
<td>TER 1220</td>
<td>Placement into ENG 1055 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HVA 1310</td>
<td>Heating, Ventilation, Air Conditioning and</td>
<td>4</td>
<td>TER 1310</td>
<td>Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HVA 1390</td>
<td>Heating, Ventilation, Air Conditioning and</td>
<td>3</td>
<td>TER 1390</td>
<td>Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HVA 1404</td>
<td>Cooperative Internship</td>
<td>4</td>
<td>IND 1404,IND 1404</td>
<td>Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HVA 1430</td>
<td>Residential and Commercial Control Systems</td>
<td>4</td>
<td>TER 1430</td>
<td>Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses.)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The description provided above is a college catalog entry detailing course contents, prerequisites, and equivalent courses. Each course is described with its credit hours and prerequisites, ensuring students have a clear understanding of the requirements and expectations for each course.
HVA 1522  Refrigeration Code ........................................ 2 Credit Hours  
Equivalent: TER 1522  
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).  
Prerequisite: HVA 1210 or consent of instructor.  
This course provides the student or apprentice with the refrigeration safety code of the American Standard Association as approved by the American Society of Heating, Refrigerating and Air Conditioning Engineers. The topics considered are scope and purpose, definitions, refrigeration systems classification, refrigerant classification, systems required for various establishments, installation requirements, piping, valves, fittings, and related parts, safety devices, design and construction of equipment, refrigerant containing pressure vessels, methods of field tests and instructions. BILLABLE CONTACT HOURS: 2  

HVA 1610  Heating Technology I ...................................... 4 Credit Hours  
Equivalent: TER 1610  
English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)  
This course provides the student the theory, installation requirements, and troubleshooting practices of residential gas-forced air heating systems. Additional emphasis will be placed on heating controls and the application of modern high-tech energy efficient residential and commercial heating systems. Biomass combustion systems and system operations will also be discussed. BILLABLE CONTACT HOURS: 4.5  

HVA 1630  Heating Technology II ...................................... 3 Credit Hours  
Equivalent: TER 1630  
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).  
Prerequisite: HVA 1610 or consent of instructor.  
This course will provide the student with a comprehensive exposure to the theory, operation and services of gas, oil, solar, and biomass forced air, hot water boilers and steam boiler systems. Additional consideration will be given to operational sequence and service of hot water boilers that use back-up solar heat and its control system. BILLABLE CONTACT HOURS: 4  

HVA 1650  Troubleshooting Air Conditioning ....................... 2 Credit Hours  
Equivalent: TER 1650  
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).  
Corequisite: HVA 1430  
This course is designed to give students the concepts and skills that emphasize the use of gauges and electrical instruments to diagnose and troubleshoot air conditioning equipment. BILLABLE CONTACT HOURS: 2.5  

HVA 1700  Heating Regulations ........................................ 2 Credit Hours  
Equivalent: TER 1700  
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).  
Prerequisite: HVA 1610 or consent of instructor.  
Heating Regulations is required by all students as preparation for obtaining a license. It will provide the student with Local and National Codes governing the safe design, construction, installation, testing and licensing as applied to heating. Safety features required for various types of fuel burning equipment, pressure vessels and system application. Rules applying to existing buildings and new construction. Requirements for approved equipment. Inspection and enforcement regulations. Relief devices and testing. BILLABLE CONTACT HOURS: 2  

HVA 1800  Advanced Controls .......................................... 3 Credit Hours  
Equivalent: TER 1800  
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).  
Prerequisite: HVA 1310 and HVA 1430; or consent of instructor.  
This course is designed to investigate the theory, operation, design considerations, and servicing of advanced commercial and industrial proportional control systems. Additional emphasis will be given to proportional single zone and multi-zone/VAV systems, as well as other proportional applications as presently used and/or proposed in automated building control. BILLABLE CONTACT HOURS: 4  

HVA 2010  Solar and Other Renewable Energy Systems ............... 4 Credit Hours  
Equivalent: AET 2010  
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).  
The student will learn and demonstrate the principles of energy efficient and solar design analysis and construction. Students will analyze the solar energy systems and will calculate solar savings fractions, backup heat needs, and economic analysis. The student will investigate the technologies and applications of other non-polluting and renewable forms of energy including wind power, photovoltaic, and alternative transportation vehicles. BILLABLE CONTACT HOURS: 4  

HVA 2120  Solar Energy Systems for Heat and Electricity ................. 4 Credit Hours  
Equivalent: AET 2120  
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).  
Prerequisite: HVA 1150 and HVA 2010; or consent of instructor.  
This course is designed for individuals interested in researching, designing, presenting or implementing solar energy systems. This course will expose the student to the basic technical analysis skills required for solar components systems using thermal collectors or photovoltaics, also known as solar electricity. Further, the course will also cover industry potentials and basic design and installation/technical skills. Students will assess the quality of homemade and manufactured systems and will create designs for final projects. BILLABLE CONTACT HOURS: 4
HVA 2400  Energy Management  4 Credit Hours  
Equivalent: AET 2400
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
The student will perform critical examinations of energy consuming facilities both domestic and commercial for the purpose of identifying energy conservation opportunities. In addition, the student will identify various energy conservation techniques as well as equipment which can be installed to further conserve energy. Energy audits will be performed at various facilities in the students' vicinities. BILLABLE CONTACT HOURS: 4

HVA 2510  Direct Digital Controls  3 Credit Hours  
Equivalent: AET 2510
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: HVA 1800 and HVA 2400; or consent of instructor. This course is designed to investigate the theory, operation, design considerations, and servicing of advanced commercial and industrial computerized control systems. Additional emphasis will be given to computerized single zone and multi-zone/VAV systems, as well as other computerized applications as presently used and/or proposed in automated building control. BILLABLE CONTACT HOURS: 4

HVA 2600  Technical Design for Sustainable Products Presentation  4 Credit Hours  
Equivalent: AET 2600
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: HVA 2010 or consent of instructor. This course will help prepare and credential students for the wide array of jobs in technical design for sustainable energies and products presentation. The course will also cover the technical presentation principles necessary for technicians, managers and business owners. Students will apply these concepts to real world sustainability issues and will describe the skills to help create sustainability related technical presentation solutions for businesses, non-profits, governmental agencies and neighborhoods. BILLABLE CONTACT HOURS: 4

History (HIS)
Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.

HIS 1510  World Civilizations to the Beginning of the Modern Era  4 Credit Hours  
Prerequisite: Placement into ENG 1510 or higher.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution. In this course we will trace human civilizations from their origins to the era of global interaction (16th century) by exploring their cultural, social, religious, economic and political institutions. We will draw comparisons in order to illustrate the diversity and similarity among civilizations and in order to develop a global view of world systems. BILLABLE CONTACT HOURS: 4
GE Outcomes: Critical Thinking, Global Understanding and Responsibility

HIS 1520  World Civilizations from the Modern Era  4 Credit Hours  
Prerequisite: Placement into ENG 1510 or higher.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution. In this course we will trace major characteristics of human civilizations throughout the world beginning with the era of global interaction (16th century) until the present by exploring their cultural, social, ideological, economic, and political institutions. We will draw comparisons in order to illustrate the diversity and similarity among civilizations and in order to develop a global view of world systems. BILLABLE CONTACT HOURS: 4
GE Outcomes: Critical Thinking, Global Understanding and Responsibility

HIS 1550  Contemporary World  3 Credit Hours  
Prerequisite: Placement into ENG 1510 or higher.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution. This course examines worldwide political, cultural, social, economic, religious and intellectual trends since World War Two. It provides the student with opportunities to examine the recent past from a global perspective today. BILLABLE CONTACT HOURS: 3
GE Outcomes: Global Understanding and Responsibility

HIS 1651  Topics in History: The Vietnam War 1887 to Present Day  3 Credit Hours  
Prerequisite: Placement into ENG 1510 or higher.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution. The Vietnam War: 1887 to present day. BILLABLE CONTACT HOURS: 3
GE Outcomes: Effective Communication

HIS 1653  Topics in History: The 1960's  3 Credit Hours  
Prerequisite: Placement into ENG 1510 or higher.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution. The 1960's. BILLABLE CONTACT HOURS: 3
GE Outcomes: Effective Communication

HIS 1654  Topics in History: The JFK Assassination  3 Credit Hours  
Prerequisite: Placement into ENG 1510 or higher.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution. The JFK Assassination. BILLABLE CONTACT HOURS: 3
GE Outcomes: Effective Communication

HIS 1660  Topics in History: The Culture and History of Ancient Egypt  3 Credit Hours  
Prerequisite: Placement into ENG 1510 or higher.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution. The Culture and History of Ancient Egypt. BILLABLE CONTACT HOURS: 3
GE Outcomes: Effective Communication
HIS 1661  Topics in History: Native American Studies ........................................3 Credit Hours
Prerequisite: Placement into ENG 1510 or higher.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
Native American Studies will examine indigenous life in the United States from early European contact to the present. There will be an emphasis of reading Native American literature. Cultural habits and language will also be introduced. The class will also dispel myths that are harbored in society today about these people and how the media has represented these cultures. BILLABLE CONTACT HOURS: 3
GE Outcomes: Effective Communication

HIS 2620  United States History from 1877 to the Present ........................................3 Credit Hours
Prerequisite: Placement into ENG 1510 or higher.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
In this course we will examine selected aspects of the political, economic, social, military, and diplomatic history of the United States since the end of Reconstruction. Among the themes to be emphasized during the span of U.S. history are the growth, maturing and restructuring of an industrial society, the struggle of civil and human rights since the end of Reconstruction, and the activist role of the U.S. in the international arena. BILLABLE CONTACT HOURS: 3
GE Outcomes: Critical Thinking

HIS 1662  Topics in History: Ancient Rome ........................................3 Credit Hours
Prerequisite: Placement into ENG 1510 or higher.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
Ancient Rome. BILLABLE CONTACT HOURS: 3
GE Outcomes: Effective Communication

HIS 2610  African American History to 1877 ........................................3 Credit Hours
Prerequisite: Placement into ENG 1510 or higher.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
This course examines the African American experience from the emergence of ancient African kingdoms through the Middle Passage to slavery in the Americas, from the abolitionist movement through the Civil War and Reconstruction. It discusses the evolution of black American slavery as a legal, social, economic and political institution. This course also studies African American religion, art, music and other contributions to American culture to 1877. BILLABLE CONTACT HOURS: 3
GE Outcomes: Critical Thinking

HIS 1663  Topics in History: Ancient Greece ........................................3 Credit Hours
Prerequisite: Placement into ENG 1510 or higher.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
Ancient Greece. BILLABLE CONTACT HOURS: 3
GE Outcomes: Effective Communication

HIS 2620  African American History From 1877 to The Present .........................3 Credit Hours
Prerequisite: Placement into ENG 1510 or higher.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
This course is a survey of African Americans in the United States from 1877 to the present. It explores the post-Reconstruction era, civil rights and black nationalistic movements as the backdrop for considering problems facing a multicultural and pluralistic society today. It traces the development of African American religion, art, music and other contributions while also examining the concepts of racism, desegregation/integration and separatism and the role of law. BILLABLE CONTACT HOURS: 3
GE Outcomes: Critical Thinking

HIS 1700  Michigan History ........................................3 Credit Hours
Prerequisite: Placement into ENG 1510 or higher.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
This course is a survey of the development of Michigan from prehistoric times to the current day. The social, economic, and political development of the state will be studied in relation to the history of the nation. BILLABLE CONTACT HOURS: 3
GE Outcomes: Critical Thinking

HUM 1510  Arts and Literature: Origins of Western Traditions .........................3 Credit Hours
Prerequisite: Placement into ENG 1510.
The course focuses on European and Middle Eastern art, architecture, literature and music from prehistoric times to the Renaissance. Comparisons with other cultures are included. Emphasis is placed on lasting meaning in the arts and their relations to philosophical, religious, aesthetic and social/political outlooks. BILLABLE CONTACT HOURS: 3
GE Outcomes: Aesthetic Awareness
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
<th>Prerequisite</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>HUM 1520</td>
<td>Arts and Literature: Renaissance Through Modern</td>
<td>3</td>
<td>Placement into ENG 1510.</td>
<td>The course focuses on traditions and highlights of Western art, architecture, literature and music from the Renaissance through the modern era. Each tradition, relations between the arts are examined. Emphasis is placed on cultural influences and aesthetic principles. BILLABLE CONTACT HOURS: 3</td>
</tr>
<tr>
<td>HUM 1710</td>
<td>World Religions</td>
<td>3</td>
<td>Placement into ENG 1510.</td>
<td>A study of the internal development, doctrine, and practice of the known world religions with added emphasis on the cultural, social, and ethical milieu in which the religions developed. The student will be able to compare the many movements, trends, and thoughts of ancient and contemporary religions. BILLABLE CONTACT HOURS: 3</td>
</tr>
<tr>
<td>HUM 1800</td>
<td>Special Topics in Humanities</td>
<td>3</td>
<td>Placement into ENG 1510.</td>
<td>Instructors will offer specific topics in interdisciplinary humanities. Each course will explore a topic in relation to two or more forms of expression (e.g. visual or performing arts, literature, philosophy or religion.) These classes will not duplicate any existing courses. Refer to the specific section using OCC’s online system for current topics. BILLABLE CONTACT HOURS: 3</td>
</tr>
<tr>
<td>HUM 1801</td>
<td>Special Topics in Humanities</td>
<td>3</td>
<td>Placement into ENG 1510.</td>
<td>Instructors will offer specific topics in interdisciplinary humanities. Each course will explore a topic in relation to two or more forms of expression (e.g. visual or performing arts, literature, philosophy or religion.) These classes will not duplicate any existing courses. Refer to the specific section using OCC’s online system for current topics. BILLABLE CONTACT HOURS: 3</td>
</tr>
<tr>
<td>HUM 1802</td>
<td>Special Topics in Humanities</td>
<td>3</td>
<td>Placement into ENG 1510.</td>
<td>Instructors will offer specific topics in interdisciplinary humanities. Each course will explore a topic in relation to two or more forms of expression (e.g. visual or performing arts, literature, philosophy or religion.) These classes will not duplicate any existing courses. Refer to the specific section using OCC’s online system for current topics. BILLABLE CONTACT HOURS: 3</td>
</tr>
<tr>
<td>HUM 1803</td>
<td>Special Topics in Humanities</td>
<td>3</td>
<td>Placement into ENG 1510.</td>
<td>Instructors will offer specific topics in interdisciplinary humanities. Each course will explore a topic in relation to two or more forms of expression (e.g. visual or performing arts, literature, philosophy or religion.) These classes will not duplicate any existing courses. Refer to the specific section using OCC’s online system for current topics. BILLABLE CONTACT HOURS: 3</td>
</tr>
<tr>
<td>HUM 1804</td>
<td>Special Topics in Humanities</td>
<td>3</td>
<td>Placement into ENG 1510.</td>
<td>Instructors will offer specific topics in interdisciplinary humanities. Each course will explore a topic in relation to two or more forms of expression (e.g. visual or performing arts, literature, philosophy or religion.) These classes will not duplicate any existing courses. Refer to the specific section using OCC’s online system for current topics. BILLABLE CONTACT HOURS: 3</td>
</tr>
<tr>
<td>HUM 1805</td>
<td>Special Topics in Humanities</td>
<td>3</td>
<td>Placement into ENG 1510.</td>
<td>Instructors will offer specific topics in interdisciplinary humanities. Each course will explore a topic in relation to two or more forms of expression (e.g. visual or performing arts, literature, philosophy or religion.) These classes will not duplicate any existing courses. Refer to the specific section using OCC’s online system for current topics. BILLABLE CONTACT HOURS: 3</td>
</tr>
<tr>
<td>HUM 1806</td>
<td>Special Topics in Humanities: Graphic Novels</td>
<td>3</td>
<td>Placement into ENG 1510.</td>
<td>Graphic Novels. BILLABLE CONTACT HOURS: 3</td>
</tr>
<tr>
<td>HUM 1900</td>
<td>Introduction to Film</td>
<td>3</td>
<td>THE 1900</td>
<td>This course offers a basic introduction to film study with a comprehensive view of motion pictures as a communications medium, an industry, and an art form. It includes historical highlights, aesthetic and critical approaches, and fundamentals of production. BILLABLE CONTACT HOURS: 3</td>
</tr>
<tr>
<td>HUM 2100</td>
<td>Topics in Film: Films of the 60's</td>
<td>3</td>
<td>Placement into ENG 1510.</td>
<td>Films of the 60's. BILLABLE CONTACT HOURS: 3</td>
</tr>
<tr>
<td>HUM 2101</td>
<td>Topics in Film: World Cinema</td>
<td>3</td>
<td>Placement into ENG 1510.</td>
<td>World Cinema. BILLABLE CONTACT HOURS: 3</td>
</tr>
<tr>
<td>HUM 2102</td>
<td>Topics in Film: The Films of Quentin Tarantino</td>
<td>3</td>
<td>Placement into ENG 1510.</td>
<td>The Films of Quentin Tarantino. BILLABLE CONTACT HOURS: 3</td>
</tr>
<tr>
<td>HUM 2103</td>
<td>Topics in Film: Great Directors</td>
<td>3</td>
<td>Placement into ENG 1510.</td>
<td>Great Directors. BILLABLE CONTACT HOURS: 3</td>
</tr>
<tr>
<td>HUM 2104</td>
<td>Topics in Film: Documentaries</td>
<td>3</td>
<td>Placement into ENG 1510.</td>
<td>Documentaries. BILLABLE CONTACT HOURS: 3</td>
</tr>
<tr>
<td>HUM 2105</td>
<td>Topics in Film: Film Noir</td>
<td>3</td>
<td>Placement into ENG 1510.</td>
<td>Film Noir. BILLABLE CONTACT HOURS: 3</td>
</tr>
<tr>
<td>HUM 2106</td>
<td>Topics in Film: Comic Books Into Film</td>
<td>3</td>
<td>Placement into ENG 1510.</td>
<td>Comic Books into Film. BILLABLE CONTACT HOURS: 3</td>
</tr>
<tr>
<td>HUM 2107</td>
<td>Topics in Film: Documentaries</td>
<td>3</td>
<td>Placement into ENG 1510.</td>
<td>Documentaries. BILLABLE CONTACT HOURS: 3</td>
</tr>
</tbody>
</table>
HUM 2108  Topics in Film: The Films of Martin Scorsese  .................................................. 3 Credit Hours
English/ESL Placement: Placement into ENG 1510.  
Prerequisite: HUM 1900  
The Films of Martin Scorsese. BILLABLE CONTACT HOURS: 3

HUM 2109  Topics in Film: The Films of Stanley Kubrick  .................................................. 3 Credit Hours
English/ESL Placement: Placement into ENG 1510.  
Prerequisite: HUM 1900  
The Films of Stanley Kubrick. BILLABLE CONTACT HOURS: 3

HUM 2720  Bible .................................................. 3 Credit Hours
English/ESL Placement: Placement into ENG 1510.  
Prerequisite: ENG 1510 and HUM 1900  
Students will do in-depth critical analysis of both literature and film, considering the processes by which film is adapted from literature and investigating how film and literature complement each other theoretically, stylistically, and thematically. BILLABLE CONTACT HOURS: 3

HUM 2900  Literature Into Film .................................................. 3 Credit Hours
English/ESL Placement: Placement into ENG 1510.  
Prerequisite: ENG 1510 and HUM 1900  
Students will do in-depth critical analysis of both literature and film, considering the processes by which film is adapted from literature and investigating how film and literature complement each other theoretically, stylistically, and thematically. BILLABLE CONTACT HOURS: 3

Interior Design (INT)

Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.

INT 1100  Introduction to Interior Design ......... 3 Credit Hours
English/ESL Placement: Placement into ENG 1510.  
This course provides an overview of the Interior Design profession and those practices and human issues pertinent to the design of interior environments. Elements and principles of design will be studied as they relate to space planning, furnishing, and materials for residential and commercial interiors. Field trips may be included. BILLABLE CONTACT HOURS: 3

INT 1140  Sketching and Drafting for Interiors .... 3 Credit Hours
English/ESL Placement: Placement into ENG 1510.  
This course explores the various freehand and architectural drafting techniques used by interior designers in concept development and presentation. Various drawing media, freehand, and mechanical drafting practices will be used to create, render, shade, and shadow perspective and elevation drawings. BILLABLE CONTACT HOURS: 3

INT 1180  Interior Design Materials .................. 3 Credit Hours
English/ESL Placement: Placement into ENG 1510.  
This course presents information on the characteristics, the properties, and the application of materials and related products and components used by interior designers. This course provides students with product information and an understanding of interior cabinetry, fixtures, textiles, and window treatments as well as floor, wall, and ceiling finishes. Field trips will be included. BILLABLE CONTACT HOURS: 3

INT 1200  Lighting and Color for Interiors .......... 3 Credit Hours
English/ESL Placement: Placement into ENG 1510.  
This course presents information on color schemes and lighting fundamentals in relation to their physical and psychological effects on interior environments. Students will be shown the various residential and commercial light fixtures and market sources available. They will study color harmony and lighting placement as it applies to residential and commercial situations. Field trips will be included. BILLABLE CONTACT HOURS: 3

INT 1300  Computer Aided Interior Design I .... 3 Credit Hours
English/ESL Placement: Placement into ENG 1510.  
Prerequisite: INT 1140 or experienced design professional.  
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.  
Students will be introduced to methods of computer use to aid the interior design process. Students will receive hands-on experience with emphasis on 2-D drafting. Students will be shown how to create, store, modify, and plot drawings such as floor plans, furniture plans, reflected ceiling plans, and elevations. BILLABLE CONTACT HOURS: 3

INT 2300  Computer Aided Interior Design II .... 3 Credit Hours
English/ESL Placement: Placement into ENG 1510.  
Prerequisite: INT 1300 or experienced design professional.  
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.  
This course explores advanced applications of computer use to aid the interior design process. It offers students hands-on experience with emphasis on creating a complete package of project documents. Students are expected to select a project in their specialty area and develop tools for administering, planning, constructing, and presenting their design solution. BILLABLE CONTACT HOURS: 3

INT 2500  Professional Practices and Presentations ..... 3 Credit Hours
English/ESL Placement: Placement into ENG 1510.  
Prerequisite: INT 1100 INT 1140 INT 1180 and INT 1200.  
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.  
This course explores interior design theory and the application of design practices and presentations in space planning projects. It integrates interior design philosophy, problem solving strategies, historical/contemporary influences, human/social factors, business matters, and the sequencing of project organization requirements. In addition to hands-on design activities, students will gain experience using their oral, written, and multimedia communication skills in the formal presentation of their projects. BILLABLE CONTACT HOURS: 3

INT 2560  Interior Design Studio  .................. 3 Credit Hours
English/ESL Placement: Placement into ENG 1510.  
Prerequisite: INT 2300 and INT 2500 or departmental approval.  
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.  
Students will develop creative interior environments through all stages of the design process from concept through appropriate use of materials, space planning, budgeting, and final graphic presentations. Projects will be selected from available options and team projects will provide group work experience. BILLABLE CONTACT HOURS: 3
INT 2571 Design Internship I .................................1 Credit Hour
English/ESL Placement: Placement into ENG 1510.
Prerequisite: INT 1100 INT 1140 INT 1180 INT 1200 INT 1300; and consent of department.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
Work experience is arranged at an appropriate job that will provide students with an opportunity to apply skills and refine techniques in an actual work environment. A minimum of 45 hours of work experience will be required for each hour of credit earned (90 hours for 2 credits, 135 hours for 3 credits). BILLABLE CONTACT HOURS: 1

INT 2572 Design Internship I .................................2 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: INT 1100 INT 1140 INT 1180 INT 1200 INT 1300; and consent of department.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
Work experience is arranged at an appropriate job that will provide students with an opportunity to apply skills and refine techniques in an actual work environment. A minimum of 45 hours of work experience will be required for each hour of credit earned (90 hours for 2 credits, 135 hours for 3 credits). BILLABLE CONTACT HOURS: 2

INT 2573 Design Internship I .................................3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: INT 1100 INT 1140 INT 1180 INT 1200 INT 1300; and consent of department.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
Work experience is arranged at an appropriate job that will provide students with an opportunity to apply skills and refine techniques in an actual work environment. A minimum of 45 hours of work experience will be required for each hour of credit earned (90 hours for 2 credits, 135 hours for 3 credits). BILLABLE CONTACT HOURS: 3

INT 2581 Design Internship II .................................1 Credit Hour
English/ESL Placement: Placement into ENG 1510.
Prerequisite: INT 2571 or INT 2572 or INT 2573; and consent of department.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
Work experience will continue at the appropriate job for the student to continue to apply skills and refine techniques. A minimum of 45 hours of work experience will be required for each hour of credit earned (90 hours for 2 credits, 135 hours for 3 credits). BILLABLE CONTACT HOURS: 1

INT 2582 Design Internship II .................................2 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: INT 2571 or INT 2572 or INT 2573; and consent of department.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
Work experience will continue at the appropriate job for the student to continue to apply skills and refine techniques. A minimum of 45 hours of work experience will be required for each hour of credit earned (90 hours for 2 credits, 135 hours for 3 credits). BILLABLE CONTACT HOURS: 2

INT 2583 Design Internship II .................................3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: INT 2571 or INT 2572 or INT 2573; and consent of department.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
Work experience will continue at the appropriate job for the student to continue to apply skills and refine techniques. A minimum of 45 hours of work experience will be required for each hour of credit earned (90 hours for 2 credits, 135 hours for 3 credits). BILLABLE CONTACT HOURS: 3

Italian (ITA)

ITA 1510 Beginning Italian I .................................4 Credit Hours
English/ESL Placement: Placement into ENG 1510.
This is an introductory course with special emphasis on the fundamentals of speaking, listening, reading, writing and understanding Italian language and culture. The course will introduce basic Italian linguistic structure according to functional models, which can be applied to everyday conversational situations. BILLABLE CONTACT HOURS: 4
GE Outcomes: Effective Communication

ITA 1530 Beginning Italian II .................................4 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: ITA 1510 or equivalent.
This course, which is a continuation of ITA 1510, comprises the second half of the introduction to Italian. The course will emphasize the fundamentals of speaking, listening, reading, writing and understanding of Italian language and culture according to functional models, which can be applied to everyday conversational situations. BILLABLE CONTACT HOURS: 4
GE Outcomes: Effective Communication

Japanese (JPN)

JPN 1510 Beginning Japanese I .................................4 Credit Hours
English/ESL Placement: Placement into ENG 1510.
This is an introductory course with special emphasis on the fundamentals of speaking, listening, reading, writing and understanding Japanese language and culture. The course will introduce basic Japanese linguistic structure in simplified character form according to functional models, which can be applied to everyday conversational situations. BILLABLE CONTACT HOURS: 4
GE Outcomes: Effective Communication

JPN 1530 Beginning Japanese II .................................4 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: JPN 1510
This course, which is a continuation of JPN 1510, comprises the second half of the introduction to basic Japanese. The course will emphasize the fundamentals of speaking, listening, reading, writing and understanding of Japanese language and culture according to functional models, which can be applied to everyday conversational situations. BILLABLE CONTACT HOURS: 4
GE Outcomes: Effective Communication
JPN 2610  Intermediate Japanese I  ..................... 4 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: JPN 1530 or departmental approval.
This course is designed to expand the students' communicative proficiency in Japanese through interactive and informative listening, speaking, reading, and writing activities broadly focused on the cross-cultural and historical understanding of Japanese culture and civilization. Language acquisition will be reinforced through the study of literary texts and media products. Conducted in Japanese. BILLABLE CONTACT HOURS: 4
GE Outcomes: Effective Communication

JPN 2620  Intermediate Japanese II  ..................... 4 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: JPN 2610 or departmental approval.
This course, a continuation of JPN 2610, is designed to further expand the students' communicative proficiency in Japanese through interactive and informative listening, speaking, reading, and writing activities broadly focused on the cross-cultural and historical understanding of Japanese culture and civilization. Language acquisition will be reinforced through the study of literary texts and media products. Conducted in Japanese. BILLABLE CONTACT HOURS: 4
GE Outcomes: Effective Communication

Library Services and Technology (LIB)

Library Services and Technology (LIB)

Prerequisites for courses in this department are not automatically waived for College Guest students or students with a bachelor's degree or higher from a U.S. institution.

LIB 1000  Introduction to the College Library and Information Resources  ............................................. 1 Credit Hour
English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)
This course is an introduction to services and resources provided by college libraries. This course will explore fundamental techniques of effective library use and basic research skills necessary for college readiness. BILLABLE CONTACT HOURS: 1

LIB 1100  Information Research Methods  ............. 1 Credit Hour
English/ESL Placement: Placement into ENG 1510.
This is a beginning course which introduces basic library information sources. Through lectures, recitation and presentation of practical individual search strategies, this course explores independent use of libraries and shows techniques to achieve effective research. Emphasis will be on electronic and print sources. BILLABLE CONTACT HOURS: 1

LIB 1150  Introduction to Library Services  ............. 3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Corequisite: LIB 1100 (Recommended)
This course will provide students with an understanding of the mission and roles of libraries including the ethics, values, and governance of libraries, and a basic knowledge of the functions of all positions and departments in a library. BILLABLE CONTACT HOURS: 3

LIB 1200  Introduction to Media Technology  .......... 3 Credit Hours
Equivalent: AVM 1010
English/ESL Placement: Placement into ENG 1510.
This course enables students to obtain technological knowledge necessary for library work. It addresses important vocabulary, concepts and skills relating to technologies used in libraries today and to the role of libraries in providing patrons access to and assistance in using technology.
BILLABLE CONTACT HOURS: 3

LIB 2000  Collection Management  ....................... 3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
This course introduces students to basic technical services functions as they relate to ordering, receiving and accounting procedures for a variety of materials (e.g. books, films, serials, software). Some of the topics include vendor/library relations, library budgets, serials control, and basic MARC format/tagging. BILLABLE CONTACT HOURS: 3

LIB 2100  Library Cataloging  ............................ 3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
This course introduces cataloging books and serials in an online environment. The Dewey Decimal and Library of Congress classification systems, subject analysis, MARC tagging, Anglo-American Cataloging Rules and Resource Description and Access are also covered. It is strongly recommended that this course be taken only after completing at least one other LIB course or having prior work experience in a library.
BILLABLE CONTACT HOURS: 3

LIB 2150  Library Access Services  ........................ 3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
This course examines the various methods of library service delivery and expands upon skills necessary to develop a personal commitment to excellent customer service. It explores elements of access services including circulation, reserves, interlibrary loan, stacks maintenance and related functions. BILLABLE CONTACT HOURS: 3

LIB 2170  Introduction to Reference Resources  .... 3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Corequisite: LIB 1100 (Recommended).
This course prepares library technicians to perform the basic information needs of library patrons utilizing library resources in print and digital formats. The functions and roles of reference work and the policies and procedures involved in accessing information resources for patrons are covered. BILLABLE CONTACT HOURS: 3

LIB 2300  Library Communication and Teamwork Library Environment ...................................................... 2 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: Completion of 6 Library (LIB) credits.
Corequisite: LIB 2450
In conjunction with LIB 2450, this course prepares students to communicate effectively with library users, library staff, and others in a variety of situations to offer high-quality customer service. BILLABLE CONTACT HOURS: 2
LIB 2450 Library Practicum ............................. 2 Credit Hours

English/ESL Placement: Placement into ENG 1510.
Prerequisite: Completion of 6 Library (LIB) credits. Consent of Program Coordinator.
Corequisite: LIB 2300

In conjunction with LIB 2300, the purpose of this practicum is to provide students an opportunity to gain formal and practical work experience in a library. Students will have supervised experience of at least 90 hours in an approved library setting to apply and strengthen skills learned in other LIB courses. They will gain experience working in a library setting, including performing routine library tasks and communicating effectively with library users, library staff, and others in a variety of situations to offer high-quality customer service. Student self-assessment and reflection assignments and supervisory evaluations will be the basis for determining student performance. BILLABLE CONTACT HOURS: 2

LIB 2500 Library Internship ......................... 4 Credit Hours

English/ESL Placement: Placement into ENG 1510.
Prerequisite: Consent of Program Coordinator.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.

Students gain experience by working under the supervision of a librarian in a public, school, college, hospital, law or corporate library. Library placement is designed to give students a working knowledge of the library, including its functions and roles as they pertain to both technical services (ordering, processing, cataloging) and public services (circulation, periodical, reference). Students will be expected to prepare a journal and other assigned work, as directed by the program coordinator. (120 hours unpaid) BILLABLE CONTACT HOURS: 4

Machine Tool Technology (MTT)

MTT 1100 Introduction to Machine Tools .......... 3 Credit Hours
Equivalent: ATM 1100, TES 1110

English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: TED 1030 (Recommended).

This course exposes students to the practical application of machine tools through text materials and performance objectives. Beginning with simple operations, the student will perform layout, cutting, drilling, filing, and tapping objectives. The student will also perform simple operations on the lathe, band saw and the milling machine. Blueprint reading exercises will be performed to develop students' spatial aptitude and visual acuity. Safety is greatly emphasized and practiced daily. BILLABLE CONTACT HOURS: 3

MTT 1200 Machine Tool Setup & Operation ...... 3 Credit Hours
Equivalent: ATM 1120, TES 1120

English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: MTT 1100 or consent of instructor.
Corequisite: MTE 1000.

This course covers the practical application of machine setup and operation through related projects, text materials and performance objectives. Mill tramming and alignment as well as setup of auxiliary devices will include rotary tables, super spacers, vises, angle plates, and boring heads. Lathe setups will include 3-jaw universal chucks, 4-jaw chuck, between centers, and offset tailstock. Students will perform all inspections of projects created. Safety is greatly emphasized and practiced daily. BILLABLE CONTACT HOURS: 3

MTT 1300 Advanced Machining Processes .......... 3 Credit Hours
Equivalent: ATM 1140

English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: MTT 1200
Corequisite: CAD 1050.

This course covers advanced skills in machine tool operation. Both theory and hands-on experiences will reinforce the instruction. Several projects will be produced by the student, each project involving more complex machining operations on the surface grinder, OD grinder, lathe, and vertical mill. Safety and proper work habits are greatly emphasized.
BILLABLE CONTACT HOURS: 3

MTT 1400 Manufacturing Processes .................. 3 Credit Hours
Equivalent: MEC 1010

English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: MTT 1100 or higher; or consent of instructor.

This course is an introduction to manufacturing processes such as safety, materials, machining, welding, casting, forging, forming, molding, design, inspection, quality, just-in-time manufacturing, lean manufacturing and automation. Projects related to manufacturing processes will be performed. BILLABLE CONTACT HOURS: 4

MTT 2100 Introduction to Computer Numerical Control (CNC) ............................................. 3 Credit Hours
Equivalent: ATM 1300

English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: MTT 1100 or consent of instructor.
Corequisite: CAD 1101.

This course provides a basic knowledge of CNC as it relates to the machine tool metal cutting industry. The fundamental CNC concepts of tool and work offsets, machine setup, and basic machine maintenance will be covered through text materials, demonstrations, and hands on activities. Upon completion of this course, the student is expected to display a working knowledge of CNC programming including coordinating systems and G & M codes. The student may also earn two national certifications upon successful completion of testing. Blueprint reading exercises will be performed to develop students' spatial aptitude and visual acuity. Safety is greatly emphasized and practiced daily. BILLABLE CONTACT HOURS: 4
Material Science (MSE)

MSE 1000  Material Science Fundamentals-Metallurgy  .... 3 Credit Hours
Equivalent: APT 8500
Prerequisite: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses). This course will provide the student a basic knowledge of the theory and practice of metallurgy, including the nature, manufacturing and principles of heat treated metals. Students will be introduced to the scope and applications of metallurgy in industry, and the treatment methods used for various materials based on desired outcomes. Material structure will be studied at the molecular level, including exposure to nanotechnologies as they relate to the scientific changes being explored in forming composite materials. BILLABLE CONTACT HOURS: 3

MSE 1100  Metallography  ........................................... 3 Credit Hours
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: Placement into ESL 2510 for students taking the ESL sequence of courses). This course provides the student with the basics of metallographic study. The course covers all the practical methods of cutting, mounting, polishing and etching of samples. Emphasis will be on the interpretation of microstructures. The samples include both ferrous and non-ferrous metals from real world applications. The student will study the background information of the metal samples prepared and assemble a final booklet of their work. The fundamental stages of heat treated conditions will be studied using a wide variety of alloys. BILLABLE CONTACT HOURS: 3

MSE 1200  Welding Metallurgy  ..................................... 3 Credit Hours
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: Placement into ESL 2510 or higher for students taking the ESL sequence of courses). This course is designed to teach the micro structural aspects of all welding processes. This course will explore the metallurgy of welding, the types of steel and their manufacture, certain welding methods and processes, temperature changes during welding, and the contribution of alloying elements in steel to welded metal behavior. Shop floor welded pieces will be examined metallographically to see the structures discussed in the classroom as well as tensile and hardness testing to demonstrate welding integrity. BILLABLE CONTACT HOURS: 3

Mathematics (MAT)

MAT 1050  Preparation for Algebra  ......................... 4 Credit Hours
Prerequisite: Math placement test results appropriate for this course within the last two years. Note: DUE TO FEDERAL REGULATION THIS COURSE MAY NOT BE ELIGIBLE FOR FEDERAL FINANCIAL AID. PLEASE CHECK WITH YOUR FINANCIAL AID OFFICE. This course is designed for the student who has had little or no algebra and/or plans to take Elementary Algebra. Topics will include whole numbers, fractions, and decimals; ratio, proportion, and percent; positive exponents and square roots; perimeter, area and volume; unit conversions including metrics; positive and negative numbers; solving linear equations and word problems; basic operations with polynomials; graphs of lines; slope. Instruction will emphasize math study skill development and will be varied to include lecture, discovery, and practice. BILLABLE CONTACT HOURS: 4
MAT 1070  Business Mathematics ...................... 3 Credit Hours
Equivalent: MAT 1010
Prerequisite: Math placement test results appropriate for this course within the last two years.
This course includes a review of addition, subtraction, multiplication, and division of whole numbers, fractions and decimals, computing the average, and working with percent. The applications include payroll, cash and trade discounts, invoices, markup and markdown, depreciation, small loans, purchasing, simple and compound interest, and annuities with an emphasis on using business formulas to solve problems. BILLABLE CONTACT HOURS: 3

MAT 1100  Elementary Algebra ......................... 4 Credit Hours
Equivalent: MAT 1120
Prerequisite: MAT 1050 or equivalent college transfer course with a grade of 'C' or better within the last three years or appropriate math placement into MAT 1100 within the last two years.
Properties of real numbers; first degree equations and inequalities; word problems; integer exponents; polynomials and factoring; rational expressions; graphing linear equations and inequalities; solving systems by graphing, addition and substitution; radicals; quadratic equations and the quadratic formula. BILLABLE CONTACT HOURS: 4

MAT 1125  Math Literacy ................................. 4 Credit Hours
Prerequisite: MAT 1050 with a 'C' or better within the last three years or appropriate math placement within the last two years.
This course will provide skills necessary to be successful in college level math courses such as Statistics or Quantitative Reasoning. Topics include numeracy, mathematical thinking and investigations, proportional reasoning, basic algebra concepts, linear and exponential functions and basic statistical concepts. Real-life applications, graphing calculators, spreadsheets, and internet resources are integrated throughout the course. This course is designed for non-STEM (Science, Technology, Engineering and Mathematics) students. BILLABLE CONTACT HOURS: 4

MAT 1150  Intermediate Algebra ....................... 4 Credit Hours
Equivalent: MAT 1130
Prerequisite: MAT 1100 or equivalent college transfer course with a grade of 'C' or better within the last three years or appropriate math placement into MAT 1150 within the last two years.
Review of basics from elementary algebra; absolute value equations and inequalities; radical and rational exponents; complex numbers; completing the square; the discriminant; quadratic inequalities; equations of lines; systems of equations; conic sections; functions, inverses and their graphs; word problems; exponential and logarithmic functions. BILLABLE CONTACT HOURS: 4

GE Outcomes: Critical Thinking, Quantitative Literacy

MAT 1500  Finite Mathematics .......................... 4 Credit Hours
Prerequisite: MAT 1150 or equivalent college transfer course with a grade of 'C' or better within the last three years or appropriate math placement into MAT 1500 within the last two years.
Designed primarily for business and social science students. Elementary functions, systems of linear equations, linear models, matrix theory, linear programming, set theory, combinatorials, probability theory, and decision making. NOTE: This course will not substitute for MAT 1540, MAT 1560, or MAT 1630 as preparation for MAT 1730. BILLABLE CONTACT HOURS: 4

GE Outcomes: Critical Thinking, Quantitative Literacy

MAT 1525  Quantitative Reasoning .................... 4 Credit Hours
Prerequisite: MAT 1125 or MAT 1150 with a 'C' or better within the last three years or appropriate math placement within the last two years.
This course is a liberal arts class intended for students who are pursuing degrees and/or programs that do not require courses in statistics, pre-calculus or the calculus sequence. Upon completion of the course, students will be able to represent and communicate mathematical information symbolically, visually, graphically and numerically. Topics include problem solving, sets, logic, statistical reasoning, probability, finance, applications of equations and applications of functions. The types of functions include linear, quadratic, exponential and logarithmic. BILLABLE CONTACT HOURS: 4

GE Outcomes: Critical Thinking, Quantitative Literacy

MAT 1540  College Algebra .................. 4 Credit Hours
Equivalent: MAT 1550
Prerequisite: MAT 1150 or equivalent college transfer course with a grade of 'C' or better within the last three years or appropriate math placement into MAT 1540 within the last two years.
Brief review of algebra fundamentals; equations quadratic in form; rational inequalities; graphing polynomials and rational functions; algebra of functions; including composition; inverse functions; theory of equations, Rational Root Theorem and Descartes’ Rule; exponential and logarithmic functions; matrices, determinants and linear programming; partial fractions; conic sections; sequences and series; permutations and combinations; Binomial Theorem. BILLABLE CONTACT HOURS: 4

GE Outcomes: Critical Thinking, Quantitative Literacy

MAT 1550  Trigonometry ............................... 3 Credit Hours
Prerequisite: MAT 1150 or equivalent college transfer course with a grade of 'C' or better within the last three years or appropriate math placement into MAT 1550 within the last two years.
Definition of the trigonometric functions as circular functions; graphs of the trigonometric functions; development and use of identities; solution of equations; inverse functions; applications; definition of the functions in a right triangle; solution of right triangles; solution of non-right triangles by use of Law of Sines and Law of Cosines; vectors; polar coordinates. BILLABLE CONTACT HOURS: 3

GE Outcomes: Critical Thinking, Quantitative Literacy

MAT 1580  Statistics ................................. 4 Credit Hours
Equivalent: MAT 1530, MAT 1310
Prerequisite: MAT 1125 or MAT 1150 with a 'C' or better within the last three years; or appropriate math placement within the last two years. Organization and presentation of data; analysis of data, including mean, median, mode, range, and standard deviation; elementary probability theory using combinations and permutations; Binomial Distribution; Normal Distribution; Student Distribution; Chi-square Distribution; F-Distribution; hypothesis testing; estimation, regression and correlation, analysis of variance (ANOVA), non-parametric statistics. Introduction to statistical analysis using current technology. BILLABLE CONTACT HOURS: 4

GE Outcomes: Critical Thinking, Quantitative Literacy

MAT 1600  Applied Calculus ......................... 4 Credit Hours
Prerequisite: MAT 1500 or MAT 1540 or equivalent college transfer course with a grade of 'C' or better within the last three years or appropriate math placement into MAT 1600 within the last two years. Designed primarily for business and social science students. Elementary functions, the limit of a function, the derivative, techniques of differentiation, the exponential and logarithmic functions with derivatives and applications, the integral, techniques of integration, applications of the integral, and introduction to multi-variable calculus. Note: Will not substitute for MAT 1730. BILLABLE CONTACT HOURS: 4

GE Outcomes: Critical Thinking, Quantitative Literacy
MAT 1630  Precalculus  ............................................ 5 Credit Hours
Equivalent: MAT 1610
Prerequisite: Placement into MAT 1630 within the last two years.
This course is an accelerated course that assumes prior exposure
to college algebra and trigonometry concepts. The course covers
equations and inequalities; absolute value, exponents and radicals. It
includes functional notation; composition of functions; inverse functions;
rational, polynomial, exponential, logarithmic, trigonometric and inverse
trigonometric functions, including graphing and solving equations.
Additionally, trigonometric identities, right triangle trigonometry, Law of
Sines and Law of Cosines are covered. BILLABLE CONTACT HOURS: 5

GE Outcomes: Critical Thinking, Quantitative Literacy

MAT 1730  Calculus I ............................................ 4 Credit Hours
Equivalent: MAT 1710
Prerequisite: MAT 1630 or equivalent college transfer course with
a grade of 'C' or better within the last three years or MAT 1540 and
MAT 1560 or equivalent college transfer courses each with a grade of 'C'
within the last three years or appropriate math placement into
MAT 1730 within the last two years.
Limits; continuity; concept of the derivative; differentiation of algebraic and
transcendental functions; applications of the derivative; antidifferentiation;
the indefinite integral; the definite integral; the Fundamental Theorem of
Calculus; numerical integration; integration involving logarithmic functions;
some applications of the integral. Some of the course concepts will be
explored and/or enhanced with current technology. BILLABLE CONTACT HOURS: 4
GE Outcomes: Critical Thinking, Quantitative Literacy

MAT 1740  Calculus II ............................................ 4 Credit Hours
Prerequisite: MAT 1730 or equivalent college transfer course with a
grade of 'C' or better.
Integrals involving inverse trigonometric functions; hyperbolic functions; an
introduction to differential equations; applications of the definite integral;
techniques of integration; limits of indeterminate forms; improper integrals;
two-dimensional analytic geometry using polar coordinates and parametric
equations; infinite series. Some of the course concepts will be explored
and/or enhanced with current technology. BILLABLE CONTACT HOURS: 4

MAT 2530  Mathematics for Elementary Teachers
I ................................................................. 4 Credit Hours
Equivalent: MAT 2510
Prerequisite: MAT 1150 with a 'C' or better within the last three years; or
appropriate math placement within the last two years.
This course is designed for students intending to major in elementary
education, and will provide mathematical understanding necessary to
Teach mathematics in elementary schools. National Council of Teachers of
Mathematics (NCTM) Standards will be followed. Topics include problem
solving techniques, set theory, logic, numeration systems, modeling
and development of algorithms for arithmetic including the sets of whole
numbers, integer and rational numbers, and number theory using virtual
and physical manipulatives. Students will observe an elementary (K-8)
math class session. BILLABLE CONTACT HOURS: 4
GE Outcomes: Critical Thinking, Effective Communication, Quantitative
Literacy

MAT 2540  Mathematics for Elementary Teachers
II ................................................................. 4 Credit Hours
Prerequisite: MAT 2530 with a 'C' or better within the last three years.
This course is the second of a two course sequence designed for students
intending to major in elementary education, and will provide mathematical
understanding necessary to teach mathematics in elementary schools.
NCTM and AMATYC standards will be followed. Topics include solving
equations and inequalities, graphs and equations of function, introductory
probability, introductory statistics, geometric figures, measurement and
transformational geometry using virtual and physical manipulatives.
BILLABLE CONTACT HOURS: 4

MAT 2740  Calculus III ............................................ 4 Credit Hours
Prerequisite: MAT 1740 or equivalent college transfer course with a
grade of 'C' or better.
Three-dimensional analytic geometry and vectors; multivariable functions;
partial differentiation with applications; multiple integrals and applications;
cylindrical coordinates; vector calculus. Some of the course concepts
will be explored and/or enhanced with current technology. BILLABLE CONTACT HOURS: 4

MAT 2810  Differential Equations ................................ 4 Credit Hours
Prerequisite: MAT 1740 or equivalent college transfer course with a
grade of 'C' or better.
This is a first course in ordinary differential equations. It includes solution
of principal types of first order differential equations with applications,
solution of higher order linear equations by undetermined coefficients and
by variation of parameters, solution by using infinite power series, solution
of linear equations by Laplace Transforms, matrix solution of systems of
linear differential equations, and solution and applications of higher order
differential equations. BILLABLE CONTACT HOURS: 4

MAT 2880  Linear Algebra ........................................ 4 Credit Hours
Prerequisite: MAT 1740 or equivalent college transfer course with a
grade of 'C' or better.
The topics covered are systems of linear equations, matrix operations
and properties of matrices, vector spaces (subspaces of Rn linear
transformations, determinants, Eigenvectors and Eigenvalues,
diagonalization and inner products. Although not required, MAT 2740
is recommended before enrolling in this course. BILLABLE CONTACT HOURS: 4

Mechatronics (MCT)

MCT 1000  Integrated Systems ................................ 2 Credit Hours
Equivalent: TSC 2006
English/ESL Placement: Placement into ENG 1060 or higher (or
placement into ESL 2510 or higher for students taking the ESL sequence
of courses).
This course provides an entry level student with an overview of the
technology used in automated integrated systems found in manufacturing.
Included is also an overview of the typical plant networks and their
associated function. Distributed and local control is examined. Analysis
of sequencing machines is completed along with an introduction of how
to troubleshoot these systems. Topics include: fluid power components,
electrical components, conveyors, part sensing components and
an overview of programmable logic controller principles. BILLABLE CONTACT HOURS: 2
MCT 1100  Fluid Power Systems  3 Credit Hours
Equivalent: TSC 2007
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: MCT 1100
This course will develop advanced skills and competencies in fluid power systems in the areas of hydraulic and pneumatic troubleshooting, repair and maintenance as it relates to machine operation, material handling and sorting systems, and participate in projects related to the course material.
BILLABLE CONTACT HOURS: 3
MCT 1120  Advanced Fluid Power Systems  3 Credit Hours
Equivalent: TSC 2009, ATF 1470, APT 8470
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: MCT 1100
This course will focus on fluid power control systems for manufacturing. Students are expected to describe and demonstrate principles of logic elements, functions and assembly of logic circuits. The course will teach students how to create, modify, operate and observe simulated hydraulic and electro-hydraulic devices and circuits using hands-on training simulators. BILLABLE CONTACT HOURS: 3
MCT 1130  General Preventative / Predictive Maintenance  2 Credit Hours
Equivalent: TSC 2018
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
This course introduces students to the principles and practices used within the manufacturing industry for preventative and preventative maintenance of equipment. Preventative maintenance will introduce students to such techniques as the use of periodic lubrication schedules, part adjustment, replacement of parts, and cleaning. The students are exposed to several predictive maintenance tools including vibration analysis. BILLABLE CONTACT HOURS: 2
MCT 2000  Industrial Controls  4 Credit Hours
Equivalent: TSC 2013
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: EEC 1020 and EEC 1040; or consent of instructor.
Industrial Controls explores automation input and output devices including AC and DC motors, variable speed drives, relays, motor starters and sizing of components for various applications. Typical control circuits are examined along with component selection and control documentation. BILLABLE CONTACT HOURS: 4
MCT 2010  Shop Floor Networking  2 Credit Hours
Equivalent: TSC 2017
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: MCT 2000 or consent of instructor.
Shop Floor Networking will explore the various types of communication systems used in industrial systems for the transportation and exchange of data. Network topologies and specifications LAN and field bus technologies used in manufacturing are presented. The data exchange techniques and formats between typical industrial equipment for information and control will be described. BILLABLE CONTACT HOURS: 2
MCT 2020  Mechanical Drives I  3 Credit Hours
Equivalent: TSC 2005
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: TSC 2030 and TSC 8110 both with a "C" or better; or consent of instructor.
This course covers the fundamentals of mechanical transfer of power. Basic concepts of mechanical power transmission will address calculations of speed and force and how they affect a power transmission system. The ability to read mechanical drawings for the assembly of various mechanical components is a key skill to be enhanced. Emphasis will also be placed on the use of hand tools, definitions and processes associated with assembly and maintenance of mechanical drives. Assignments will be focused on hands-on activities building upon theory and concepts studied. BILLABLE CONTACT HOURS: 3
MCT 2030  Mechanical Drives II  3 Credit Hours
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: MCT 2020
Mechanical Drives II is a continuation of Mechanical Drives I and is focused on machine and electric motor drive systems. Topics include mounting, measuring speed, torque, power, mechanical shaft bearing, coupling, and alignment, as well as v-belt, chain, spur gear, and multiple shaft drives. BILLABLE CONTACT HOURS: 3

Medical Assisting (MDA)

Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.

MDA 1050  Medical Assisting-Administrative Procedures  4 Credit Hours
Equivalent: MDA 1050
English/ESL Placement: Placement into ENG 1510.
Prerequisite: Completion of the Medical Assisting Orientation within the last 2 years.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
This course is designed to acquaint the student with the administrative requirements of the medical facility. The course will provide instruction in the following: medical receptionist skills, HIPAA Regulations, human relations, medical secretarial skills, bookkeeping methods, and management techniques. BILLABLE CONTACT HOURS: 4

MDA 1053  Medical Office Software Applications  1 Credit Hour
English/ESL Placement: Placement into ENG 1510.
Prerequisite: Completion of the Medical Assisting Orientation within the last 2 years.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
This course provides students with medical office application skills utilizing a medical office software program. Students will integrate various communication and data entry skills to perform tasks efficiently in the administrative area of a medical office as they prepare for patient billing. Basic keyboard knowledge is necessary as the students will be required to complete computer-based assignments. BILLABLE CONTACT HOURS: 1
MDA 1103 Medical Terminology .........................3 Credit Hours
Equivalent: MED 1103, MED 1100
English/ESL Placement: Placement into ENG 1510.
Medical Terminology is intended for students entering health professions. This is an introductory course with special emphasis on the fundamentals of speaking, writing, and understanding medical language as used in the health care industry. Spelling and definition of medical terminology will utilize a word-root, prefix, suffix structure system. Application of medical terms as they relate to human anatomy, body systems, disease process, and the health care setting will be provided. BILLABLE CONTACT HOURS: 3

MDA 1130 Medical Assisting Clinical Skills ..........3 Credit Hours
Prerequisite: Completion of the Medical Assisting Orientation within the last 2 years.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
This course will provide instruction regarding the duties and responsibilities of a Medical Assistant in the clinical area of a medical facility. Topics include: Emergency preparedness in the medical office as well as radiologic, cardiopulmonary, and physiotherapy procedures. BILLABLE CONTACT HOURS: 3

MDA 1140 Medical Assisting Clinical Procedures .... 4 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: Completion of the Medical Assisting Orientation within the last 2 years.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
This course will provide instruction regarding the duties and responsibilities of a medical assistant in the clinical area of a medical facility. Topics include: assisting the physician, preparing the patient for examination, assessing vital signs, sterilization procedures, documentation utilizing electronic health records (EHR), and nutrition therapy. BILLABLE CONTACT HOURS: 4

MDA 1170 Medical Assisting Laboratory Procedures .... 3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: Completion of the Medical Assisting Orientation within the last 2 years.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
This course is designed to give the medical assisting student practical experience in the collection and handling of various specimens and in the performance and interpretation of tests done in the physician's office. These include Gram staining, initial culture taking, basic microbe identification, routine urinalysis, hematology, and other basic lab tests. Emphasis will be placed on patient contact orientation, contamination of specimens, patient education prior to testing, and explanation of results. BILLABLE CONTACT HOURS: 4

MDA 1250 Phlebotomy .................................1 Credit Hour
English/ESL Placement: Placement into ENG 1510.
Prerequisite: Completion of the Medical Assisting Orientation within the last 2 years.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
This course will provide instruction in the skill of phlebotomy by lecture, demonstration and lab practice. It will include universal precautions, proper equipment and technique, skills for problem draws, specimen handling, quality control, interpersonal skills and professional liability. BILLABLE CONTACT HOURS: 2

MDA 1350 Medical Law and Ethics ........................3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
This course is designed to give the Medical Assisting student and other healthcare practitioners a knowledge of law and ethics as they pertain to medicine. The course will provide the student with a thorough understanding of his medico-legal responsibilities and relationship to his physician/employer and patient. Emphasis will be placed on the practical application of the principles of medical law and ethics. BILLABLE CONTACT HOURS: 3

MDA 1461 Medical Assisting Practicum I ........3 Credit Hours
Equivalent: MDA 1460
English/ESL Placement: Placement into ENG 1510.
Prerequisite: MDA 1051 MDA 1053 MDA 1103 MDA 1130 and MDA 1140 each with a grade of 'C' or better; and consent of instructor based upon selection criteria specified in the Medical Assisting Student Handbook.
Corequisite: MDA 1250 (Recommended)
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
This course covers a review and rotation sequence of practical experience in offices of qualified physicians and/or accredited hospitals and clinics. Skills acquired in the first year of the Medical Assisting program will be applied during the supervised 90 hours of clinical practice. In addition to medical office practices, human relation skills will be stressed in the course work. BILLABLE CONTACT HOURS: 3

MDA 2010 Medical Office Medications ..................3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: Completion of the Medical Assisting Orientation within the last 2 years. Completion of MAT 1050 with a minimum grade of 'C' or placement into MAT 1100 or higher.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
This course will provide the Medical Assisting student with a basic understanding of drug therapy, including the legal, technical, ethical and moral aspects of handling and administering medications. The Medical Assisting student will practice administration of oral and parenteral medication. Nutritional supplements and diet supplemnetations related to therapy as prescribed by the physician will be covered. BILLABLE CONTACT HOURS: 4
MDA 2380  Medical Office Insurance Coding and Billing  4 Credit Hours

English/ESL Placement: Placement into ENG 1510.
Prerequisite: Completion of the Medical Assisting Orientation within the last 2 years.
Corequisite: MDA 1103
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
This course will give the student the fundamentals of medical office insurance diagnosis and procedure coding as well as skills required to produce mailable forms in a timely manner to third party payers (e.g. Blue Shield, Medicare, Medicaid, and others.) Students will learn to reconcile payments and rejections, process inquiry forms and understand the Diagnostic Related Groupings and how they relate to inpatient regulations.
BILLABLE CONTACT HOURS: 4

MDA 2383  Medical Office Insurance Coding and Billing Applications  1 Credit Hour

English/ESL Placement: Placement into ENG 1510.
Prerequisite: Completion of the Medical Assisting Orientation within the last 2 years.
Corequisite: MDA 2380
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
Students apply their knowledge in medical terminology, insurance coding and billing and word processing skills by executing accurate claim submissions for reimbursement, utilizing a billing software program. The students will be required to complete computer-based assignments.
BILLABLE CONTACT HOURS: 1

MDA 2460  Medical Assisting Practicum II  3 Credit Hours

English/ESL Placement: Placement into ENG 1510.
Prerequisite: MDA 1461 with a grade of 'C' or better and consent of instructor based upon selection criteria specified in the Medical Assisting Handbook.
Corequisite: MDA 1350 (Recommended)
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
This course covers a review and rotation sequence of practical experience in offices of qualified physicians and/or accredited hospitals and clinics. Skills acquired in the Medical Assisting program will be applied during the supervised 90 hours of clinical and administrative practice. In addition to medical office practices patient education will be emphasized in the course work.
BILLABLE CONTACT HOURS: 3

MDA 2560  Medical Assisting Seminar  4 Credit Hours

English/ESL Placement: Placement into ENG 1510.
Prerequisite: MDA 1461 with a grade of 'C' or better.
This course is designed to review the entire Medical Assisting program in preparation for writing the CMA certification examination. Emphasis will be placed on general topics, administrative and clinical duties, human relations and professionalism.
BILLABLE CONTACT HOURS: 4

Mental Health / Social Work (MHA)

MHA 1500  Fundamentals of Alcohol and Substance Abuse  4 Credit Hours

English/ESL Placement: Placement into ENG 1510.
The course is designed to provide an overview of common substances of abuse and related substance use disorders. Course content will include an overview of the physiological, psychological and behavioral effects of common substances of abuse. The course will also cover the diagnostic criteria of substance use disorder as defined by the American Psychiatric Association.
BILLABLE CONTACT HOURS: 4

MHA 1510  Substance Abuse Treatments  4 Credit Hours

English/ESL Placement: Placement into ENG 1510.
Prerequisite: MHA 1500
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
A systematic study of methods and procedures used in treatment in the substance abuse programs. This course will include treatment techniques and community development techniques.
BILLABLE CONTACT HOURS: 4

MHA 2100  Counseling and Interviewing Skills  4 Credit Hours

English/ESL Placement: Placement into ENG 1510.
Prerequisite: Completion of two psychology (PSY) courses with a grade of 'C+' or higher.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
The course is designed to introduce students to the basic techniques of interviewing used in the mental health and social work fields. The art and science of interviewing will be explored. In order to reinforce skill development, students will be required to practice interviewing skills in the classroom setting.
BILLABLE CONTACT HOURS: 4

MHA 2300  Interpersonal Theory and Practice  4 Credit Hours

English/ESL Placement: Placement into ENG 1510.
Prerequisite: Completion of two psychology (PSY) courses with a grade of 'C+' or higher.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
The course is designed to provide students with an overview of counseling theories used in contemporary mental health practice. A range of therapeutic approaches including cognitive behavioral, client centered, and family systems will be explored. Theoretical tenets and application of each approach will be explored.
BILLABLE CONTACT HOURS: 4
MHA 2400  Group Dynamics Theory and Practice  ......4 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: Completion of three psychology (PSY) courses with a grade of 'C+' or higher.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
The course is designed to introduce students to the basic techniques and theory of the group approach. Psycho-educational, support, and counseling groups will be explored. Member engagement, group development, and strategies for working with difficult group members will also be discussed. In order to reinforce skill development, students will be required to practice group facilitation skills in the classroom setting.
BILLABLE CONTACT HOURS: 4

MHA 2500  Family Systems Theory and Practice  ......4 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: Completion of three psychology (PSY) courses with a grade of 'C+' or higher.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
The course is designed to provide students with a basic theoretical foundation for the practice of family therapy and family social work. Therapeutic models and techniques for successful intervention will be introduced. The impact of abuse, neglect, trauma, and mental illness on family functioning will also be explored.
BILLABLE CONTACT HOURS: 4

MHA 2600  Mental Health and Social Work Internship  .................................4 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: Consent of program coordinator with successful completion of a background clearance; completion of two MHA courses and three psychology courses each with a grade of 'C+' or better.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
This course provides the student with an opportunity to apply the content and skills learned during prior MHA courses into the social service field. The student will have an opportunity for a variety of experiences based upon their internship setting, interests, and career goals. Students will arrange meetings with the instructor throughout the course. In addition, students will be required to complete 135 of internship.
BILLABLE CONTACT HOURS: 4

Music (MUS)

MUS 1500  Voice I  ............................................2 Credit Hours
Equivalent: MUS 1810
English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)
This course is designed for students who have had little or no previous vocal or musical instruction. It covers the rudiments of vocal technique, music reading and basic keyboard skills, in order to improve the student's singing voice as well as his/her ability to read and learn songs without the aid of recordings. Basic diction in foreign languages may be covered in accordance to specific student interests. The course includes in-class performances by the students.
BILLABLE CONTACT HOURS: 2
GE Outcomes: Aesthetic Awareness

MUS 1510  Piano I  ............................................2 Credit Hours
English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)
This is an introductory course designed for students who have had very little or no piano instruction. The course will include the essentials of music reading and keyboard theory including triads (chords) in all keys. Practice facilities are available at scheduled times.
BILLABLE CONTACT HOURS: 2
GE Outcomes: Aesthetic Awareness

MUS 1521  Fundamental Ear Training and Sight Singing  ..................................2 Credit Hours
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses.)
In this fundamental level course, the student will work to achieve fluency at the recognition of note and rest values, time signatures, notation in treble/ bass clefs, and conducting patterns in simple and compound meters. Through aural recognition of tonal elements in major keys, the student will sing and transcribe individual notes, intervals, and short melodic lines.
BILLABLE CONTACT HOURS: 2

MUS 1530  Fundamentals of Music  .................................2 Credit Hours
Equivalent: MUS 1610
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses.)
The student will identify and construct basic elements of music including names of lines and spaces of the treble, bass, and alto clefs; note values and time signatures; major and minor scales; modes; intervals; and triads.
BILLABLE CONTACT HOURS: 2

MUS 1560  Listening to Music: 'Classical' to Jazz  ...........................................3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
This non-technical course is designed to increase interest in all styles of music through the broadening of the student's experience in music and growth in appreciation of music in relation to general culture and history. In order to develop a heightened sense of aesthetic awareness, the course will examine the essential elements of musical composition, develop listening skills and trace the historical progression of major composers and musical styles from the middle ages through the jazz era and is not limited to the western world.
BILLABLE CONTACT HOURS: 3
GE Outcomes: Aesthetic Awareness

MUS 1570  Guitar I  ............................................2 Credit Hours
English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)
The student will perform simple chords and chordal progressions, various strumming patterns, and simple melodies. Music reading and elementary theory will be stressed. The student will be required to play at least two complete compositions of a guitar score selected from a required list of compositions. The student will be required to own or have access to an acoustic six-string guitar. Nylon strings are preferred but not required.
BILLABLE CONTACT HOURS: 2
GE Outcomes: Aesthetic Awareness
MUS 1585 Listening to Music: World Music .......... 3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
This course provides an introduction to the major musical traditions of the world by emphasizing their diversity and uniqueness. The course focuses on folk, ethnic, dance, and ceremonial music from different regions of the Americas, Africa, Asia, Australia, and Europe. Concepts such as ethnicity, ethnocentrism, racism, and gender issues are addressed as they apply to each culture individually. This course relies heavily on guided listening of authentic recordings and/or performances. BILLABLE CONTACT HOURS: 3

GE Outcomes: Aesthetic Awareness

MUS 1590 Listening to Music: Rock to Hip-Hop 3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Students will trace the development of rock music, beginning with pre-rock influences in jazz, classical, and traditional pop. They will identify the major artistic, technical, historical, social, economic, and entertainment aspects of rock by means of a variety of recorded examples, classroom presentation and written materials. BILLABLE CONTACT HOURS: 3

GE Outcomes: Aesthetic Awareness

MUS 1601 Voice II ........................................ 2 Credit Hours
Equivalent: MUS 1820
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: MUS 1500 or consent of instructor.
This course is designed for those students who have completed Voice I or have a comparable level of vocal and musical proficiency. This course builds up on the same goals as Voice I, with an emphasis on vocal exercises and performance techniques. BILLABLE CONTACT HOURS: 2

GE Outcomes: Aesthetic Awareness

MUS 1611 Piano II ........................................ 2 Credit Hours
Equivalent: MUS 1520
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: MUS 1510 or consent of instructor.
Designed for those students who have completed Piano I or equivalent or instruction that has taken the student to the comparable level of Piano I. Greater emphasis is placed on piano technique and keyboard theory. Early intermediate level piano literature is introduced as well as appropriate level material chosen by the student. Practice facilities are available at scheduled times. BILLABLE CONTACT HOURS: 2

GE Outcomes: Aesthetic Awareness

MUS 1620 Ear Training and Sight Singing I ............ 2 Credit Hours
English/ESL Placement: Placement into ENG 1510.
The student will write melodies which are dictated, will learn sight reading of melodies, and will emphasize aural rather than theoretical music.
BILLABLE CONTACT HOURS: 2

MUS 1630 Music Theory I .................................. 3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: MUS 1530 or consent of instructor.
This course is designed to provide the student with the necessary tools to realize, analyze and compose music in the four-part chorale style. The major/minor system is covered extensively. Topics include the mechanics of part-writing, identification of all triads and their inversions, figured bass, cadences and non-harmonic tones. Additionally, works of Bach and others will be analyzed (with special emphasis on chorales). In class, students will produce compositions and a variety of assignments using pianos, computers, music theory and notational software. BILLABLE CONTACT HOURS: 3

MUS 1671 Guitar II ......................................... 2 Credit Hours
Equivalent: MUS 1580
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: MUS 1570 or consent of instructor.
A thorough knowledge of the material taught in Guitar I is necessary in order to qualify for Guitar II. Students will execute advanced chords and chordal progressions with various strumming and picking patterns. They will develop advanced music reading skills that will enable them to undertake the study of classical guitar and flamenco guitar. They will be required to play at least two complete compositions of a guitar score from a required list of com-positions. The student will also play major scales using only fretted strings. The student will be required to own, purchase, or have access to a non-amplified 6-string guitar from the outset of the class. Nylon strings are preferred but not required. BILLABLE CONTACT HOURS: 2

GE Outcomes: Aesthetic Awareness

MUS 1751 Small Ensemble/Combo ....................... 1 Credit Hour
Equivalent: MUS 1661
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: Consent of instructor
The student will participate in rehearsals and performances of suitable ensemble music. The ensemble will meet once each week for three hours and will perform publicly at least once each semester. With consent of instructor’s, this course may be elected eight times. BILLABLE CONTACT HOURS: 1

MUS 1752 Small Ensemble/Combo ....................... 1 Credit Hour
Equivalent: MUS 1662
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: Consent of instructor
The student will participate in rehearsals and performances of suitable ensemble music. The ensemble will meet once each week for three hours and will perform publicly at least once each semester. With consent of instructor’s, this course may be elected eight times. BILLABLE CONTACT HOURS: 1

MUS 1753 Small Ensemble/Combo ....................... 1 Credit Hour
Equivalent: MUS 1663
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: Consent of instructor
The student will participate in rehearsals and performances of suitable ensemble music. The ensemble will meet once each week for three hours and will perform publicly at least once each semester. With consent of instructor’s, this course may be elected eight times. BILLABLE CONTACT HOURS: 1
MUS 1754  Small Ensemble/Combo  1 Credit Hour
Equivalent: MUS 1664
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: Consent of instructor
The student will participate in rehearsals and performances of suitable ensemble music. The ensemble will meet once each week for three hours and will perform publicly at least once each semester. With consent of instructor’s, this course may be elected eight times. BILLABLE CONTACT HOURS: 1

MUS 1755  Small Ensemble/Combo  1 Credit Hour
Equivalent: MUS 1665
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: Consent of instructor
The student will participate in rehearsals and performances of suitable ensemble music. The ensemble will meet once each week for three hours and will perform publicly at least once each semester. With consent of instructor’s, this course may be elected eight times. BILLABLE CONTACT HOURS: 1

MUS 1761  OCC Chorale  1 Credit Hour
Equivalent: MUS 1710
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: Consent of instructor
Students will sing choral literature from the Renaissance to the modern, semi-popular, period. They will participate in performances for special assemblies and in concerts for the general public. Information for required audition is available through the program coordinator. BILLABLE CONTACT HOURS: 1

MUS 1756  Small Ensemble/Combo  1 Credit Hour
Equivalent: MUS 1666
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: Consent of instructor
The student will participate in rehearsals and performances of suitable ensemble music. The ensemble will meet once each week for three hours and will perform publicly at least once each semester. With consent of instructor’s, this course may be elected eight times. BILLABLE CONTACT HOURS: 1

MUS 1762  OCC Chorale  1 Credit Hour
Equivalent: MUS 1720
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: Consent of instructor
Students will sing choral literature from the Renaissance to the modern, semi-popular, period. They will participate in performances for special assemblies and in concerts for the general public. Information for required audition is available through the program coordinator. BILLABLE CONTACT HOURS: 1

MUS 1757  Small Ensemble/Combo  1 Credit Hour
Equivalent: MUS 1667
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: Consent of instructor
The student will participate in rehearsals and performances of suitable ensemble music. The ensemble will meet once each week for three hours and will perform publicly at least once each semester. With consent of instructor’s, this course may be elected eight times. BILLABLE CONTACT HOURS: 1

MUS 1763  OCC Chorale  1 Credit Hour
Equivalent: MUS 1730
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: Consent of instructor
Students will sing choral literature from the Renaissance to the modern, semi-popular, period. They will participate in performances for special assemblies and in concerts for the general public. Information for required audition is available through the program coordinator. BILLABLE CONTACT HOURS: 1

MUS 1758  Small Ensemble/Combo  1 Credit Hour
Equivalent: MUS 1668
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: Consent of instructor
The student will participate in rehearsals and performances of suitable ensemble music. The ensemble will meet once each week for three hours and will perform publicly at least once each semester. With consent of instructor’s, this course may be elected eight times. BILLABLE CONTACT HOURS: 1

MUS 1764  OCC Chorale  1 Credit Hour
Equivalent: MUS 1740
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: Consent of instructor
Students will sing choral literature from the Renaissance to the modern, semi-popular, period. They will participate in performances for special assemblies and in concerts for the general public. Information for required audition is available through the program coordinator. BILLABLE CONTACT HOURS: 1

MUS 1759  Small Ensemble/Combo  1 Credit Hour
Equivalent: MUS 1669
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: Consent of instructor
The student will participate in rehearsals and performances of suitable ensemble music. The ensemble will meet once each week for three hours and will perform publicly at least once each semester. With consent of instructor’s, this course may be elected eight times. BILLABLE CONTACT HOURS: 1

MUS 1765  OCC Chorale  1 Credit Hour
Equivalent: MUS 1750
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: Consent of instructor
Students will sing choral literature from the Renaissance to the modern, semi-popular, period. They will participate in performances for special assemblies and in concerts for the general public. Information for required audition is available through the program coordinator. BILLABLE CONTACT HOURS: 1
MUS 1766 OCC Chorale ............................... 1 Credit Hour
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: Consent of instructor
Students will sing choral literature from the Renaissance to the modern, semi-popular, period. They will participate in performances for special assemblies and in concerts for the general public. Information for required audition is available through the program coordinator. BILLABLE CONTACT HOURS: 1

MUS 1767 OCC Chorale ............................... 1 Credit Hour
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: Consent of instructor
Students will sing choral literature from the Renaissance to the modern, semi-popular, period. They will participate in performances for special assemblies and in concerts for the general public. Information for required audition is available through the program coordinator. BILLABLE CONTACT HOURS: 1

MUS 1768 OCC Chorale ............................... 1 Credit Hour
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: Consent of instructor
Students will sing choral literature from the Renaissance to the modern, semi-popular, period. They will participate in performances for special assemblies and in concerts for the general public. Information for required audition is available through the program coordinator. BILLABLE CONTACT HOURS: 1

MUS 1771 Concert Band ............................... 1 Credit Hour
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: Audition or consent of instructor.
Consists of woodwinds, brass, and percussion. Through weekly rehearsals and a variety of performances in conjunction with area concert bands, students will have the opportunity to become familiar with all styles of concert band repertoire. The student is expected to prepare for, and attend all rehearsals and performances. Members of the concert band must provide their own instruments. BILLABLE CONTACT HOURS: 1

MUS 1772 Concert Band ............................... 1 Credit Hour
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: Audition or consent of instructor.
Consists of woodwinds, brass, and percussion. Through weekly rehearsals and a variety of performances in conjunction with area concert bands, students will have the opportunity to become familiar with all styles of concert band repertoire. The student is expected to prepare for, and attend all rehearsals and performances. Members of the concert band must provide their own instruments. BILLABLE CONTACT HOURS: 1

MUS 1773 Concert Band ............................... 1 Credit Hour
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: Audition or consent of instructor.
Consists of woodwinds, brass, and percussion. Through weekly rehearsals and a variety of performances in conjunction with area concert bands, students will have the opportunity to become familiar with all styles of concert band repertoire. The student is expected to prepare for, and attend all rehearsals and performances. Members of the concert band must provide their own instruments. BILLABLE CONTACT HOURS: 1

MUS 1774 Concert Band ............................... 1 Credit Hour
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: Audition or consent of instructor.
Consists of woodwinds, brass, and percussion. Through weekly rehearsals and a variety of performances in conjunction with area concert bands, students will have the opportunity to become familiar with all styles of concert band repertoire. The student is expected to prepare for, and attend all rehearsals and performances. Members of the concert band must provide their own instruments. BILLABLE CONTACT HOURS: 1

MUS 1775 Concert Band ............................... 1 Credit Hour
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: Audition or consent of instructor.
Consists of woodwinds, brass, and percussion. Through weekly rehearsals and a variety of performances in conjunction with area concert bands, students will have the opportunity to become familiar with all styles of concert band repertoire. The student is expected to prepare for, and attend all rehearsals and performances. Members of the concert band must provide their own instruments. BILLABLE CONTACT HOURS: 1

MUS 1776 Concert Band ............................... 1 Credit Hour
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: Audition or consent of instructor.
Consists of woodwinds, brass, and percussion. Through weekly rehearsals and a variety of performances in conjunction with area concert bands, students will have the opportunity to become familiar with all styles of concert band repertoire. The student is expected to prepare for, and attend all rehearsals and performances. Members of the concert band must provide their own instruments. BILLABLE CONTACT HOURS: 1

MUS 1777 Concert Band ............................... 1 Credit Hour
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: Audition or consent of instructor.
Consists of woodwinds, brass, and percussion. Through weekly rehearsals and a variety of performances in conjunction with area concert bands, students will have the opportunity to become familiar with all styles of concert band repertoire. The student is expected to prepare for, and attend all rehearsals and performances. Members of the concert band must provide their own instruments. BILLABLE CONTACT HOURS: 1
MUS 1778  Concert Band  1 Credit Hour
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: Audition or consent of instructor.
Consists of woodwinds, brass, and percussion. Through weekly rehearsals and a variety of performances in conjunction with area concert bands, students will have the opportunity to become familiar with all styles of concert band repertoire. The student is expected to prepare for, and attend all rehearsals and performances. Members of the concert band must provide their own instruments. BILLABLE CONTACT HOURS: 1

MUS 1781  Orchestra  1 Credit Hour
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: Audition or consent of instructor.
Orchestra is a performance ensemble that consists of strings, woodwinds, brass, and percussion. Through weekly rehearsals and a variety of performances in conjunction with area orchestras, students will have the opportunity to become familiar with all styles of orchestral repertoire. The student is expected to prepare for, and attend all rehearsals and performances. Members of the orchestra must provide their own instruments. BILLABLE CONTACT HOURS: 1

MUS 1782  Orchestra  1 Credit Hour
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: Audition or consent of instructor.
Orchestra is a performance ensemble that consists of strings, woodwinds, brass, and percussion. Through weekly rehearsals and a variety of performances in conjunction with area orchestras, students will have the opportunity to become familiar with all styles of orchestral repertoire. The student is expected to prepare for, and attend all rehearsals and performances. Members of the orchestra must provide their own instruments. BILLABLE CONTACT HOURS: 1

MUS 1783  Orchestra  1 Credit Hour
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: Audition or consent of instructor.
Orchestra is a performance ensemble that consists of strings, woodwinds, brass, and percussion. Through weekly rehearsals and a variety of performances in conjunction with area orchestras, students will have the opportunity to become familiar with all styles of orchestral repertoire. The student is expected to prepare for, and attend all rehearsals and performances. Members of the orchestra must provide their own instruments. BILLABLE CONTACT HOURS: 1

MUS 1784  Orchestra  1 Credit Hour
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: Audition or consent of instructor.
Orchestra is a performance ensemble that consists of strings, woodwinds, brass, and percussion. Through weekly rehearsals and a variety of performances in conjunction with area orchestras, students will have the opportunity to become familiar with all styles of orchestral repertoire. The student is expected to prepare for, and attend all rehearsals and performances. Members of the orchestra must provide their own instruments. BILLABLE CONTACT HOURS: 1

MUS 1785  Orchestra  1 Credit Hour
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: Audition or consent of instructor.
Orchestra is a performance ensemble that consists of strings, woodwinds, brass, and percussion. Through weekly rehearsals and a variety of performances in conjunction with area orchestras, students will have the opportunity to become familiar with all styles of orchestral repertoire. The student is expected to prepare for, and attend all rehearsals and performances. Members of the orchestra must provide their own instruments. BILLABLE CONTACT HOURS: 1

MUS 1786  Orchestra  1 Credit Hour
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: Audition or consent of instructor.
Orchestra is a performance ensemble that consists of strings, woodwinds, brass, and percussion. Through weekly rehearsals and a variety of performances in conjunction with area orchestras, students will have the opportunity to become familiar with all styles of orchestral repertoire. The student is expected to prepare for, and attend all rehearsals and performances. Members of the orchestra must provide their own instruments. BILLABLE CONTACT HOURS: 1

MUS 1787  Orchestra  1 Credit Hour
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: Audition or consent of instructor.
Orchestra is a performance ensemble that consists of strings, woodwinds, brass, and percussion. Through weekly rehearsals and a variety of performances in conjunction with area orchestras, students will have the opportunity to become familiar with all styles of orchestral repertoire. The student is expected to prepare for, and attend all rehearsals and performances. Members of the orchestra must provide their own instruments. BILLABLE CONTACT HOURS: 1

MUS 1788  Orchestra  1 Credit Hour
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: Audition or consent of instructor.
Orchestra is a performance ensemble that consists of strings, woodwinds, brass, and percussion. Through weekly rehearsals and a variety of performances in conjunction with area orchestras, students will have the opportunity to become familiar with all styles of orchestral repertoire. The student is expected to prepare for, and attend all rehearsals and performances. Members of the orchestra must provide their own instruments. BILLABLE CONTACT HOURS: 1

MUS 1789  OCC Stage/Jazz Band  1 Credit Hour
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: Audition or consent of instructor.
The OCC Stage/Jazz Band is a performing ensemble specializing in standard big band and jazz charts as well as modern arrangements. Instrumentation consists of saxophones (alto/tenor/baritone), trumpets, trombones, bass (upright or guitar), guitar, drums, and piano. Except for drums and piano, members must provide their own instruments. Rentals are available through local music stores. BILLABLE CONTACT HOURS: 1
MUS 1792 OCC Stage/Jazz Band ............................ 1 Credit Hour
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: High school marching band skill level or equivalent is required or consent of instructor.
The OCC Stage/Jazz Band is a performing ensemble specializing in standard big band and jazz charts as well as modern arrangements. Instrumentation consists of saxophones (alto/tenor/baritone), trumpets, trombones, bass (upright or guitar), guitar, drums, and piano. Except for drums and piano, members must provide their own instruments. Rentals are available through local music stores. BILLABLE CONTACT HOURS: 1

MUS 1793 OCC Stage/Jazz Band ............................ 1 Credit Hour
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: High school marching band skill level or equivalent is required or consent of instructor.
The OCC Stage/Jazz Band is a performing ensemble specializing in standard big band and jazz charts as well as modern arrangements. Instrumentation consists of saxophones (alto/tenor/baritone), trumpets, trombones, bass (upright or guitar), guitar, drums, and piano. Except for drums and piano, members must provide their own instruments. Rentals are available through local music stores. BILLABLE CONTACT HOURS: 1

MUS 1794 OCC Stage/Jazz Band ............................ 1 Credit Hour
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: High school marching band skill level or equivalent is required or consent of instructor.
The OCC Stage/Jazz Band is a performing ensemble specializing in standard big band and jazz charts as well as modern arrangements. Instrumentation consists of saxophones (alto/tenor/baritone), trumpets, trombones, bass (upright or guitar), guitar, drums, and piano. Except for drums and piano, members must provide their own instruments. Rentals are available through local music stores. BILLABLE CONTACT HOURS: 1

MUS 1795 OCC Stage/Jazz Band ............................ 1 Credit Hour
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: High school marching band skill level or equivalent is required or consent of instructor.
The OCC Stage/Jazz Band is a performing ensemble specializing in standard big band and jazz charts as well as modern arrangements. Instrumentation consists of saxophones (alto/tenor/baritone), trumpets, trombones, bass (upright or guitar), guitar, drums, and piano. Except for drums and piano, members must provide their own instruments. Rentals are available through local music stores. BILLABLE CONTACT HOURS: 1

MUS 1796 OCC Stage/Jazz Band ............................ 1 Credit Hour
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: High school marching band skill level or equivalent is required or consent of instructor.
The OCC Stage/Jazz Band is a performing ensemble specializing in standard big band and jazz charts as well as modern arrangements. Instrumentation consists of saxophones (alto/tenor/baritone), trumpets, trombones, bass (upright or guitar), guitar, drums, and piano. Except for drums and piano, members must provide their own instruments. Rentals are available through local music stores. BILLABLE CONTACT HOURS: 1

MUS 1797 OCC Stage/Jazz Band ............................ 1 Credit Hour
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: High school marching band skill level or equivalent is required or consent of instructor.
The OCC Stage/Jazz Band is a performing ensemble specializing in standard big band and jazz charts as well as modern arrangements. Instrumentation consists of saxophones (alto/tenor/baritone), trumpets, trombones, bass (upright or guitar), guitar, drums, and piano. Except for drums and piano, members must provide their own instruments. Rentals are available through local music stores. BILLABLE CONTACT HOURS: 1

MUS 1798 OCC Stage/Jazz Band ............................ 1 Credit Hour
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: High school marching band skill level or equivalent is required or consent of instructor.
The OCC Stage/Jazz Band is a performing ensemble specializing in standard big band and jazz charts as well as modern arrangements. Instrumentation consists of saxophones (alto/tenor/baritone), trumpets, trombones, bass (upright or guitar), guitar, drums, and piano. Except for drums and piano, members must provide their own instruments. Rentals are available through local music stores. BILLABLE CONTACT HOURS: 1

MUS 2521 Ear Training and Sight Singing II .........2 Credit Hours
Equivalent: MUS 1640
English/ESL Placement: Placement into ENG 1510.
Prerequisite: MUS 1620
The student will write melodies more difficult than in MUS 1620 with two-part dictations being given along with simple three- and four-part harmonies. The emphasis will be on the aural aspects of harmony rather than the theoretical aspects as well as more advanced sight singing exercises. BILLABLE CONTACT HOURS: 2

MUS 2530 Music Theory II ............................... 3 Credit Hours
Equivalent: MUS 1650
English/ESL Placement: Placement into ENG 1510.
Prerequisite: MUS 1630 or consent of instructor.
This course continues the study of music theory that was introduced in Music Theory I. Topics include seventh chords, the function and analysis of all chromatic chords and non-harmonic tones, and modulation to closely related and foreign keys. An emphasis will be placed on chorale and keyboard style music. In class, students will produce compositions and a variety of assignments using pianos, computers, music theory and notational software. BILLABLE CONTACT HOURS: 3

MUS 2551 Applied Music: Vocal or Instrumental
Instruction ..................................................1 Credit Hour
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: Consent of OCC music faculty.
A sequence of private studio lessons in voice or the instrument of the student's choice. The student will study with instructors approved by the College and should be prepared to pay a weekly lesson fee in addition to tuition. Individual lesson arrangements should be made through OCC music faculty prior to enrollment in the course. Students are expected to provide musical instruments. BILLABLE CONTACT HOURS: 1
MUS 2552 Applied Music: Vocal or Instrumental
Instruction ........................................................................1 Credit Hour

English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).

Prerequisite: Consent of OCC music faculty.
A sequence of private studio lessons in voice or the instrument of the student's choice. The student will study with instructors approved by the College and should be prepared to pay a weekly lesson fee in addition to tuition. Individual lesson arrangements should be made through OCC music faculty prior to enrollment in the course. Students are expected to provide musical instruments. BILLABLE CONTACT HOURS: 1

MUS 2553 Applied Music: Vocal or Instrumental
Instruction ........................................................................1 Credit Hour

English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).

Prerequisite: Consent of OCC music faculty.
A sequence of private studio lessons in voice or the instrument of the student's choice. The student will study with instructors approved by the College and should be prepared to pay a weekly lesson fee in addition to tuition. Individual lesson arrangements should be made through OCC music faculty prior to enrollment in the course. Students are expected to provide musical instruments. BILLABLE CONTACT HOURS: 1

MUS 2554 Applied Music: Vocal or Instrumental
Instruction ........................................................................1 Credit Hour

English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).

Prerequisite: Consent of OCC music faculty.
A sequence of private studio lessons in voice or the instrument of the student's choice. The student will study with instructors approved by the College and should be prepared to pay a weekly lesson fee in addition to tuition. Individual lesson arrangements should be made through OCC music faculty prior to enrollment in the course. Students are expected to provide musical instruments. BILLABLE CONTACT HOURS: 1

MUS 2555 Applied Music: Vocal or Instrumental
Instruction ........................................................................1 Credit Hour

English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).

Prerequisite: Consent of OCC music faculty.
A sequence of private studio lessons in voice or the instrument of the student's choice. The student will study with instructors approved by the College and should be prepared to pay a weekly lesson fee in addition to tuition. Individual lesson arrangements should be made through OCC music faculty prior to enrollment in the course. Students are expected to provide musical instruments. BILLABLE CONTACT HOURS: 1

MUS 2556 Applied Music: Vocal or Instrumental
Instruction ........................................................................1 Credit Hour

English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).

Prerequisite: Consent of OCC music faculty.
A sequence of private studio lessons in voice or the instrument of the student's choice. The student will study with instructors approved by the College and should be prepared to pay a weekly lesson fee in addition to tuition. Individual lesson arrangements should be made through OCC music faculty prior to enrollment in the course. Students are expected to provide musical instruments. BILLABLE CONTACT HOURS: 1

MUS 2557 Applied Music: Vocal or Instrumental
Instruction ........................................................................1 Credit Hour

English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).

Prerequisite: Consent of OCC music faculty.
A sequence of private studio lessons in voice or the instrument of the student's choice. The student will study with instructors approved by the College and should be prepared to pay a weekly lesson fee in addition to tuition. Individual lesson arrangements should be made through OCC music faculty prior to enrollment in the course. Students are expected to provide musical instruments. BILLABLE CONTACT HOURS: 1

MUS 2558 Applied Music: Vocal or Instrumental
Instruction ........................................................................1 Credit Hour

English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).

Prerequisite: Consent of OCC music faculty.
A sequence of private studio lessons in voice or the instrument of the student's choice. The student will study with instructors approved by the College and should be prepared to pay a weekly lesson fee in addition to tuition. Individual lesson arrangements should be made through OCC music faculty prior to enrollment in the course. Students are expected to provide musical instruments. BILLABLE CONTACT HOURS: 1

MUS 2560 Conducting ..................................................2 Credit Hours
Equivalent: MUS 1860

English/ESL Placement: Placement into ENG 1510.

Prerequisite: MUS 1630
This course is designed to provide the student with an introduction to the basic conducting and rehearsal techniques of both vocal and instrumental ensembles. The students are given the opportunity to practice the techniques learned during the semester by periodically conducting the rest of the class. Depending on availability, the students who wish to do so may conduct one of the college ensembles during a rehearsal. BILLABLE CONTACT HOURS: 2

MUS 2630 Music Theory: Jazz ........................................2 Credit Hours
Equivalent: MUS 1680

English/ESL Placement: Placement into ENG 1510.

Prerequisite: MUS 2530
This course is designed to provide the student with a thorough foundation in the music elements that characterize jazz, through lectures and class assignments in: musical analysis, contemporary nomenclature, scales, writing jazz bass lines, structuring melodic lines, standard forms, constructing a solo, basic horn transposition, and modes. BILLABLE CONTACT HOURS: 2

MUS 2640 Music Composition: Art Music ....................2 Credit Hours
Equivalent: MUS 2021

English/ESL Placement: Placement into ENG 1510.

Prerequisite: MUS 2530.
This course requires students to compose two pieces during the semester. Project one is the exposition of a piano sonata. Project two is an art song, for two or more instruments, in the 'classical' style of the student's choice. BILLABLE CONTACT HOURS: 2
The purpose of the Special Topics courses is to provide students with an in-depth study of a specific major subject in music, such as a specific period, composer or group of composers, performance practices, etc. The subject covered varies each semester in accordance with students' interests or needs and will be announced in the specific section using OCC's online system. BILLABLE CONTACT HOURS: 3

MUS 2651 Special Topics in Music .......................... 3 Credit Hours
Equivalent: MUS 2501
English/ESL Placement: Placement into ENG 1510.

MUS 2652 Special Topics in Music .......................... 3 Credit Hours
Equivalent: MUS 2502
English/ESL Placement: Placement into ENG 1510.

MUS 2653 Special Topics in Music .......................... 3 Credit Hours
Equivalent: MUS 2503
English/ESL Placement: Placement into ENG 1510.

MUS 2654 Special Topics in Music .......................... 3 Credit Hours
Equivalent: MUS 2504
English/ESL Placement: Placement into ENG 1510.

MUS 2655 Special Topics in Music .......................... 3 Credit Hours
Equivalent: MUS 2505
English/ESL Placement: Placement into ENG 1510.

MUS 2656 Special Topics in Music .......................... 3 Credit Hours
Equivalent: MUS 2506
English/ESL Placement: Placement into ENG 1510.

MUS 2657 Special Topics in Music .......................... 3 Credit Hours
Equivalent: MUS 2507
English/ESL Placement: Placement into ENG 1510.

MUS 2658 Special Topics in Music .......................... 3 Credit Hours
Equivalent: MUS 2508
English/ESL Placement: Placement into ENG 1510.

MUS 2659 Special Topics in Music .......................... 3 Credit Hours
Equivalent: MUS 2509
English/ESL Placement: Placement into ENG 1510.

MUS 2730 Jazz Improvisation ................................. 2 Credit Hours
Equivalent: MUS 1690
English/ESL Placement: Placement into ENG 1510.
Prerequisite: MUS 2630
This course covers the fundamentals of jazz improvisation through a series of exercises and in-class performances. The techniques addressed include the blues and the blues scale, the II-V-I and similar chord progressions, and the use of chord tones, and select scales and modes to improvise solo lines. BILLABLE CONTACT HOURS: 2

MUS 2740 Music Composition: Standard Forms .......... 2 Credit Hours
Equivalent: MUS 2011
English/ESL Placement: Placement into ENG 1510.
Prerequisite: MUS 2530
This course takes an in-depth look into the songs of composers such as Gershwin, Rogers and Hart, Porter and Sondheim, in order to fully understand their compositional styles and techniques. The students are given the opportunity to write arrangements or original music in accordance with these composers' styles and techniques. Students are required to write two original songs or arrangements during the semester. BILLABLE CONTACT HOURS: 2

MUS 2810 Recital/Special Project ............................ 1 Credit Hour
Equivalent: MUS 2601
English/ESL Placement: Placement into ENG 1510.
Prerequisite: Consent of instructor
The student will prepare and perform or present a recital or culminating music project (such as a composition or musical arrangement) during the semester in which the student is registered. Ensemble performances or presentations are acceptable. All recital programs or music projects, as well as performance dates and venues (if applicable) must be approved individually by the instructor. BILLABLE CONTACT HOURS: 1
Nursing (NUR)

Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.

NUR 1410 Foundations of Nursing ................................7 Credit Hours
Equivalent: NUR 1310
Prerequisite: Acceptance into the Nursing Program.
Corequisite: NUR 1290
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
This course introduces the first year nursing student to the theory and practice of professional nursing. The concepts of human being, health, environment and nursing are used to provide a framework for discussion of such topics as biopsychosocial development, human needs, the health/illness continuum, the health care delivery system, nurse patient interaction and the provision of nursing services via the nursing process. BILLABLE CONTACT HOURS: 10

NUR 1450 Clinical Skills .............................................0.5 Credit Hours
Equivalent: NUR 1350
Prerequisite: NUR 1290 and NUR 1410 each with a grade of 'B-' or better.
Corequisite: NUR 1510 NUR 1520 or NUR 1530
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
This course is designed to provide the student with a modified modular approach to learning bedside clinical skills. Each module contains specific readings, practice activities and skill check off procedures. BILLABLE CONTACT HOURS: 1.5

NUR 1460 Integrated Physical Assessment and Decision Making Skills I .........................................................0.5 Credit Hours
Equivalent: NUR 1360
Prerequisite: NUR 1290 NUR 1410 NUR 1440 each with a grade of 'B-' or better.
Corequisite: NUR 1510 NUR 1520 NUR 1530 or NUR 1811
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
This modified modular approach course introduces the student to various health assessment techniques and procedures used in initial and routine patient status examinations. It focuses on decision making processes in making clinical judgments regarding which assessment technique is appropriate. The organizing, analyzing and recording of data obtained from nursing assessments is related to the nursing process. BILLABLE CONTACT HOURS: 1.5

NUR 1470 Integrated Physical Assessment and Decision Making Skills II .......................................................0.5 Credit Hours
Equivalent: NUR 1370
Prerequisite: NUR 1290 NUR 1410 NUR 1440 each with a grade of 'B-' or better.
Corequisite: NUR 1510 NUR 1520 NUR 1530 or NUR 1811
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
This course is a continuation of NUR 1460 with added emphasis on integration of the various components of physical assessment. BILLABLE CONTACT HOURS: 1.5
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisites</th>
<th>Corequisites</th>
<th>Note:</th>
</tr>
</thead>
<tbody>
<tr>
<td>NUR 1510</td>
<td>Nursing of the Childbearing Family</td>
<td>4</td>
<td>Prerequisite: NUR 1290 NUR 1410 each with a grade of 'B-' or better.</td>
<td>NUR 1430</td>
<td>For students and students with a bachelor's degree or higher from a U.S. institution.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Corequisite: NUR 1450 NUR 1460 or NUR 1470</td>
<td></td>
<td>This course develops the ability of the student to utilize the nursing process in the care of families throughout the childbearing cycle. The functional patterns associated with reproduction and sexuality are presented. The course covers these normal processes and well-defined health problems of reproduction, fetal and newborn development. The clinical component of this course includes experience in intrapartal, postpartal and newborn settings. BILLABLE CONTACT HOURS: 7</td>
</tr>
<tr>
<td>NUR 1520</td>
<td>Nursing of Adults - Mental Health and Maladaptive Behavior</td>
<td>4</td>
<td>Prerequisite: NUR 1290 NUR 1410 or NUR 1811 each with a grade of 'B-' or better.</td>
<td>NUR 1440</td>
<td>This course presents the essential concepts of mental health and illness. The theory component emphasizes adaptive and maladaptive patterns of behavior, personality development, defense mechanisms, coping patterns, substance abuse and exploration of the variables affecting the development of psychopathology. The clinical focus is on the development of nursing skills and the use of the nursing process with clients exhibiting emotional disorder. Therapeutic communication skills are integrated and practiced throughout the course. BILLABLE CONTACT HOURS: 7</td>
</tr>
<tr>
<td>NUR 1530</td>
<td>Nursing of Adults I</td>
<td>4</td>
<td>Prerequisite: NUR 1290 NUR 1410 each with a grade of 'B-' or better.</td>
<td>NUR 1450</td>
<td>This course introduces basic concepts of adult medical surgical nursing related to the functional patterns of activity - exercise, nutrition, metabolism and elimination. The focus is on the utilization of the nursing process in meeting adult patient needs with simple well-defined problems with emphasis in the maintenance of health and prevention of disabilities in patients with temporary or relatively simple disruptions in their health status. The clinical component of this course will provide the opportunity to apply theoretical content in various acute care facilities primarily on general medical/surgical units. Problem solving approach utilizes the nursing process in providing care to patients. BILLABLE CONTACT HOURS: 7</td>
</tr>
<tr>
<td>NUR 1811</td>
<td>Foundations for the Transition to the Registered Nurse Role</td>
<td>5</td>
<td>Prerequisite: Acceptance into the Nursing program NUR 1290 and NUR 1460 each with a grade of 'B-' or better.</td>
<td>NUR 1470</td>
<td>This course is designed to facilitate the transition from the role of the Licensed Practical Nurse (LPN) to the role of the Associate Degree Registered Nurse (RN). This course will build upon and enhance the student's nursing knowledge. The basic concepts of the Oakland Community College Associate Degree Program Philosophy (nursing, nursing education, teaching, learning, health, environment and human being) are presented to provide a framework for discussion. The nursing care, via the nursing process, of patients with simple, well-defined medical surgical dysfunction will be presented. The concepts of pain, fluid and electrolyte balance, oxygenation, the surgical experience and nutrition associated with the medical surgical patient will be highlighted to facilitate critical thinking and clinical decision-making. BILLABLE CONTACT HOURS: 8</td>
</tr>
<tr>
<td>NUR 1812</td>
<td>Child Bearing Foundations for the Transition to the Registered Nurse Role</td>
<td>2</td>
<td>Prerequisite: NUR 1470 NUR 1811 each with a grade of 'B-' or better</td>
<td>NUR 1520</td>
<td>This course is designed to facilitate the transition from the role of the Licensed Practical Nurse to the role of the Associate Degree Registered Nurse. The course further develops the student's ability to utilize the nursing process in the care of families throughout the childbearing cycle. The functional patterns associated with reproduction are presented. The nursing care, via the nursing process, of the well-defined childbearing family will be discussed. In addition, alterations in functional health patterns during the reproductive cycle will be presented. The concepts of culturally sensitive care, legal/ethical issues in care, current trends in women's health, and maternal-child health will provide a framework for discussion. BILLABLE CONTACT HOURS: 4.5</td>
</tr>
<tr>
<td>NUR 2510</td>
<td>Nursing of Children and Families</td>
<td>4</td>
<td>Equivalent: NUR 2310</td>
<td></td>
<td>For students and students with a bachelor's degree or higher from a U.S. institution.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Prerequisite: Grade of 'B-' or better in first-year nursing courses.</td>
<td></td>
<td>This course focuses on the student's continuing development to apply the nursing process to the unique and specialized aspects of the care of children and their families with special emphasis on growth and development needs of infancy through adolescence, health maintenance, illness and accident prevention, teaching/learning needs and responses to children and their families to selected acute illnesses and chronic health conditions; including the situational crises of hospitalization, outpatients and continuing home care. BILLABLE CONTACT HOURS: 7</td>
</tr>
</tbody>
</table>
Paralegal (PLG)

Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.

PLG 2100 Legal Research .......................... 3 Credit Hours
Equivalent: LGL 2000
English/ESL Placement: Placement into ENG 1510.
Prerequisite: Acceptance into the PLG Program.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.

This course covers the activities the paralegal undertakes immediately prior to and during a trial as well as related ethical considerations. The course will teach the student to outline depositions, summarize evidence, prepare witness and exhibit lists, prepare witnesses, and prepare exhibits for use in trials. The student also will be expected to take notes and assist at trial through the use of an actual case in law / equity. As the final course project, the student is expected to produce a trial notebook which includes all of the above materials. BILLABLE CONTACT HOURS: 3
PLG 2160 Legal Ethics ............................ 2 Credit Hours  
English/ESL Placement: Placement into ENG 1510.  
Prerequisite: PLG 2100 and PLG 2130  
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution. This course will introduce students to the types of dilemmas that they will face in the legal environment. Students will be introduced to the ethical rules developed by the American Bar Association and the rules adopted by the State of Michigan for the regulation of attorney and paralegal conduct, as well as the ethical codes of paralegal associations. The student is expected to demonstrate methods for researching the answers to ethical dilemmas in the legal environment. This course will also introduce the current business and ethical trends confronting the legal profession. BILLABLE CONTACT HOURS: 2  

PLG 2510 Paralegal Internship ....................... 3 Credit Hours  
English/ESL Placement: Placement into ENG 1510.  
Prerequisite: Written consent of the program coordinator is required for enrollment in the internship course.  
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution. The internship student will work in a law office or other legal environment on a supervised special project which relates directly to the student's career goals. The student will work a minimum of 135 hours on the project. Students may seek their own placement or be placed by the program coordinator. The project, work site, and supervisor must be approved by the program coordinator prior to beginning the placement. The student will be evaluated on their performance by their supervisor and the internship coordinator. BILLABLE CONTACT HOURS: 3  

PLG 2601 Special Topics: Bankruptcy ............ 2 Credit Hours  
English/ESL Placement: Placement into ENG 1510.  
Prerequisite: PLG 2100 and PLG 2110  
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution. Bankruptcy BILLABLE CONTACT HOURS: 2  

PLG 2602 Special Topics: Criminal Law ............ 2 Credit Hours  
English/ESL Placement: Placement into ENG 1510.  
Prerequisite: PLG 2100 and PLG 2110  
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution. Criminal Law BILLABLE CONTACT HOURS: 2  

PLG 2603 Special Topics: Employment Law ......... 2 Credit Hours  
English/ESL Placement: Placement into ENG 1510.  
Prerequisite: PLG 2100 and PLG 2110  
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution. Employment Law BILLABLE CONTACT HOURS: 2  

PLG 2604 Special Topics: Immigration Law ......... 2 Credit Hours  
English/ESL Placement: Placement into ENG 1510.  
Prerequisite: PLG 2100 and PLG 2110  
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution. Immigration Law BILLABLE CONTACT HOURS: 2  

PLG 2605 Special Topics: Family Law ............. 2 Credit Hours  
English/ESL Placement: Placement into ENG 1510.  
Prerequisite: PLG 2100 and PLG 2110  
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution. Family Law BILLABLE CONTACT HOURS: 2  

PLG 2606 Special Topics: Probate Law ............. 2 Credit Hours  
English/ESL Placement: Placement into ENG 1510.  
Prerequisite: PLG 2100 and PLG 2110  
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution. Probate Law BILLABLE CONTACT HOURS: 2  

PLG 2607 Special Topics: Intellectual Property .... 2 Credit Hours  
English/ESL Placement: Placement into ENG 1510.  
Prerequisite: PLG 2100 and PLG 2110  
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution. Intellectual Property BILLABLE CONTACT HOURS: 2  

PLG 2608 Special Topics: Real Estate .............. 2 Credit Hours  
English/ESL Placement: Placement into ENG 1510.  
Prerequisite: PLG 2100 and PLG 2110  
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution. Real Estate BILLABLE CONTACT HOURS: 2  

PLG 2609 Special Topics: Business Organizations ..... 2 Credit Hours  
English/ESL Placement: Placement into ENG 1510.  
Prerequisite: PLG 2100 and PLG 2110  
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution. Business Organizations BILLABLE CONTACT HOURS: 2  

PLG 2611 Special Topics: Legal Technology ........ 2 Credit Hours  
English/ESL Placement: Placement into ENG 1510.  
Prerequisite: PLG 2100 and PLG 2110  
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution. Legal Technology BILLABLE CONTACT HOURS: 2  

PLG 2612 Special Topics: Special Topics ........... 2 Credit Hours  
English/ESL Placement: Placement into ENG 1510.  
Prerequisite: PLG 2100 and PLG 2110  
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution. The purpose of the Special Topics course is to provide students with an intensive, hands on experience in the substance of a specific field of law, such as, but not limited to, environmental law, criminal law, family law, wills and trusts, probate, etc. The topics addressed in any semester will be announced in the specific section using OCC's online system and will be determined by student interest, community need and instructor availability. Every Special Topics course will be taught by attorneys, occasionally assisted by other experts (such as investigators), practicing in the respective specific legal specialties. BILLABLE CONTACT HOURS: 2
PLG 2613  Special Topics  2 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: PLG 2100 and PLG 2110
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.

The purpose of the Special Topics course is to provide students with an intensive, hands-on experience in the substance of a specific field of law, such as, but not limited to, environmental law, criminal law, family law, wills and trusts, probate, etc. The topics addressed in any semester will be announced in the specific section using OCC's online system and will be determined by student interest, community need and instructor availability. Every Special Topics course will be taught by attorneys, occasionally assisted by other experts (such as investigators), practicing in the respective specific legal specialties. BILLABLE CONTACT HOURS: 2

PLG 2614  Special Topics  2 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: PLG 2100 and PLG 2110
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.

The purpose of the Special Topics course is to provide students with an intensive, hands-on experience in the substance of a specific field of law, such as, but not limited to, environmental law, criminal law, family law, wills and trusts, probate, etc. The topics addressed in any semester will be announced in the specific section using OCC's online system and will be determined by student interest, community need and instructor availability. Every Special Topics course will be taught by attorneys, occasionally assisted by other experts (such as investigators), practicing in the respective specific legal specialties. BILLABLE CONTACT HOURS: 2

PLG 2615  Special Topics  2 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: PLG 2100 and PLG 2110
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.

The purpose of the Special Topics course is to provide students with an intensive, hands-on experience in the substance of a specific field of law, such as, but not limited to, environmental law, criminal law, family law, wills and trusts, probate, etc. The topics addressed in any semester will be announced in the specific section using OCC's online system and will be determined by student interest, community need and instructor availability. Every Special Topics course will be taught by attorneys, occasionally assisted by other experts (such as investigators), practicing in the respective specific legal specialties. BILLABLE CONTACT HOURS: 2

PHI 1510  Introduction to Philosophy  3 Credit Hours
English/ESL Placement: Placement into ENG 1510.

Primarily Western in orientation, this course addresses themes such as objectivity and relativism, the existence of God, the nature of reality, the self, knowledge, good lives, wisdom and the meaning of life. This course examines, in an open-ended way, competing answers to fundamental questions of human existence through the analysis, evaluation, or construction of well thought out arguments. BILLABLE CONTACT HOURS: 3

GE Outcomes: Critical Thinking

Photographic Technology (PHO)

PHO 1220  Fundamentals of Photography  3 Credit Hours
Equivalent: AVM 1220
English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)

Students will operate competently a still camera and photographic enlarger. They will identify the functions and characteristics of the various parts of such equipment. They will produce finished enlargements, beginning with unexposed black and white negative film, exposing it correctly, processing the film and using the enlarger to generate finished photographs. They will also be required to properly finish prints for exhibition. BILLABLE CONTACT HOURS: 3

GE Outcomes: Aesthetic Awareness
PHO 1500  Advanced Photography  ..................... 3 Credit Hours

English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)

Prerequisite: PHO 1220

Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.

This course builds upon skills introduced in PHO 1220 and introduces advanced techniques in black and white still photography. Emphasis will be placed on creating photos of the highest quality. Students will experiment with topics such as portraiture, still life, large format, and documentary photography. Discussion will include copy work, photographic chemistry, papers, negative and positive film and presentation of photographs.

BILLABLE CONTACT HOURS: 3

PHO 1550  History of Photography  ................. 3 Credit Hours

English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)

This course will survey the history of photography from the early 1800's to present day issues and trends. Emphasis will be placed on the mediums impact upon society and other visual arts. Technical developments, aesthetic concerns, and individual photographers will be studied.

BILLABLE CONTACT HOURS: 3

PHO 1700  Beginning Digital Photography  ........ 4 Credit Hours

English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)

This course provides students with an introduction to current digital imaging technology. Through the use of digital cameras, film recorders, scanners, printers and photo imaging software, students explore the world of the electronic darkroom. Prior computer experience is recommended but not required. BILLABLE CONTACT HOURS: 4

PHO 1800  Fundamentals of Digital Video  ........... 4 Credit Hours

English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)

This course introduces the student to basic principles of digital video production and provides a foundation for understanding the aesthetic and technical concerns associated with digital filmmaking using Final Cut Pro/Express software. Through analysis and discussion, students will develop an understanding of historical and contemporary short films. Students will produce their own short digital videos. BILLABLE CONTACT HOURS: 4

PHO 2050  Studio Photography  ...................... 3 Credit Hours

English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)

Prerequisite: PHO 1500 or consent of instructor.

Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.

This course concentrates on studio lighting and medium/large format shooting techniques. Lectures, demonstrations and practical experiences will include fashion, architecture, small product lighting and multiple exposure techniques. BILLABLE CONTACT HOURS: 3

PHO 2100  Color Photography  ....................... 3 Credit Hours

English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)

Prerequisite: PHO 1220

Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.

An introduction to the characteristics and properties of color films and deals with color exposure. The course provides experience in developing and printing of color negatives and processing color slides. BILLABLE CONTACT HOURS: 3

PHO 2110  Advanced Color Photography  .......... 3 Credit Hours

English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)

Prerequisite: PHO 1500 and PHO 2100

Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.

This course builds upon the skills introduced in PHO 2100. The student will produce color photographs using several different film types, including printing from color slides. BILLABLE CONTACT HOURS: 3

PHO 2402  Special Projects in Photography  ...... 2 Credit Hours

English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)

Prerequisite: PHO 1220 or consent of instructor.

Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.

The student will work on an individual photographic project as arranged by student and instructor. BILLABLE CONTACT HOURS: 2

PHO 2403  Special Projects in Photography  ...... 3 Credit Hours

English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)

Prerequisite: PHO 1220 or consent of instructor.

Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.

The student will work on an individual photographic project as arranged by student and instructor. BILLABLE CONTACT HOURS: 3

PHO 2404  Special Projects in Photography  ...... 4 Credit Hours

English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)

Prerequisite: PHO 1220 or consent of instructor.

Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.

The student will work on an individual photographic project as arranged by student and instructor. BILLABLE CONTACT HOURS: 4
PHO 2452 Special Projects in Digital Photography ..... 2 Credit Hours

English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)

Prerequisite: PHO 1700

Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.

The student will work on an individual digital photographic project as arranged by student and instructor. BILLABLE CONTACT HOURS: 2

PHO 2453 Special Projects in Digital Photography ..... 3 Credit Hours

English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)

Prerequisite: PHO 1700

Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.

The student will work on an individual digital photographic project as arranged by student and instructor. BILLABLE CONTACT HOURS: 3

PHO 2700 Advanced Digital Photography ........... 4 Credit Hours

English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)

Prerequisite: PHO 1700

Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.

This course builds upon the skills introduced in PHO 1700 concentrating on the electronic image as an independent form of visual expression. Students will learn advanced techniques for image manipulation and explore the creation of their own photographic imagery using digital cameras, film recorders, scanners, printers and photo imaging software within the digital darkroom. BILLABLE CONTACT HOURS: 4

PHO 2800 Advanced Digital Video ...................... 4 Credit Hours

English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)

Prerequisite: PHO 1800

Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.

Building on the skills and concepts introduced in PHO 1800, this course examines cinematic structure and strategies in digital storytelling. Students will learn advanced production and post-production techniques. Students will use Final Cut Pro/Express for digital nonlinear editing. Several production assignments and one final project will be required. Students will work collaboratively as well as individually. BILLABLE CONTACT HOURS: 4

PHO 2803 Special Projects in Digital Video ........... 3 Credit Hours

English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)

Prerequisite: PHO 2800

Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.

The course will allow the student to develop a digital video project, or projects, as arranged with the instructor. BILLABLE CONTACT HOURS: 3

Physical Education and Recreation (PER)

The student will identify one of the following physical activities and will participate in that activity for one semester. The student will be evaluated on the basis of ability, attendance, improvement, and knowledge as demonstrated in a written examination. The student will be presented with technique instruction, rules information, active participation and standards of appreciation in each activity. The emphasis is in lifetime carry-over activities, skills and sports. All activity courses are co-educational unless otherwise noted. In activities courses, the student may be required to pay additional fees and arrange for equipment.

PER 1300 Stress Management: Neuromuscular Relaxation .... 2 Credit Hours

English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).

This course is for the person who wishes to learn how to relax (reduce muscular tension) through the scientific principles of applied progressive neuromuscular relaxation. Some topics covered will include tension and anxiety reduction without drugs, anxiety and ulcers, tension and high blood pressure, tension and heart attack, and fear and success. Through lecture, discussion, and neuromuscular relaxation practice sessions, the student will learn to control anxiety, conserve energy, and thereby reduce tension that leads to nervousness. Neuromuscular relaxation helps the student to better meet the stress brought about by the pressures of modern day living. BILLABLE CONTACT HOURS: 2

GE Outcomes: Personal Development

PER 1590 Physical Well-Being in a Modern Society .................................................. 2 Credit Hours

English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).

Through a combination of classroom and supervised group activities, this course will provide the student with an understanding of the principles of physical well-being. Self-appraisal techniques of current physical status will lead to the development of a personalized program to meet the needs, demands, and concerns for a healthy lifestyle in a modern society. Course is also appropriate for the physically handicapped. BILLABLE CONTACT HOURS: 2

GE Outcomes: Personal Development
PER 1620  Basketball ........................................ 1 Credit Hour

English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)

Basic drills will be used to develop ball handling, defensive and offensive techniques. Rules and strategy of the game will be demonstrated during class play. BILLABLE CONTACT HOURS: 1

GE Outcomes: Personal Development

PER 1653  Dance - Modern .................................. 1 Credit Hour

English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)

Basic introduction to interpretive dance, working through creative movement to develop rhythmic skills, and dance techniques. Students will demonstrate skills through solo and small group choreography with and without music. BILLABLE CONTACT HOURS: 1

GE Outcomes: Aesthetic Awareness

PER 1681  Golf - Beginning .................................. 1 Credit Hour

English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)

Basic knowledge about the game of golf such as equipment, clothing, etiquette, rules, terminology, and the basic fundamentals of grip, stance, and swing. BILLABLE CONTACT HOURS: 1

GE Outcomes: Personal Development

PER 1700  Self Defense ..................................... 1 Credit Hour

English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)

Basic skills and knowledge of self-defense tactics for personal protection in daily living. Emphasis in defensive skills used in warding off attacks on one’s person, including mental awareness rather than confrontation. BILLABLE CONTACT HOURS: 1

GE Outcomes: Personal Development

PER 1746  Step Aerobics ................................... 1 Credit Hour

English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)

The purpose of this course is designed to provide the student an opportunity to gain total physical fitness through utilization of a bench step to create a routine while movements are done to various rhythmic sounds. The student will gain an opportunity to develop cardiovascular, strengthening, and flexibility components of fitness. BILLABLE CONTACT HOURS: 1

GE Outcomes: Personal Development

PER 1748  Group Exercise ................................. 1 Credit Hour

English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)

This course will introduce a variety of group exercises that benefit the student’s wellness. The types of exercise that may be included are cardiovascular and core activities such as rope jumping, sliding, and other group exercise activities. Proper technique and fitness attributes will be presented for each activity. BILLABLE CONTACT HOURS: 1

GE Outcomes: Personal Development

PER 1740  Physical Fitness ............................... 1 Credit Hour

English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)

Instruction in aerobic conditioning, self-fitness evaluation, nutrition, weight control, flexibility, strength, and cardiovascular risk factors. The student will develop an individual fitness plan based on personal need. BILLABLE CONTACT HOURS: 1

GE Outcomes: Personal Development

PER 1714  Jogging ........................................... 1 Credit Hour

English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)

Introduction to jogging as a lifetime fitness activity. The student will develop an individual jogging program conducive to reaching cardiovascular potential. BILLABLE CONTACT HOURS: 1

GE Outcomes: Personal Development

PER 1742  Aerobic Dance ............................... 1 Credit Hour

English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)

Aerobic Dance is designed to provide the student an opportunity to gain total physical fitness exercising to various rhythmic sounds. BILLABLE CONTACT HOURS: 1

GE Outcomes: Personal Development

PER 1880  Yoga ............................................. 1 Credit Hour

English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)

Basic physical aspects of the art of (Hatha) yoga. Students will develop strength, flexibility, endurance, and relaxation skills necessary to perform a graduated program of postures (Asana). BILLABLE CONTACT HOURS: 1

GE Outcomes: Personal Development
PER 1890 Bowling ............................................. 1 Credit Hour

**English/ESL Placement:** Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)

Basic bowling skills including equipment, equipment selection, stance, approach, delivery, and follow through. Student will compete in class games to demonstrate knowledge of the rules and methods of spare shooting. BILLABLE CONTACT HOURS: 1

**GE Outcomes:** Personal Development

---

PER 1920 Racquetball ............................................. 1 Credit Hour

**English/ESL Placement:** Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)

Basic skills including serve, forehand, backhand, lob, and stroke variations to accomplish strategy. Various strategies of play and rules will be taught. BILLABLE CONTACT HOURS: 1

**GE Outcomes:** Personal Development

---

PER 1930 Volleyball ............................................. 1 Credit Hour

**English/ESL Placement:** Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)

Introduction to basic skills including equipment, rules, and strategy. Variations in setting, spiking, and wall play will be demonstrated through class play. BILLABLE CONTACT HOURS: 1

**GE Outcomes:** Personal Development

---

PER 1970 Basic Rifle Safety and Marksmanship . 1 Credit Hour

**English/ESL Placement:** Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)

This course will provide instruction in firearm safety, history, law, and the proper handling of target rifles. The course also provides supervised training in rifle marksmanship. Students are required to use the rifles provided by the range facility and must meet the Michigan laws regarding gun ownership before registering for this course. State laws regarding prohibition of ownership and/or handling include and are not limited to those with felony convictions, convictions for domestic violence, and those treated for mental illness including depression. Students will identify and explain proper firearm safety in the field, during transport, and in the home. All safety guidelines will be observed during each session. BILLABLE CONTACT HOURS: 1

---

PER 2540 Medical First Responder/First Responder ....... 4 Credit Hours

**Equivalent:** PER 1540, PER 1720, PED 1720

**English/ESL Placement:** Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses.)

The purpose of this course is to provide the first responder with the knowledge and skills necessary in an emergency to help sustain life, reduce pain, and minimize the consequences of injury or sudden illness until more advanced medical help can arrive. The course content and activities will prepare participants to make appropriate decisions about the care to provide in an emergency. The course teaches the skills a first responder needs to act as a crucial link in the emergency medical services (EMS) system. The contents of this course meet or exceed all requirements of the Michigan Department of Industrial and Consumer Services for Medical First Responder (MFR) licensure when conducted by an instructor licensed by the State of Michigan. This course includes professional rescuer CPR certification. This course is equivalent to courses previously called Advanced First Aid and Emergency Care and meets or exceeds all requirements of the American Red Cross for the Emergency Response course. BILLABLE CONTACT HOURS: 4

**GE Outcomes:** Critical Thinking

---

PER 2610 Physical Fitness/Defense Tactics ....... 3 Credit Hours

**English/ESL Placement:** Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)

The student will develop his or her body tone and muscular coordination through physical fitness activities. Students will then practice defensive tactics such as basic defensive holds and movements. They will practice these holds until completely mastered with great speed and effectiveness. Care will be exercised in practicing judo so that the tactics used will not cause injury unless the necessity arises during enforcement action as a police officer. Further, the student will develop the techniques used in hand-to-hand combat by the application of eighteen judo holds pertaining to simple judo, policeman's hold, push and grab techniques, lock and twist holds, choke releases and disarming techniques. Structural weaknesses of the human body vulnerable to attack and personal weapons of the body used for self-defense and counter-attack will be identified by the defensive tactics units. BILLABLE CONTACT HOURS: 3

**GE Outcomes:** Personal Development

---

PER 2812 Coaching Skills and Techniques ........... 2 Credit Hours

**English/ESL Placement:** Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)

**Prerequisite:** PER 2810

This course allows the students to be introduced to the diverse roles of a coach. In addition to a classroom setting, time will be spent in an athletic setting. The experience will vary to meet the students’ needs and to expand the students’ background on the many roles of a coach. BILLABLE CONTACT HOURS: 2

---

PER 2840 Recreational Leadership ..................... 3 Credit Hours

**English/ESL Placement:** Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)

The student will identify and define major aspects of leadership techniques and the personality traits of effective leaders. The student will then demonstrate his or her leadership abilities through class participation in planning and leading fifteen low-organized games which he or she will select from a card file of fifty games he or she has compiled. BILLABLE CONTACT HOURS: 3
Physical Science (PSC)

Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.

PSC 1560 Physical Science I .................................. 4 Credit Hours

English/ESL Placement: Placement into ENG 1510.

Prerequisite: Secondary school algebra or MAT 1100.

Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution. The student will identify, define, and describe the following basic concepts of chemistry and physics: chemical nomenclature, oxidation/reduction, acids, bases and salts, atomic structure, mechanics, magnetism and electricity, optics, and relativity. A laboratory is integral to the course. BILLABLE CONTACT HOURS: 5

GE Outcomes: Critical Thinking, Scientific Literacy

Physics (PHY)

Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.

PHY 1031 Concepts in Physics .......................... 4 Credit Hours

English/ESL Placement: Placement into ENG 1510.

This is a non-mathematical introduction to basic concepts in physics and their interrelationships. These ideas will be applied to everyday phenomena, current technology, and the entire universe. A laboratory is integral to the course. BILLABLE CONTACT HOURS: 5

GE Outcomes: Critical Thinking, Scientific Literacy

PHY 1610 College Physics I .................................. 4 Credit Hours

English/ESL Placement: Placement into ENG 1510.

Prerequisite: MAT 1540 or MAT 1560 or higher.

Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution. The student will investigate the physical aspects of mechanics, sound, and heat. The student will perform measurements and experiments in mechanics and thermodynamics. BILLABLE CONTACT HOURS: 6

GE Outcomes: Critical Thinking, Scientific Literacy

PHY 1620 College Physics II .................................. 4 Credit Hours

English/ESL Placement: Placement into ENG 1510.

Prerequisite: PHY 1610

Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution. The student will study electricity, magnetism, optics, and selected topics in atomic physics. The student will perform measurements and experiments in electricity, magnetism, and optics. BILLABLE CONTACT HOURS: 6

GE Outcomes: Critical Thinking, Scientific Literacy

Political Science (POL)

POL 1510 American Government .......................... 3 Credit Hours

English/ESL Placement: Placement into ENG 1510.

Prerequisite: Completion of ENG 1350 or ENG 1450; or placement into ENG 1510.

This course focuses on the structure and functioning of American government; introductory analysis of the process of decision-making, the relationship of the state and the individual, and the degree and nature of popular control. BILLABLE CONTACT HOURS: 3

GE Outcomes: Social Responsibility

POL 1990 Topics in Political Science: Constitutional Law ........................................... 3 Credit Hours

English/ESL Placement: Placement into ENG 1510.

Constitutional Law. BILLABLE CONTACT HOURS: 3

POL 1991 Topics in Political Science: Sports in the Political Arena ........................................... 3 Credit Hours

English/ESL Placement: Placement into ENG 1510.

Sports in the Political Arena. BILLABLE CONTACT HOURS: 3

POL 1992 Topics in Political Science: Politics of Africa ........................................... 3 Credit Hours

English/ESL Placement: Placement into ENG 1510.

Politics of Africa. BILLABLE CONTACT HOURS: 3

POL 1993 Topics in Political Science: Presidential Politics ........................................... 3 Credit Hours

English/ESL Placement: Placement into ENG 1510.

This course will examine the role of the president and the executive branch of the United States government. The role of a unitary executive and the constitutional decisions made in establishing this position, as well as presidential power, leadership, presidents at war, presidents and policy, and presidential elections and campaigns will be covered. BILLABLE CONTACT HOURS: 3
Psychology (PSY)

PSY 2510 Introduction to Psychology ............ 3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
This course includes the basic concepts and principles of scientific psychology, its history as a discipline, and its major theories. The topics covered include methods of research, the biology of behavior, consciousness, sensations and perception, memory, conditioning and learning, thinking and problem solving, and motivation and emotion. With its completion, the student will understand and apply a more comprehensive perspective of human behavior and mental processes and will better perceive psychology's role within the social sciences. BILLABLE CONTACT HOURS: 3
GE Outcomes: Scientific Literacy

PSY 2630 Psychology of Organizational Behavior ..... 3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
This course will introduce the student to the nature of human relations within complex human organizations, and allow the student to understand the impact of organizational roles and relationships on behaviors. The student will be given opportunities to develop skills in working together including skills in creative collaboration (in oral as well as written communication) and in managing productive group interaction. Through these opportunities, the student will be encouraged to sharpen personal as well as intellectual skills: skills for building effective working relationships and for making productive response to changes in the work place. BILLABLE CONTACT HOURS: 3
GE Outcomes: Effective Communication, Personal Development

PSY 2710 Child Development ......................... 3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: PSY 2510 or consent of instructor.
The student will identify the major hereditary and environmental influences, needs, wants, and development tasks at each of the major stages of growth from conception to adolescence and interpret their significance for adulthood. BILLABLE CONTACT HOURS: 3
GE Outcomes: Scientific Literacy

PSY 2730 Survey of the Exceptional Child ........ 3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: PSY 2510
This course is a survey of the differences and disturbances among children. The student will be expected to recognize and explain behavioral patterns not considered normal and examine pre-screening and assessment processes and tools. The course will explore interventions that support inclusion and collaboration in the school and community. An understanding of the perspectives on culture and family will be highlighted. Fact, principle, theory and research as it applies to exceptional children from early childhood through transition to adult will be examined. BILLABLE CONTACT HOURS: 3
GE Outcomes: Critical Thinking

POL 2520 Urban and State Politics ............... 3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
This course will focus on the problems of urban living within the structure of the American states. The role of political parties and the behavior of urban, suburban, and rural residents and the interests which they represent within the framework of the state and metropolitan government will be examined. BILLABLE CONTACT HOURS: 3
GE Outcomes: Social Responsibility

POL 2530 International Relations ................. 3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
This course is designed to encourage students to understand the global environment in a political context and to think critically about how political, economic and technological changes affect it. Students will be introduced to the basic principles of national development, international law and international organizations. They will also study the influences which shape the foreign policy of modern states and the impact of policy decisions on the contemporary world. BILLABLE CONTACT HOURS: 3
GE Outcomes: Global Understanding and Responsibility

POL 2590 Topics in Political Science: Globalization and the Environment ................................ 3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Globalization and the Environment. BILLABLE CONTACT HOURS: 3

POL 2610 Comparative World Politics ............ 3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
This course will introduce criteria for the comparison of social systems. It will demonstrate political patterns, ideologies and structures in selected systems. There will be an effort to promote the appreciation of the great diversity in political approaches and political culture, as well as the great commonality of political striving throughout the world. BILLABLE CONTACT HOURS: 3
GE Outcomes: Global Understanding and Responsibility

POL 2990 Topics in Political Science: Globalization and the Environment ............................... 3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Globalization and the Environment. BILLABLE CONTACT HOURS: 3

POL 2991 Topics in Political Science Introduction to Public Policy ........................................ 3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Introduction to Public Policy BILLABLE CONTACT HOURS: 3

POL 2992 Topics in Political Science ............. 1-4 Credit Hours
English/ESL Placement: Placement into ENG 1510.
This course will deal with specific topics of interest in political science to the public. The topics will vary from semester to semester. Refer to the specific section using OCC's online system for current topics. In studying each topic the student will become cognizant of the key political concepts underlying the topic. Emphasis will be directed to understanding the historic, current, and future political issues and their impact on our society, the relationship between fact and generalization, the relative input of individuals and institutions in events, and the ability to understand all sides of the political issues at hand. BILLABLE CONTACT HOURS: 1 - 4

GE Outcomes: Social Responsibility

GE Outcomes:

Children from early childhood through transition to adult will be examined. An understanding of the perspectives on culture and family will be highlighted. Fact, principle, theory and research as it applies to exceptional children from early childhood through transition to adult will be examined. BILLABLE CONTACT HOURS: 3

GE Outcomes: Critical Thinking

GE Outcomes: Effective Communication, Personal Development
PSY 2740 Human Development Across the Lifespan ..... 3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: PSY 2510
This course studies systematic change in psychological and behavioral processes of humans over the lifespan, beginning with prenatal development and progressing through end of life. The course will examine fact, principle, theory and research as it applies to biological, cognitive, emotional, linguistic, social, and behavioral development. BILLABLE CONTACT HOURS: 3

GE Outcomes: Critical Thinking

NY 2810 Psychology of Adjustment ................. 3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: PSY 2510
The student will demonstrate an understanding of the concepts and research pertaining to the adjustment process, including the concepts of adjustment, personality, coping, stress, mental health, mental illness, psychological assessment and psychotherapy. BILLABLE CONTACT HOURS: 3

GE Outcomes: Critical Thinking

PSY 2820 Social Psychology .......................3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: PSY 2510
This course introduces students to major concepts in the field of social psychology--the way in which individuals perceive, relate to and influence others. Classic and current theories in the area of social inference, attribution, conformity and obedience, emotion, altruism, stereotypes and prejudice, attraction and aggression, attitudes and persuasion will be presented. BILLABLE CONTACT HOURS: 3

GE Outcomes: Critical Thinking

PSY 2910 Abnormal Psychology ....................3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: PSY 2510
The student will demonstrate an understanding of the major disorders in the diagnostic and statistical manual (anxiety, mood, dissociative, personality, substance abuse, atypical sexuality, organic, and schizophrenia), therapeutic techniques relating to the various disorders will be explored. BILLABLE CONTACT HOURS: 3

GE Outcomes: Critical Thinking

Radiologic Technology (RAD)

Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.

RAD 2000 Introduction to Radiologic Technology .....2 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: Admission to the RAD Technology Program.
Corequisite: RAD 2009 RAD 2011 RAD 2088 and RAD 2140
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
This course introduces the scope of activities and responsibilities necessary to become a radiologic technologist. An overview of the curriculum will be provided to identify the responsibilities of the radiographer. Fundamental ethical and legal obligations to patients and society are discussed, as well as basic radiation safety and protective measures and quality assurance. Identification of the physical and emotional needs of the patient, nursing procedures, and patient care techniques used with specific radiographic examinations are included. BILLABLE CONTACT HOURS: 2

RAD 2009 Radiographic Procedures I ............ 2 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: Admission to the RAD Technology Program.
Corequisite: RAD 2000 RAD 2011 RAD 2140 and RAD 2088
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
This course provides instruction and practical applications in positioning of the chest, abdomen, upper and lower extremities, for various radiographic projections. Emphasis will also be placed on anatomy and evaluation of radiographs. BILLABLE CONTACT HOURS: 2

RAD 2011 Procedures Lab I ............................1 Credit Hour
English/ESL Placement: Placement into ENG 1510.
Prerequisite: Admission and advancement in the RAD Technology Program.
Corequisite: RAD 2000 RAD 2009 RAD 2140 and RAD 2088
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
This course provides the student with practical applications and simulations of the positioning procedures taught in Radiographic Procedures I. Additional emphasis is placed on patient care, communication and safe practice. Instruction takes place in the campus radiography lab. BILLABLE CONTACT HOURS: 2

RAD 2021 Radiographic Procedures II ............2 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: RAD 2000 RAD 2009 RAD 2140 and RAD 2088
Corequisite: RAD 2110 RAD 2022 and RAD 2199
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
This course is a continuation of RAD 2009 which introduces additional procedures such as the spine and pelvis, bony thorax and contrast studies of the digestive, hepatobiliary and urinary systems. Emphasis will also be placed on anatomy and evaluation of radiographs. BILLABLE CONTACT HOURS: 2
RAD 2022  
Procedures Lab II  

1 Credit Hour  

English/ESL Placement: Placement into ENG 1510.  
Prerequisite: RAD 2000 RAD 2009 RAD 2110 RAD 2140 and RAD 2088  
Corequisite: RAD 2021 RAD 2110 and RAD 2199  
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.  
This course provides practical applications and simulations of the positioning procedures taught in Radiographic Procedures II. Additional emphasis is placed on patient care, communication and safe practice. Instruction takes place in the campus radiography lab. BILLABLE CONTACT HOURS: 2  

RAD 2030  
Advanced Radiographic Procedures  

2 Credit Hours  

English/ESL Placement: Placement into ENG 1510.  
Prerequisite: RAD 2080 and RAD 2244  
Corequisite: RAD 2033 and RAD 2266  
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.  
This course introduces advanced procedures which includes radiographic anatomy and positioning of the skull, trauma radiography, pediatric procedures and cross sectional anatomy. Emphasis will also be placed on the critique of radiographs. BILLABLE CONTACT HOURS: 2  

RAD 2033  
Procedures Lab III  

1 Credit Hour  

English/ESL Placement: Placement into ENG 1510.  
Prerequisite: RAD 2080 and RAD 2244  
Corequisite: RAD 2030 and RAD 2266  
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.  
This course provides practical applications and simulations of the positioning procedures taught in Advanced Radiographic Procedures. Additional emphasis is placed on independent clinical judgment and critical thinking skills. Instruction takes place in the campus radiography lab. BILLABLE CONTACT HOURS: 2  

RAD 2080  
Radiation Physics  

3 Credit Hours  

English/ESL Placement: Placement into ENG 1510.  
Prerequisite: RAD 2021 RAD 2110 RAD 2122 and RAD 2199 or consent of instructor.  
Corequisite: RAD 2244  
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.  
This course emphasizes the fundamentals of radiation production and the basic principles underlying the operation of radiographic equipment. Information on electromagnetic radiation, beam characteristics, units of measure, tube housing, anodes and cathodes and x-ray circuitry are also presented. BILLABLE CONTACT HOURS: 3  

RAD 2088  
Clinical Practice I  

4 Credit Hours  

English/ESL Placement: Placement into ENG 1510.  
Prerequisite: Admission to the Radiologic Technology Program.  
Corequisite: RAD 2000 RAD 2009 RAD 2110 RAD 2140  
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.  
This is a clinical course which will be conducted in an assigned clinical facility where the supervised practice in performing selected procedures will be provided. Simple competencies will be mastered before progressing to more complicated levels. The development of a greater understanding in the practice of professional behaviors, responsibilities and team work is expected. BILLABLE CONTACT HOURS: 7  

RAD 2110  
Radiographic Exposure/Quality Assurance And Imaging Systems  

3 Credit Hours  

English/ESL Placement: Placement into ENG 1510.  
Prerequisite: RAD 2000 RAD 2009 RAD 2110 RAD 2088 and RAD 2140  
Corequisite: RAD 2021 RAD 2222 RAD 2199  
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.  
This course will provide the practical and theoretical knowledge necessary to function in a radiographic room by setting technical factors, implementing accessory tools such as grids, filters and screens. This course will also provide knowledge of the relationship between radiographic exposure and processing used to produce the finished radiograph. Computed Radiographic Imaging and Digital Imaging procedures will also be discussed. BILLABLE CONTACT HOURS: 3  

RAD 2120  
Radiologic Pathology  

2 Credit Hours  

English/ESL Placement: Placement into ENG 1510.  
Prerequisite: RAD 2030 RAD 2033 and RAD 2266  
Corequisite: RAD 2220 RAD 2277  
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.  
This course is designed to provide an appreciation of the pathophysiologic states that can exist within the human body and how these pathologic states relate to the changes which will be seen on radiographic images. A systematic approach to the study of diseases will be used and will include all body systems. Radiologic diagnosis in trauma situations will also be discussed. BILLABLE CONTACT HOURS: 2  

RAD 2140  
Radiation Protection/Radiation Biology  

3 Credit Hours  

English/ESL Placement: Placement into ENG 1510.  
Prerequisite: Admission to the Radiologic Technology Program.  
Corequisite: RAD 2000 RAD 2009 RAD 2110  
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.  
This course is designed to teach the basic principles of radiation safety for patients, personnel and self. Quantities and units of radiation protection, detection instruments, protection devices and state and federal laws governing the use of radiation will be presented. The radiation biology portion of this course will emphasize interactions of radiation with physiological systems, genetics, radiation injury and radiation dosimetry. BILLABLE CONTACT HOURS: 3
RAD 2199  Clinical Practice II  6 Credit Hours  
English/ESL Placement: Placement into ENG 1510.  
Prerequisite: RAD 2000 RAD 2009 RAD 2011 RAD 2088 and RAD 2140  
Corequisite: RAD 2022 RAD 2110  
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.  
This clinical course will be conducted in an assigned clinical facility where the student will receive supervised practice in performing selected procedures. This course will build on the competencies gained in Clinical Practice I. Progress will occur in accordance with the level of student competence. BILLABLE CONTACT HOURS: 11

RAD 2220  Radiation Seminar  2 Credit Hours  
English/ESL Placement: Placement into ENG 1510.  
Prerequisite: RAD 2030 RAD 2033 and RAD 2266  
Corequisite: RAD 2120 RAD 2277  
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.  
This course will be conducted in the format of a seminar in which the student will have an opportunity to research special imaging devices and procedures and make classroom presentation of the research. Emphasis will be on the most current types of imaging modalities and guest lecturers will participate whenever appropriate. BILLABLE CONTACT HOURS: 9

RAD 2244  Clinical Practice III  5 Credit Hours  
English/ESL Placement: Placement into ENG 1510.  
Prerequisite: RAD 2021 RAD 2022 and RAD 2110  
Corequisite: RAD 2080 RAD 2033  
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.  
This course is a continuation of Clinical Practice I & II. Emphasis is placed on the development of problem solving skills with more complex, multiple approach radiographic procedures. ER & OR experience will be gained and skills will be further developed in the evaluation of radiographic images. Progress in clinical practice will occur in accordance with the level of student competence. BILLABLE CONTACT HOURS: 8

RAD 2266  Clinical Practice IV  8 Credit Hours  
English/ESL Placement: Placement into ENG 1510.  
Prerequisite: RAD 2080 and RAD 2244  
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.  
This course is a continuation of Clinical Practice I, II and III. Skills will be refined in critiquing images and performing complex exams requiring problem solving and/or critical thinking approaches. Experience will be gained with more advanced modalities such as interventional radiography, CT, MRI and ultrasound. BILLABLE CONTACT HOURS: 11

RAD 2277  Clinical Practice V  8 Credit Hours  
English/ESL Placement: Placement into ENG 1510.  
Prerequisite: RAD 2030 RAD 2033 and RAD 2266  
Corequisite: RAD 2120 RAD 2220  
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.  
This course is a continuation of Clinical Practice I, II, III and IV. Skills in critiquing images and performing complex exams will be refined requiring problem solving and/or critical thinking approaches. Students will gain experience with more advanced modalities such as interventional radiography, CT, MRI and ultrasound. BILLABLE CONTACT HOURS: 11

Respiratory Therapy (RSP)

RSP 1220  Introduction to Respiratory Care  4 Credit Hours  
English/ESL Placement: Placement into ENG 1510.  
Prerequisite: Admission to the Respiratory Therapy Program.  
Corequisite: RSP 2230 RSP 2240  
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.  
The course will provide an overview of the historical development and current practice of Respiratory Care. The student will be familiarized with common abnormalities of the cardiopulmonary system and with the respiratory care modalities used to manage these problems. A brief review of the goals, indications, contraindications, and potential hazards of respiratory care procedures will be introduced through class discussion and demonstration. Equipment related to Respiratory Care modalities will be demonstrated and floor therapy procedures will be introduced in the College Respiratory Therapy lab. Current issues and controversies involving the field will be discussed. BILLABLE CONTACT HOURS: 5

RSP 2230  Cardiopulmonary Structure and Function  3 Credit Hours  
English/ESL Placement: Placement into ENG 1510.  
Prerequisite: Admission to the Respiratory Therapy Program.  
Corequisite: RSP 1220 RSP 2240  
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.  
The student will review in depth the normal structure and function of the cardiopulmonary systems of the human body, and the interactions between these systems. The pathology and impact of common cardiopulmonary disorders will be reviewed through class discussion, outside research projects and verbal presentations. Diagnostic and therapeutic respiratory care procedures related to monitoring of cardiopulmonary status and treatment of cardiopulmonary disorders will be briefly introduced in this course. BILLABLE CONTACT HOURS: 3

RSP 2240  Pharmacology for Respiratory Therapy  3 Credit Hours  
English/ESL Placement: Placement into ENG 1510.  
Prerequisite: Admission to the Respiratory Therapy Program.  
Corequisite: RSP 1220 RSP 2230  
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.  
This pharmacology course is designed to inform the respiratory therapy student about medications that are specifically delivered by respiratory care practitioners. An in-depth study of the autonomic nervous system with common abnormalities of the cardiopulmonary system and with the pharmacological management of respiratory medications. The course will also focus on critical care pharmacology, anesthetics, and anti-infective agents. The student should gain a complete understanding of the physiological response to all the above medications and the pharmacological management of cardiopulmonary conditions. BILLABLE CONTACT HOURS: 3
RSP 2250  Floor Therapy and Equipment Procedures  ..... 4 Credit Hours

English/ESL Placement: Placement into ENG 1510.
Prerequisite: RSP 1220 RSP 2230 and RSP 2240.
Corequisite: RSP 2260 and RSP 2290

Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.

This course focuses on the operation, application, and monitoring of respiratory therapy devices used to deliver floor therapy in the clinical setting, including: medical gas therapy, aerosol and humidity therapy, aerosol drug administration, bronchial hygiene therapy, arterial puncture and expansion therapy. Equipment related to these procedures will be studied in depth, and floor therapy procedures will be practiced in the College Respiratory Therapy Lab. This course includes a weekly laboratory session. BILLABLE CONTACT HOURS: 5

RSP 2260  Cardiopulmonary Pathophysiology  2 Credit Hours

English/ESL Placement: Placement into ENG 1510.
Prerequisite: RSP 1220 RSP 2230 and RSP 2240.
Corequisite: RSP 2250 RSP 2290

Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.

This course is a detailed study of disease affecting the cardiovascular and pulmonary systems. Emphasis is placed on a detailed study of the etiology, clinical manifestations, treatment, complications, and prognosis for most cardiopulmonary disorders. Diagnostic respiratory care procedures related to the diagnosis, monitoring and treatment of cardiopulmonary disorders will be covered in detail. BILLABLE CONTACT HOURS: 2

RSP 2290  Diagnostic Testing  3 Credit Hours

Equivalent: RSP 2280

English/ESL Placement: Placement into ENG 1510.
Prerequisite: RSP 1220 RSP 2230 and RSP 2240.
Corequisite: RSP 2250 RSP 2260

Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.

The student will become familiar with techniques and equipment used for diagnosis and monitoring of patients with cardiopulmonary disorders. Emphasis is placed on acid-base balance and blood gas studies, EKG monitoring/interpretation, chest X-ray interpretation, nutrition, laboratory tests, sleep studies, bronchoscopy, capnography and pulmonary function testing/interpretation. Other related diagnostic tests are reviewed through assigned student outside research projects. BILLABLE CONTACT HOURS: 3

RSP 2310  Critical Care Equipment and Procedures  4 Credit Hours

Equivalent: RSP 2300

English/ESL Placement: Placement into ENG 1510.
Prerequisite: RSP 2250 RSP 2260 and RSP 2290.
Corequisite: RSP 2320

Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.

This course focuses on the operation, application and monitoring of respiratory care procedures used in the adult critical care setting, including: artificial airways, drawing blood from arterial lines, noninvasive ventilation CPR, secretion removal, and mechanical ventilation. Equipment related to these procedures will be studied in depth, and critical care procedures will be practiced in the College Respiratory Therapy Lab. Much of this course will concentrate on familiarizing the student with adult mechanical ventilators currently being utilized in the emergency room and critical care units, including the procedures the therapist uses to set up, monitor, maintain, transport and wean the adult patient from mechanical ventilation. This course includes a weekly laboratory session. BILLABLE CONTACT HOURS: 5

RSP 2320  Clinical Practice I  4 Credit Hours

Equivalent: RSP 2270, RSP 2275

English/ESL Placement: Placement into ENG 1510.
Prerequisite: RSP 2250 RSP 2260 and RSP 2290.
Corequisite: RSP 2310

Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.

The student will gain practical experience in the hospital. Areas of concentration will include: patient care arts, patient assessment, pharmacology of aerosol drugs, chart review, therapy documentation, infection control procedures, medical gas therapy, aerosol and humidity therapy, aerosol drug administration, bronchial hygiene therapy, expansion therapy, and cardiopulmonary resuscitation. Students will also complete a variety of case studies, critical thinking and patient care plan assignments as well as competency assessment of related clinical skills. A minimum of 12 hours per week of supervised clinical practice in a variety of settings will be included. BILLABLE CONTACT HOURS: 7

RSP 2326  Clinical Practice II  6 Credit Hours

Equivalent: RSP 2310, RSP 2320

English/ESL Placement: Placement into ENG 1510.
Prerequisite: RSP 2310 and RSP 2320.
Corequisite: RSP 2350

Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.

The student will continue to gain experience in floor therapy procedures and will be exposed to respiratory care procedures of a more complex nature, including: adult critical care procedures (artificial airway insertion/monitoring/care, critical care CPR, arterial puncture and blood gas analysis, drawing blood from arterial lines, suctioning and others) emergency room care and adult mechanical ventilation (patient assessment, ventilator selection/preparation, initiation of ventilation, ventilating patient monitoring, vent troubleshooting and vent weaning). Students will continue to complete related case studies, critical thinking and care plan worksheets and competency assessment of clinical skills. In addition, students will complete a variety of rotations in hospital or home care sites. A minimum of 24 hours per week of supervised clinical practice will be included. BILLABLE CONTACT HOURS: 9
RSP 2350  Advanced Clinical Applications  .......... 4 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: RSP 2310 and RSP 2320.
Corequisite: RSP 2326
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
This course focuses on the operation, application and monitoring of respiratory care procedures used in the neonatal and pediatric critical care setting, including: artificial airways, CPR, secretion removal, artificial surfactant administration and mechanical ventilation. Equipment related to these procedures will be studied in depth and critical care procedures will be practiced in the College Respiratory Therapy Lab. Advanced hemodynamic interpretation and monitoring, HFV, Nitric Oxide, ECMO and literature review of published research topics will be included. This course includes a weekly laboratory session. BILLABLE CONTACT HOURS: 5

RSP 2360  Clinical Practice III  .....................6 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: RSP 2326 and RSP 2350.
Corequisite: RSP 2370
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
The student will continue to gain experience in performing respiratory therapy functions of a more advanced nature including: emergency care, adult/pediatric/neonatal mechanical ventilation and critical care and advanced monitoring techniques. Participation in patient care as a member of the medical team will be emphasized. A minimum of 24 hours per week of supervised clinical experience in hospital or clinic settings will be provided. BILLABLE CONTACT HOURS: 9

RSP 2370  Registry Review Seminar  ................2 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: RSP 2326 and RSP 2350.
Corequisite: RSP 2360
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
This course provides advanced practitioner students with an opportunity to review and demonstrates their summative mastery of the cognitive areas relating to the national board examinations. Students' assessment skills will be needed to recommend diagnostic tests, special procedures and modification of therapy. BILLABLE CONTACT HOURS: 2

Robotics / Automated Systems Technology (ROB)

ROB 1500  Introduction to Robotics Technology  .......... 4 Credit Hours
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
This course is an overview of robotic and automated systems technology. The student will be introduced to basic manufacturing techniques, robot terminology, different types of automation, safety, basic robotic programming, interfacing robotic communications, automated work cells, and robotic applications. Robot operations and programming fundamentals will be applied by the students. BILLABLE CONTACT HOURS: 4

ROB 1520  Robotic Maintenance  .....................4 Credit Hours
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: ROB 1500
This course is designed to give students a detailed knowledge of robotic mechanical units. The types of gears and gear reduction systems that are used in robots will be studied. Many aspects of robotic mechanical units will be observed, including mechanical adjustments and preventative maintenance. Controller setting and procedures which influence the motion of the robotic manipulator will be investigated. The safety procedures involved in working with robotic mechanical units will be emphasized. BILLABLE CONTACT HOURS: 5

ROB 1620  Industrial Robotic Applications  .......... 4 Credit Hours
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: ROB 1500
This course offers the opportunity to study, program, and work with stand-alone robots and with robots integrated into work cells. Applications studied will include palletizing and packaging, material joining, material removal and material handling. An in depth study of applications programming will be covered during the semester. Programming will include different methods of error handling and operator interfacing used in robotic applications. Students will be introduced to robotic simulation. BILLABLE CONTACT HOURS: 5

ROB 1640  Interpolated Welding Robotic Application  .......... 4 Credit Hours
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: ROB 1620
This course will examine the complex motions in robotic applications. Controller frame set-up and programming techniques for interpolated linear and circular motions will be investigated in the lecture. The concepts will be applied in the Robotics Lab to investigate techniques for various types of material removal and joining applications. The course will include lectures on basic welding fundamentals. The student will program and set weld schedules to enable robotic welding applications using Gas Metal Arc Welding (GMAW) and resistance welding. Students will use robotic simulation for complex motions. BILLABLE CONTACT HOURS: 5

ROB 1650  Collaborative Robotics  .....................2 Credit Hours
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: ROB 1620
This course explores the application of collaborative robotics for safe and effective interaction with human workers while performing industrial tasks. The setup of the collaborative robot parameters and programming techniques will be applied by the student. Risk assessment will be outlined, and safety systems used in conjunction with the robots will be studied. Various labs and applications are defined in which the student will develop the programs for collaborative robotics. BILLABLE CONTACT HOURS: 3
ROB 1660 Robotic Communications and Machine Vision ................................................................. 4 Credit Hours

Prerequisite: ROB 1620

This course will give the student a working knowledge of the various types of industrial sensors incorporated into a complex work cell. The student will utilize point-to-point wiring interfaces, field device networks, and data networks to investigate how controllers are programmed to interact with the types of signals the sensors will supply to the controller. Concepts of machine vision lighting/lensing and programming will be studied and applied to robotic applications. Students will study the use of simulation in programming signal exchanges in robotics applications. BILLABLE CONTACT HOURS: 5

ROB 2040 Programmable Controller Applications ................................................................. 4 Credit Hours

Prerequisite: ROB 2140

This class will introduce the fundamentals of Programmable Logic Controller (PLC) operations, including symbology and programming techniques. PLC hardware and data structures will be presented. Methods of using the programming interface to troubleshoot applications will be emphasized. The student will write, enter, and execute application programs using the programmable controllers and Human Machine Interface (HMI). The use of the Robotics Lab equipment will give the student practical programming and troubleshooting skills used in the maintenance of automated systems. BILLABLE CONTACT HOURS: 5

ROB 2140 Advanced Programmable Controllers Applications ................................................................. 4 Credit Hours

Prerequisite: ROB 2040

This course focuses on the maintenance aspect of robot controllers. Students will study the techniques and components involved in maintaining industrial sensors incorporated into a complex work cell. The student will utilize point-to-point wiring interfaces, field device networks, and data networks to investigate how controllers are programmed to interact with the types of signals the sensors will supply to the controller. Concepts of machine vision lighting/lensing and programming will be studied and applied to robotic applications. Students will study the use of simulation in programming signal exchanges in robotics applications. BILLABLE CONTACT HOURS: 4

ROB 2400 Robotic Automated Systems Applications ................................................................. 4 Credit Hours

Prerequisite: ROB 1640 and ROB 1660

This course provides the system aspects for applying robots in automation. Topics include the process requirements, programming, and communication for implementing robotic applications. The student will gain practical information on how these systems are interfaced together mechanically, electrically and software wise. Robotic simulation and machine vision sensors will be utilized by the students in robotic work cell applications. BILLABLE CONTACT HOURS: 4

ROB 2500 Robotic Controller Maintenance ................................................................. 4 Credit Hours

Prerequisite: ROB 1500 or consent of instructor.

This course will cover the maintenance aspect of robot controllers. Students will study the techniques and components involved in maintenance including: controller settings; electrical/electronic architecture; analysis and troubleshooting techniques of robot controllers. Students will utilize observations, documentation, and prints to diagnose and correct problems on the robotic controllers. BILLABLE CONTACT HOURS: 5

Service Learning (SRV)

SRV 1100 Service Learning Elective ............................................................................. 1 Credit Hour

Prerequisite: Consent of instructor and department.

This course focuses on an awareness of social responsibility and active citizenship by identifying community needs and resources relating to a student's field of study. Students will apply, in a community service setting, what they are learning in their current OCC class or have learned in an OCC class they took immediately prior to the current semester. With the approval of an OCC instructor and the department chair, students will select their own service-learning project from the OCC Service Learning database and negotiate their schedule with the community partner. Evaluation will be completed by the OCC instructor of record, based on documentation of the work completed, evaluation report completed by the student's supervisor at the project site, and the student's own written reflection on the project. Project must be begun and completed during the semester the credit is requested, and only one SRV 1100 credit can be earned. Required forms must be picked up at a faculty department office. BILLABLE CONTACT HOURS: 1

Sign Language Interpreter (SLI)

Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.

SLI 1000 American Sign Language (ASL) I .................................................................. 3 Credit Hours

Equivalent: SLS 1000, SLS 1000

English/ESL Placement: Placement into ENG 1510.

This course provides an introduction to American Sign Language (ASL), including basic grammar, vocabulary, fingerspelling, and number use. Students will be expected to attain a basic proficiency in expressive and receptive ASL. American Deaf culture topics will also be introduced. BILLABLE CONTACT HOURS: 3

GE Outcomes: Effective Communication

SLI 1001 Orientation to Deafness ............................................................................. 2 Credit Hours

Equivalent: SLS 1001, SLS 1001

English/ESL Placement: Placement into ENG 1510.

This course provides an overview of deafness, with an emphasis on the impact of deafness on the individual and the family, social patterns of the Deaf community and culture, and historical and changing attitudes toward persons with disabilities. BILLABLE CONTACT HOURS: 2
SLI 1010  American Sign Language (ASL) II  .......3 Credit Hours
Equivalent: SLS 1010,SLS 1010
English/ESL Placement: Placement into ENG 1510.
Prerequisite: Grade of 'C+' or better in SLI 1000 or consent of departmental designee.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
This course builds on the introduction to American Sign Language (ASL) provided in SLS 1000. The course will continue vocabulary building and mastery of basic grammar. American Deaf culture topics will also be introduced. BILLABLE CONTACT HOURS: 3
GE Outcomes: Effective Communication

SLI 1020  American Sign Language (ASL) III  .......3 Credit Hours
Equivalent: SLS 1020,SLS 1020
English/ESL Placement: Placement into ENG 1510.
Prerequisite: Grade of 'C+' or better in SLI 1010 or consent of departmental designee.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
This course provides instruction in vocabulary building and mastery of grammar through rigorous receptive and expressive language activities. American Sign Language (ASL) skills development with application to complex grammatical structures is continued. Topics to be discussed in ASL III include the location and description of items in rooms and buildings, complaints, making suggestions, and making requests. American Deaf culture topics will be discussed. BILLABLE CONTACT HOURS: 3
GE Outcomes: Effective Communication

SLI 1030  American Sign Language (ASL) IV  .......3 Credit Hours
Equivalent: SLS 1030,SLS 1030
English/ESL Placement: Placement into ENG 1510.
Prerequisite: Grade of 'C+' or better in SLI 1020 or consent of departmental designee.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
This course provides vocabulary building and mastery of grammar through rigorous receptive and expressive language activities. American Sign Language (ASL) skills development with application to complex grammatical structures is continued. Topics to be discussed in ASL IV build from those covered in the ASL III course (descriptions, complaints, making suggestions, requests, Deaf culture). BILLABLE CONTACT HOURS: 3
GE Outcomes: Effective Communication

SLI 1040  American Sign Language (ASL) V  .......3 Credit Hours
Equivalent: SLS 1040,SLS 1040
English/ESL Placement: Placement into ENG 1510.
Prerequisite: SLI 1030 or consent of departmental designee.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
This course provides vocabulary building and continued mastery of grammar through rigorous receptive and expressive language activities. American Sign Language (ASL) skills development with application to complex grammatical structures is continued. Topics to be discussed in ASL V build from those covered in the ASL IV course (specialized vocabulary). BILLABLE CONTACT HOURS: 3

SLI 1045  American Sign Language (ASL) VI  .......3 Credit Hours
Equivalent: SLS 1045,SLS 1045
English/ESL Placement: Placement into ENG 1510.
Prerequisite: SLI 1040 or consent of departmental designee.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
This course provides vocabulary building and continued mastery of grammar through rigorous receptive and expressive language activities. American Sign Language (ASL) skills development with application to complex grammatical structures is continued. Topics to be discussed in ASL VI build from those covered in the ASL V course (specialized vocabulary). BILLABLE CONTACT HOURS: 3

SLI 1050  Linguistic Principles of ASL  ............3 Credit Hours
Equivalent: SLS 1050,SLS 1050
English/ESL Placement: Placement into ENG 1510.
Prerequisite: Grade of 'C+' or better in SLI 1030 or consent of departmental designee.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
This course provides an overview of the linguistic structures of American Sign Language (ASL), including phonology, morphology, syntax, semantics, and discourse. Topics relevant to interpreting, such as language variation and its impact on interpretation choices, will be discussed. BILLABLE CONTACT HOURS: 3

SLI 1150  Interpreting: ASL to English I  ............3 Credit Hours
Equivalent: SLS 1150,SLS 1150
English/ESL Placement: Placement into ENG 1510.
Prerequisite: Grade of 'C+' or better in SLI 1030 or consent of departmental designee.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
This course will provide an introduction to American Sign Language (ASL) to English voice interpretation via lecture, textbook readings and practical activities utilizing video materials. BILLABLE CONTACT HOURS: 3

SLI 1211  Non-manual Grammatical Features of ASL  ....2 Credit Hours
Equivalent: SLS 1211,SLS 1211
English/ESL Placement: Placement into ENG 1510.
Prerequisite: Grade of 'C+' or better in SLI 1030 or consent of departmental designee.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
This course focuses on specific facial manipulations that are essential grammatical components of American Sign Language such as lexical, morphological and syntactical non-manual signals formed by the mouth, cheeks, eyes, eyebrows, head, and shoulders. Expressive and receptive activities designed to increase awareness and use of these features will be provided. BILLABLE CONTACT HOURS: 2
SLI 1501    Deaf Culture and History          .......... 3 Credit Hours
Equivalent: SLS 1501,SLS 1500
English/ESL Placement: Placement into ENG 1510.
Prerequisite: Grade of 'C+' or better in SLI 1030 or consent of
departmental designee.
Note: Prerequisites for courses in this department are not automatically
waived for College Guest students and students with a bachelor's degree
or higher from a U.S. institution.
This course will allow students to compare prevailing American values,
beliefs and institutions with those of the Deaf community in the United
States. An examination of the history of the American Deaf community
from 1700 - present will provide information about important milestones,
technological advances, and influential figures. Subjects covered will
include Deaf people's contributions to American culture and the values,
identities, group norms, social mores, literature, art, and traditions of the
Deaf community. BILLABLE CONTACT HOURS: 3

SLI 1550    Interpreting: ASL to English II     .......... 3 Credit Hours
Equivalent: SLS 1550,SLS 1550
English/ESL Placement: Placement into ENG 1510.
Prerequisite: Grade of 'C+' or better in SLI 1150 or consent of
departmental designee.
Note: Prerequisites for courses in this department are not automatically
waived for College Guest students and students with a bachelor's degree
or higher from a U.S. institution.
A continuation of SLI 1150, this course will provide additional instruction in
American Sign Language (ASL) to English voice interpretation via practical
activities utilizing video materials. BILLABLE CONTACT HOURS: 3

SLI 1600    American Sign Language Fingerspelling and Number
Use                                ........................................ 3 Credit Hours
Equivalent: SLS 2100
English/ESL Placement: Placement into ENG 1510.
Prerequisite: Grade of 'C+' or better in SLI 1030 or consent of
departmental designee.
Note: Prerequisites for courses in this department are not automatically
waived for College Guest students and students with a bachelor's degree
or higher from a U.S. institution.
This course provides the student with concentrated instruction on the
rules of and practice in both expressive and receptive fingerspelling skills.
BILLABLE CONTACT HOURS: 3

SLI 2050    Principles of Interpreting         .......... 3 Credit Hours
Equivalent: SLS 2050,SLS 2050
English/ESL Placement: Placement into ENG 1510.
Prerequisite: Grade of 'C+' or better in both SLI 1030 and ENG 1520 or
consent of departmental designee.
Note: Prerequisites for courses in this department are not automatically
waived for College Guest students and students with a bachelor's degree
or higher from a U.S. institution.
This course provides a foundation in the principles of sign language
interpretation including an overview of historical and current milestones
in the field. The course will include introduction to and application of the
National Association of the Deaf - Registry of Interpreters for the Deaf
(NAD-RID) Code of Professional Conduct for sign language interpreters to
specific settings and situations. Practical activities in pre-interpreting skills,
such as text translation, short term memory improvement, and language
processing, will be introduced. BILLABLE CONTACT HOURS: 3

SLI 2150    Interpreting: ASL to English III    .......... 3 Credit Hours
Equivalent: SLS 2150,SLS 2150
English/ESL Placement: Placement into ENG 1510.
Prerequisite: Grade of 'C+' or better in SLI 1550 or consent of
departmental designee.
Note: Prerequisites for courses in this department are not automatically
waived for College Guest students and students with a bachelor's degree
or higher from a U.S. institution.
This course will provide advanced instruction in American Sign Language
to English voice interpretation. Techniques taught include register,
processing time, anticipation and prediction, closure, analyzing dialect and
modality variation, pacing, and voice projection. Activities utilizing video
materials and guest speakers will provide practical experience. BILLABLE
CONTACT HOURS: 3

SLI 2250    Interpreting: English to ASL I       .......... 3 Credit Hours
Equivalent: SLS 2250,SLS 2250
English/ESL Placement: Placement into ENG 1510.
Prerequisite: Grade of 'C+' or better in SLI 2050 or consent of
departmental designee.
Note: Prerequisites for courses in this department are not automatically
waived for College Guest students and students with a bachelor's degree
or higher from a U.S. institution.
This course concentrates on the development of English to American Sign
Language consecutive and simultaneous interpretation and transliteration
skills through simulated interpreting situations, vocabulary review,
activities and practical exams. BILLABLE CONTACT HOURS: 3

SLI 2450    Interpreting: English to ASL II      .......... 2 Credit Hours
Equivalent: SLS 2450,SLS 2450
English/ESL Placement: Placement into ENG 1510.
Prerequisite: Grade of 'C+' or better in SLI 2250 or consent of
departmental designee.
Note: Prerequisites for courses in this department are not automatically
waived for College Guest students and students with a bachelor's degree
or higher from a U.S. institution.
This course continues the development of consecutive and simultaneous
interpretation and transliteration skills through simulated interpreting
situations, vocabulary review, activities and practical exams. BILLABLE
CONTACT HOURS: 2

SLI 2800    Interactive Interpreting            .......... 3 Credit Hours
Equivalent: SLS 2800,SLS 2800
English/ESL Placement: Placement into ENG 1510.
Prerequisite: Grade of 'C+' or better in SLI 1600, SLI 2150, SLI 2450 or
consent of departmental designee.
Note: Prerequisites for courses in this department are not automatically
waived for College Guest students and students with a bachelor's degree
or higher from a U.S. institution.
This course provides a review of and preparation for the various methods
of assessment for certification. Activities include practical application of
voice to sign and sign to voice skills gained from prerequisite courses
via interpreting for simulated interactive situations, such as interviews or
appointments. BILLABLE CONTACT HOURS: 3
SLI 2900  ASL - English Interpreting Internship     .2 Credit Hours
Equivalent: SLS 2900,SLS 2900
English/ESL Placement: Placement into ENG 1510.
Prerequisite: Grade of ‘C-’ or better in SLI 1600 SLI 2150 SLI 2450 and consent of departmental designee.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
This course provides an opportunity to participate in the interpreting process in work situations and to assist with agency duties. The student will be expected to arrange an internship with the participating agencies for a minimum of 90 hours. BILLABLE CONTACT HOURS: 2

SLI 2910  Topics in Interpreting: Interpreting in Artistic Settings  ...........................................1 Credit Hour
Equivalent: SLS 2910,SLS 2910
English/ESL Placement: Placement into ENG 1510.
Prerequisite: SLI 2900 or consent of departmental designee.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
Interpreting in Artistic Settings. BILLABLE CONTACT HOURS: 2

SLI 2913  Topics in Interpreting: Idioms   ..............1 Credit Hour
Equivalent: SLS 2913,SLS 2913
English/ESL Placement: Placement into ENG 1510.
Prerequisite: SLI 2900 or consent of departmental designee.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
Idioms. BILLABLE CONTACT HOURS: 1

SLI 2914  Topics in Interpreting: ASL Storytelling  1 Credit Hour
Equivalent: SLS 2914,SLS 2914
English/ESL Placement: Placement into ENG 1510.
Prerequisite: SLI 2900 or consent of departmental designee.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
ASL Storytelling. BILLABLE CONTACT HOURS: 1

SLI 2917  Topics in Interpreting: Freelance 101    ....1 Credit Hour
Equivalent: SLS 2917,SLS 2917
English/ESL Placement: Placement into ENG 1510.
Prerequisite: SLI 2900 or consent of departmental designee.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
Freelance 101. BILLABLE CONTACT HOURS: 1

SLI 2918  Topics in Interpreting: Team Interpreting    .....1 Credit Hour
Equivalent: SLS 2918,SLS 2918
English/ESL Placement: Placement into ENG 1510.
Prerequisite: SLI 2900 or consent of departmental designee.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
Team Interpreting. BILLABLE CONTACT HOURS: 1

SLI 2921  Interpreter Certification Preparation    .....2 Credit Hours
Equivalent: SLS 2919,SLS 2919
English/ESL Placement: Placement into ENG 1510.
Prerequisite: Grade of ‘C+’ or better in SLI 2050 with or consent of departmental designee.
Corequisite: SLI 2250
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
This course is designed to provide advanced students and working interpreters with an overview of the major interpreter certification examinations offered in Michigan and the US. Students will receive instruction in and application of deliberate practice in preparing for written and performance examinations. Instructional methods will include lecture, practical activities, group work, and student presentations. BILLABLE CONTACT HOURS: 2

SLI 2922  Educational Interpreting: EIPA Bootcamp   .....2 Credit Hours
Equivalent: SLS 2912,SLS 2912
English/ESL Placement: Placement into ENG 1510.
Prerequisite: SLI 2900 or consent of departmental designee.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
This course is designed to provide advanced students and working interpreters with an overview of the major interpreter certification examinations offered in Michigan and the US. Students will receive instruction in and application of deliberate practice in preparing for written and performance examinations. Instructional methods will include lecture, practical activities, group work, and student presentations. BILLABLE CONTACT HOURS: 2

SLI 2925  Introduction to DeafBlind Interpreting    2 Credit Hours
Equivalent: SLS 2915,SLS 2915
English/ESL Placement: Placement into ENG 1510.
Prerequisite: SLI 2050 or consent of departmental designee.
Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.
This course is designed to provide advanced students and working interpreters with an overview of the major interpreter certification examinations offered in Michigan and the US. Students will receive instruction in and application of deliberate practice in preparing for written and performance examinations. Instructional methods will include lecture, practical activities, group work, and student presentations. BILLABLE CONTACT HOURS: 2

Sociology (SOC)

SOC 2510  Sociology  .............................................3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
This course will cover the basic sociological theories, paradigms, and methods of social research. Some of the topics included in this course include culture, socialization, society, groups, inequalities, global society, deviance, social class, stratification, institutions, social change, and demography. BILLABLE CONTACT HOURS: 3
GE Outcomes: Global Understanding and Responsibility
SOC 2520  Analysis of Social Problems  .............. 3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: SOC 2510
The student will explain and describe major social problems in contemporary American society and potential programs for the prevention and amelioration of these problems. The student will analyze the following social problems from a general, theoretical point of view: poverty, health, crime and juvenile delinquency, mental disease, personality adjustment, marriage, and housing. BILLABLE CONTACT HOURS: 3

SOC 2530  Racial and Ethnic Group Relations  ...  3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: SOC 2510
This course offers a comprehensive overview of the causes and processes whereby racial and ethnic divisions are established, reproduced, and sometimes transformed. As social constructs, race and ethnicity are approached through the lens of the sociological imagination - in a way that takes into account evidence of the social and historical forces at work in the world. This course will cover today's most controversial and misunderstood race-related topics, including immigration, affirmative action, racial segregation, interracial relationships, political representation, racialized poverty and affluence, educational inequality, incarceration, terrorism, cultural appropriation, civil society, religion, marriage and divorce, and racial identity formation. BILLABLE CONTACT HOURS: 3

SOC 2550  Sociology of the Aging  ..................... 3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: PSY 2510 or SOC 2510
The objective of the course is to provide the student with an understanding of aging processes, the demography of the aged, and the implications of aging for the individual and society in the future. BILLABLE CONTACT HOURS: 3

SOC 2560  Sociology of Sex Roles  ..................... 3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
The student will analyze the biosocial, cultural and institutional factors which determine the form and content of male and female social roles. The student will examine socialization theories which can be applied to everyday conversational situations. BILLABLE CONTACT HOURS: 3

SOC 2570  Marriage and Family in Modern Society  ..................... 3 Credit Hours
Equivalent: SSC 2610
English/ESL Placement: Placement into ENG 1510.
The student will explore basic concepts relating to marriage and families in modern society. This is an introduction to the changing perspectives of courtship, marriage, family life, and the varying sexual roles, social values, and life styles reflected in contemporary mate selection patterns. BILLABLE CONTACT HOURS: 3

GE Outcomes: Personal Development

SOC 2580  Mass Media and Society  ..................... 3 Credit Hours
Equivalent: SSC 2710
English/ESL Placement: Placement into ENG 1510.
The student will analyze the impact of mass communication in society with respect to the formation of public opinion and the dissemination of information. The student will develop the ability to critically examine the techniques of the mass media and its effects upon the American culture. BILLABLE CONTACT HOURS: 3

SOC 2610  Introduction to Criminology  ..................... 3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: SOC 2510
This course will apply sociological principles to analyze and interpret social factors that contribute to crime. Some of the topics covered will include etiology of crime, criminal statistics, law, nature of crime, institutions and crime, courts, corrections, prevention, and many popular issues dealing with criminology today. BILLABLE CONTACT HOURS: 3

SOC 2620  Sociology of Diversity  ..................... 3 Credit Hours
Prerequisite: Placement into ENG 1510.
This course will address theory and research on diversity as well as the encouragement of behavior that embraces diversity and promotes a more just and peaceful society. BILLABLE CONTACT HOURS: 3

GE Outcomes: Social Responsibility

Spanish (SPA)

SPA 1510  Beginning Spanish I  ..................... 4 Credit Hours
English/ESL Placement: Placement into ENG 1510.
This is an introductory course with special emphasis on the fundamentals of speaking, listening, reading, writing and understanding Spanish language and the cultures of Spanish speaking countries. The course will introduce basic Spanish linguistic structure according to functional models, which can be applied to everyday conversational situations. BILLABLE CONTACT HOURS: 4

GE Outcomes: Effective Communication

SPA 1530  Beginning Spanish II  ..................... 4 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: SPA 1510 or departmental approval.
This course, which is a continuation of SPA 1510, comprises the second half of the introduction to Spanish. The course will emphasize the fundamentals of speaking, listening, reading, writing and understanding of Spanish language and the cultures of Spanish-speaking countries according to functional models, which can be applied to everyday conversational situations. BILLABLE CONTACT HOURS: 4

GE Outcomes: Effective Communication

SPA 2610  Intermediate Spanish I  ..................... 4 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: SPA 1530 or departmental approval.
This course is designed to expand the students' communicative proficiency in Spanish through interactive and informative listening, speaking, reading, and writing activities broadly focused on the cross-cultural and historical understanding of Spanish and Hispanic culture and civilization. Language acquisition will be reinforced through the study of literary texts and media products. Conducted in Spanish. BILLABLE CONTACT HOURS: 4

GE Outcomes: Effective Communication


SUR 2410  
**Clinical Practicum I**  
*4 Credit Hours*

**English/ESL Placement:** Placement into ENG 1510.

**Prerequisite:** Acceptance to the Surgical Technology Program and completion of SUR 2150; or consent of instructor.

**Corequisite:** SUR 2440

**Note:** Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.

This course is designed to allow the surgical technology student continued implementation of skills in the operating room. Under the direct supervision of a clinical preceptor, the surgical technology student will function in the role of first scrub with assist or first scrub solo in general, gynecological, urological, plastic reconstruction and ear, nose and throat surgical procedures. During this course, the students will transition into the specialties of orthopedic, neurological, peripheral vascular and thoracic surgical procedures. BILLABLE CONTACT HOURS: 7

SUR 2370  
**Clinical Practicum III**  
*6 Credit Hours*

**English/ESL Placement:** Placement into ENG 1510.

**Prerequisite:** Acceptance to the Surgical Technology Program and completion of SUR 2150 and SUR 2350; or consent of instructor.

**Corequisite:** SUR 2440

**Note:** Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.

This course is designed to allow the surgical technology student continued implementation of skills in the operating room. Under the direct supervision of a clinical preceptor, the surgical technology student will function in the role of first scrub with assist or first scrub solo in general, gynecological, urological, plastic reconstruction and ear, nose and throat surgical procedures. During this course, the students will transition into the specialties of orthopedic, neurological, peripheral vascular and thoracic surgical procedures and complete all case requirements as dictated by the Core curriculum of Surgical Technology. BILLABLE CONTACT HOURS: 9

SUR 2410  
**Foundations of Surgical Technology I**  
*4 Credit Hours*

**Prerequisite:** Placement into ENG 1510.

**Corequisite:** SUR 2440

**Note:** Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.

This course is the first of two sequential courses designed specifically for entry-level job training. It is a combination of classroom studies and lab practice. The course is designed to offer experiences in the perioperative arena in order to prepare for competent and safe patient care. The essential components of the career of Surgical Technology will be introduced in course material and practiced in the lab setting. These elements include appropriate aseptic and sterile technique, the surgical scrub, gowning and gloving of self and others, identification of furniture, instrumentation and equipment, safe handling of sharps, set up of the sterile field, draping of the patient and surgical equipment, accurate surgical counts and proper passing of instruments. BILLABLE CONTACT HOURS: 4
The lab practice integrates mock surgery, simulation and basic and are covered including the assessment of need for surgical intervention. The fundamentals of numerous procedures required during a surgical procedure as well as the instrumentation of course also emphasizes the anatomy of the surgical patient and the steps for these surgical interventions. The lab components and strengthen the knowledge of surgical interventions. This lecture and lab course develops concepts care in the most common and basic surgical procedures experienced a basic understanding of diagnoses, regional anatomy and physiology, This course is designed to provide the surgical technology student with an advanced understanding of diagnoses, regional anatomy and physiology, and the surgical instruments and equipment needed to provide optimum care in the most common surgical procedures as outlined in the core curriculum and mandated by the accrediting body (ARC) in the following surgical areas: general, gynecological, urological, plastic, ear, nose and throat, neurological, peripheral vascular, orthopedics, cardiothoracic, oral and ophthalmic. This lecture and lab course develops concepts learned in the classroom and in the previous Procedures I and Foundations I courses. The coursework will further develop the knowledge of theory and lab components and strengthen the knowledge of surgical interventions. The course also emphasizes the anatomy of the surgical patient and the steps required during a surgical procedure as well as the instrumentation for these surgical interventions. The fundamentals of multiple procedures are covered including the assessment of need for surgical intervention. 

The lab practice integrates mock surgery, simulation and basic and advanced clinical skills. BILLABLE CONTACT HOURS: 8

SUR 2400 Surgical Procedures II .............................. 6 Credit Hours

English/ESL Placement: Placement into ENG 1510.

Prerequisite: Acceptance to the Surgical Technology Program and completion of SUR 2420 or consent of instructor.

Corequisite: SUR 2430 SUR 2450 or consent of instructor.

Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.

This course is designed to provide the surgical technology student with an advanced understanding of diagnoses, regional anatomy and physiology, and the surgical instruments and equipment needed to provide optimum care in the most common surgical procedures as outlined in the core curriculum and mandated by the accrediting body (ARC) in the following surgical areas: general, gynecological, urological, plastic, ear, nose and throat, neurological, peripheral vascular, orthopedics, cardiothoracic, oral and ophthalmic. This lecture and lab course develops concepts learned in the classroom and in the previous Procedures I and Foundations I courses. The coursework will further develop the knowledge of theory and lab components and strengthen the knowledge of surgical interventions. The course also emphasizes the anatomy of the surgical patient and the steps required during a surgical procedure as well as the instrumentation for these surgical interventions. The fundamentals of multiple procedures are covered including the assessment of need for surgical intervention. The lab practice integrates mock surgery, simulation and basic and advanced clinical skills. BILLABLE CONTACT HOURS: 7

SUR 2450 Surgical Instrumentation & Equipment .... 4 Credit Hours

English/ESL Placement: Placement into ENG 1510.

Prerequisite: Acceptance to the Surgical Technology Program and completion of SUR 2420 SUR 2430 or consent of instructor.

Corequisite: SUR 2420 SUR 2430 or consent of instructor.

Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.

This course is designed to prepare students in the fundamentals of care and handling of instruments and equipment for the operative setting. The course instructs students in the proper names, use, and importance of safe care, handling, processing, and troubleshooting of the most common instruments and equipment seen in the surgical setting. In addition, this course also addresses new and ever changing technology utilized in the operating room. It will provide the student with the concepts in the delivery of health care services to monitor, measure, diagnose and treat while providing a safe environment for patients and surgical personnel. The content will discuss specific trends with regard to the use of robotic technology, LASER, stealth navigation, and other cutting edge equipment associated with surgical interventions. BILLABLE CONTACT HOURS: 5
**SUR 2460  Capstone & Certificate Preparatory ..........2 Credit Hours**

**English/ESL Placement:** Placement into ENG 1510.

**Prerequisite:** Acceptance to the Surgical Technology Program and completion of SUR 2150 SUR 2350 SUR 2420 SUR 2440 and SUR 2450; or consent of instructor.

**Corequisite:** SUR 2370 or consent of instructor.

**Note:** Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.

This course is the capstone for the Surgical Technology Program. The course combines research and theory with experiential and reflective learning and emphasizes active participation. Class sessions will consist of lectures, problem solving exercises, small and large group discussion, and hands-on activities to support the development of your personal resume and interview skills. Each student is required to develop a resume and cover letter and have a 'mock interview' during this course. Emphasis is also placed on preparation for entering the profession of Surgical Technology. Multiple practice certification exams will be given in preparation for the actual Certification exam to be held the week after course completion. Preparation for the Surgical Technology Certification (CST) Exam will be a primary focus. **BILLABLE CONTACT HOURS: 2**

---

**Technical Internships (IND)**

**IND 1402  Cooperative Internship .................2 Credit Hours**

**English/ESL Placement:** Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).

**Prerequisite:** Consent of Instructor.

The student will be employed within his trade area in a supervised situation under the guidance of a coordinator. The student will identify and describe, through reports and position papers, technical problems encountered on the job. **BILLABLE CONTACT HOURS: 2**

**IND 2403  Advanced Cooperative Internship ........3 Credit Hours**

**English/ESL Placement:** Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).

**Prerequisite:** Consent of Instructor.

The advanced internship student will continue their employment within their trade area. Students will prepare research projects on special methods and processes and new technical equipment developed in their specific trade area. **BILLABLE CONTACT HOURS: 3**

**IND 2404  Advanced Cooperative Internship ........4 Credit Hours**

**English/ESL Placement:** Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).

**Prerequisite:** Consent of Instructor.

The advanced internship student will continue their employment within their trade area. Students will prepare research projects on special methods and processes and new technical equipment developed in their specific trade area. **BILLABLE CONTACT HOURS: 4**

---

**Mechatronics Capstone**

**NOTE:** Placement into ESL 2510 or higher for students taking the ESL sequence of courses.

**Prerequisite:** Consent of Instructor.

**Mechatronics Capstone. BILLABLE CONTACT HOURS: 2**

---

**Theatre (THE)**

**THE 1561  Introduction to Theatre ..................... 3 Credit Hours**

**Equivalent:** THE 1560, ENG 1560

**English/ESL Placement:** Placement into ENG 1510.

This course will introduce students to the elements and structure of the theatre through analysis of written dramas and performance reviews. Students will read representative classic and contemporary plays and study the role of theatre in society and how theatre generates value as a humanistic discipline. The course will expose students to the techniques used by actors, directors and designers in contemporary American theatre. Students may be required to attend performances outside of class. **BILLABLE CONTACT HOURS: 3**

**GE Outcomes:** Aesthetic Awareness

**THE 1571  Acting I .................................. 3 Credit Hours**

**Equivalent:** THE 1570

**English/ESL Placement:** Placement into ENG 1510.

This course will focus on the fundamentals of stage acting. Through acting exercises and scene work, the course will provide an introduction to physical, vocal and rehearsal techniques common to contemporary theatre. **BILLABLE CONTACT HOURS: 3**

**GE Outcomes:** Aesthetic Awareness

**THE 1580  Acting II .................................. 3 Credit Hours**

**English/ESL Placement:** Placement into ENG 1510.

**Prerequisite:** THE 1571

This course is a continuation of Acting One, designed to further develop the student's acting skills. The coursework will emphasize the application of scene study and rehearsal skills in the preparation and performance of scenes and monologues from contemporary and classical plays. **BILLABLE CONTACT HOURS: 3**

**GE Outcomes:** Aesthetic Awareness

**THE 1581  Voice for the Actor ......................... 3 Credit Hours**

**English/ESL Placement:** Placement into ENG 1510.

**Prerequisite:** THE 1571

Geared toward the actor, but also beneficial to anyone wishing to improve one's voice and diction, this course will help the student identify strengths and weaknesses in his/her vocal production and provide tools that may be used to strengthen and improve breathing, phonation, resonance, articulation, pronunciation, phrasing and projection. **BILLABLE CONTACT HOURS: 3**
THE 1583 Movement for the Actor .......................... 3 Credit Hours

English/ESL Placement: Placement into ENG 1510.
Prerequisite: THE 1571
This course is designed to help the actor become more aware of his/her body and improve it as an instrument for the stage, through studies in movement characterization, dance and stage combat. It will introduce traditional and contemporary techniques of movement and provide exercises to improve posture, muscular strength, coordination, flexibility, musicality, dramatic movement ability and stamina. BILLABLE CONTACT HOURS: 3

THE 1585 Acting for Film .................................... 3 Credit Hours

English/ESL Placement: Placement into ENG 1510.
Prerequisite: THE 1571
This course will provide a comprehensive study of the intrinsic challenges, both technical and artistic, of film acting. The class will offer theoretical analysis and practical experience concerning the differences between film and stage acting techniques, and will focus on producing the non-theatrical work required for film. Students will develop their craft through extensive time in front of the camera, resulting in a taped scene of their final work. BILLABLE CONTACT HOURS: 3

THE 1587 Audition and the Business of Acting .................. 3 Credit Hours

English/ESL Placement: Placement into ENG 1510.
Prerequisite: THE 1571
Corequisite: THE 1580 (Recommended).
This class is designed to prepare the actor in the different audition techniques for stage and film and to provide insight concerning the challenges of a career in the theatre, television and film. Students will receive training in how to do effective cold readings, improvisation and monologue auditions, along with choosing appropriate audition materials. The course will provide information concerning headshots, resumes, interviews, casting directors, talent agents, unions and other topics necessary for getting work in the business of acting. BILLABLE CONTACT HOURS: 3

THE 1590 Improvisation ...................................... 3 Credit Hours

English/ESL Placement: Placement into ENG 1510.
The course will study the elements and structure of improvisation in performance. The student will participate in the organization and dramatization of both individual and group scenarios. Emphasis will be on the presentation of self in solo and group impromptu theatrical situations. BILLABLE CONTACT HOURS: 3

THE 1601 Theatre Production and Technology .................. 3 Credit Hours

English/ESL Placement: Placement into ENG 1510.
This course is an introduction to the equipment, materials, and techniques used in theatre production and design. Students will be exposed to costume design, set design, behind the scenes, stage rigging, prop building, stage organization, lighting and sound technology used in contemporary theatre, and will have an opportunity to apply those skills learned. BILLABLE CONTACT HOURS: 3

THE 1701 Theatre Activity .................................... 1 Credit Hour

English/ESL Placement: Placement into ENG 1510.
This course provides novices and experienced actors or technicians with the opportunity to learn while participating in their chosen area of theatrical endeavor. Among the areas available for up to six units credit include acting, set construction, lighting, box office management, stage management, costume, and design. The total number of rehearsal or lab time will be arranged according to the department schedule of activities. (One hour credit for 45 hours of rehearsal or lab time.) A written log of the activity must be presented to earn credit. BILLABLE CONTACT HOURS: 1

THE 1702 Theatre Activity .................................... 2 Credit Hours

English/ESL Placement: Placement into ENG 1510.
This course provides novices and experienced actors or technicians with the opportunity to learn while participating in their chosen area of theatrical endeavor. Among the areas available for up to six units credit include acting, set construction, lighting, box office management, stage management, costume, and design. The total number of rehearsal or lab time will be arranged according to the department schedule of activities. (One hour credit for 45 hours of rehearsal or lab time.) A written log of the activity must be presented to earn credit. BILLABLE CONTACT HOURS: 2

THE 1703 Theatre Activity .................................... 3 Credit Hours

English/ESL Placement: Placement into ENG 1510.
This course provides novices and experienced actors or technicians with the opportunity to learn while participating in their chosen area of theatrical endeavor. Among the areas available for up to six units credit include acting, set construction, lighting, box office management, stage management, costume, and design. The total number of rehearsal or lab time will be arranged according to the department schedule of activities. (One hour credit for 45 hours of rehearsal or lab time.) A written log of the activity must be presented to earn credit. BILLABLE CONTACT HOURS: 3

THE 1704 Theatre Activity .................................... 4 Credit Hours

English/ESL Placement: Placement into ENG 1510.
This course provides novices and experienced actors or technicians with the opportunity to learn while participating in their chosen area of theatrical endeavor. Among the areas available for up to six units credit include acting, set construction, lighting, box office management, stage management, costume, and design. The total number of rehearsal or lab time will be arranged according to the department schedule of activities. (One hour credit for 45 hours of rehearsal or lab time.) A written log of the activity must be presented to earn credit. BILLABLE CONTACT HOURS: 4

THE 1705 Theatre Activity .................................... 5 Credit Hours

English/ESL Placement: Placement into ENG 1510.
This course provides novices and experienced actors or technicians with the opportunity to learn while participating in their chosen area of theatrical endeavor. Among the areas available for up to six units credit include acting, set construction, lighting, box office management, stage management, costume, and design. The total number of rehearsal or lab time will be arranged according to the department schedule of activities. (One hour credit for 45 hours of rehearsal or lab time.) A written log of the activity must be presented to earn credit. BILLABLE CONTACT HOURS: 5

THE 1706 Theatre Activity .................................... 6 Credit Hours

English/ESL Placement: Placement into ENG 1510.
This course provides novices and experienced actors or technicians with the opportunity to learn while participating in their chosen area of theatrical endeavor. Among the areas available for up to six units credit include acting, set construction, lighting, box office management, stage management, costume, and design. The total number of rehearsal or lab time will be arranged according to the department schedule of activities. (One hour credit for 45 hours of rehearsal or lab time.) A written log of the activity must be presented to earn credit. BILLABLE CONTACT HOURS: 6

THE 1990 Fundamentals of Directing ........................... 3 Credit Hours

English/ESL Placement: Placement into ENG 1510.
Prerequisite: THE 1571
This course will present students with an overview of the directing process and different styles of directing, giving them direct and practical experience in the art and craft of stage directing. The final project for the course will include a full play analysis and director's promptbook based on a ten-minute play that the student director will select, cast, block, rehearse and produce as a finished performance. BILLABLE CONTACT HOURS: 3
THE 2101  Topics in Theatre: Advanced Acting for Film .............................................. 2 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Advanced Acting for Film. BILLABLE CONTACT HOURS: 2

THE 2102  Topics in Theatre: Advanced Scene Study ................................................. 2 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: THE 1580
Advanced Scene Study. BILLABLE CONTACT HOURS: 2

THE 2103  Topics in Theatre: Acting Shakespeare ................................................. 3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: THE 1571
Acting Shakespeare. BILLABLE CONTACT HOURS: 3

THE 2104  Topics in Theatre: Children’s Theatre Production ........................................ 3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Children’s Theatre Production. BILLABLE CONTACT HOURS: 3

THE 2105  Topics in Theatre: Improvisation II ....................................................... 3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Prerequisite: THE 1590
Improvisation II. BILLABLE CONTACT HOURS: 3

THE 2106  Topics in Theatre ......................................................... 1-3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Topics courses will provide students with a focus on a particular area of theatre. Refer to the specific section using OCC’s online system for current topics. BILLABLE CONTACT HOURS: 1 - 3

THE 2107  Topics in Theatre ......................................................... 1-3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Topics courses will provide students with a focus on a particular area of theatre. Refer to the specific section using OCC’s online system for current topics. BILLABLE CONTACT HOURS: 1 - 3

THE 2111  Topics in Technical Theatre ......................................................... 1-3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Topics in Technical Theatre courses will provide students with a focus on a particular area of technical theatre. Refer to the specific section using OCC’s online system for current topics. BILLABLE CONTACT HOURS: 1 - 3

THE 2112  Topics in Technical Theatre: Hair & Make-Up Design and Application ........................................... 2 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Hair & Make-Up Design and Application. BILLABLE CONTACT HOURS: 2

THE 2113  Topics in Technical Theatre ......................................................... 1-3 Credit Hours
English/ESL Placement: Placement into ENG 1510.
Topics in Technical Theatre courses will provide students with a focus on a particular area of technical theatre. Refer to the specific section using OCC’s online system for current topics. BILLABLE CONTACT HOURS: 1 - 3

Welding (WEL)

WEL 1111  Welding for the Non-Career Welder ....................................................... 3 Credit Hours
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
This course is designed for those students who come from various backgrounds that seek a basic foundation in welding to be applied to specific applications. Backgrounds include those from, but not limited to: machining, automotive, engineering, and hobbyist. Individual and group work will be encouraged, and appropriate reading material will be discussed. Safety will be followed and practiced daily. BILLABLE CONTACT HOURS: 4

WEL 1500  Welding Fundamentals ....................................................... 3 Credit Hours
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Corequisite: WEL 1600
Students will be introduced to the basic concepts found in the welding industry. This includes, but is not limited to: welding and cutting theory, proper machine setup, welding terminology, defects and discontinuities, weld/welding symbols, and shop safety. Lectures will be reinforced with practical lab demonstrations. BILLABLE CONTACT HOURS: 4

WEL 1600  Basic Welding ............................................................... 4 Credit Hours
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Corequisite: WEL 1500
This course introduces students to the practical aspect of welding. Welds will be performed using GMAW, GTAW, SMAW, and FCAW on mild steel and in all positions. Safety is emphasized, and will be followed on a daily basis. BILLABLE CONTACT HOURS: 5

WEL 1700  Fabrication Basics ............................................................... 4 Credit Hours
Equivalent: WEL 2100,WEL 2100
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
This course will introduce students to various machines and fabrication techniques found in the metal working industry. Proper usage demonstrations and terminology will be covered, along with individual and group projects. Topics to include, but not limited to: sheet metal layout for bending/braking, rolling, and shrinking/stretching; tube and structural steel layout for notching/mitering; plate layout for holes and rolling; blueprints; shop mathematics. Appropriate reading and text will be covered. Safety will be greatly emphasized and followed on a daily basis. BILLABLE CONTACT HOURS: 5

WEL 2500  Advanced Welding ............................................................... 5 Credit Hours
English/ESL Placement: Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).
Prerequisite: WEL 1500 and WEL 1600 or consent of instructor.
This course is a continuation of WEL 1600. Students will perform more advanced weldments on mild steel using the GMAW, FCAW, GTAW, and SMAW processes per the guidelines of the NC3 certifications. Safety will be greatly emphasized and followed on a daily basis. BILLABLE CONTACT HOURS: 6
WEL 2600  Welding of Advanced Materials ....... 5 Credit Hours

**English/ESL Placement:** Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).

**Prerequisite:** WEL 1500 and WEL 1600 or consent of instructor.

This course will introduce students to the welding of more advanced metals such as, but not limited to: aluminum, stainless steel, copper, and cast iron. An introduction to pipe-fitting/welding will be covered, along with various thermal cutting exercises. Safety will be greatly emphasized and followed on a daily basis. **BILLABLE CONTACT HOURS: 6**

WEL 2700  Welding and Fabrication Capstone .... 5 Credit Hours

**English/ESL Placement:** Placement into ENG 1060 or higher (or placement into ESL 2510 or higher for students taking the ESL sequence of courses).

**Prerequisite:** WEL 1500 WEL 1600 WEL 1700 WEL 2500 WEL 2600 and TED 1030 or consent of instructor.

Students will utilize the knowledge acquired from the prerequisite classes to build a project from their own design. Students will draft a blueprint, develop a bill-of-materials and cut list, and write a procedure and tool list to accommodate the project being built. Projects can be of individual or group design, and will be held to the common standards found in industry. Safety will be greatly emphasized and followed on a daily basis. **BILLABLE CONTACT HOURS: 6**
<table>
<thead>
<tr>
<th>Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
</tr>
<tr>
<td>Academic Support Center (ASC)</td>
</tr>
<tr>
<td>Accounting</td>
</tr>
<tr>
<td>Accounting (ACC)</td>
</tr>
<tr>
<td>Anthropology (ANT)</td>
</tr>
<tr>
<td>Applied Science Degree</td>
</tr>
<tr>
<td>Apprentice Applied Technology (APP)</td>
</tr>
<tr>
<td>Apprentice Engineering / Drafting (TED)</td>
</tr>
<tr>
<td>Apprentice Mathematics (APM)</td>
</tr>
<tr>
<td>Apprentice Tinsmith (APT)</td>
</tr>
<tr>
<td>Arabic (ARB)</td>
</tr>
<tr>
<td>Architecture (ARC)</td>
</tr>
<tr>
<td>Art (ART)</td>
</tr>
<tr>
<td>Associate in Arts</td>
</tr>
<tr>
<td>Associate in Arts with a Concentration in Music (MUS.AA)</td>
</tr>
<tr>
<td>Automobile Servicing</td>
</tr>
<tr>
<td>Automobile Servicing (AUS.AAS)</td>
</tr>
<tr>
<td>Automobile Servicing (AUS.CT)</td>
</tr>
<tr>
<td>Automotive Technology (AUT)</td>
</tr>
<tr>
<td>B</td>
</tr>
<tr>
<td>Biology (BIO)</td>
</tr>
<tr>
<td>Business Administration</td>
</tr>
<tr>
<td>Business Administration with a Concentration in Accounting (ACC.ABA)</td>
</tr>
<tr>
<td>Business (BUS)</td>
</tr>
<tr>
<td>C</td>
</tr>
<tr>
<td>Career Clusters</td>
</tr>
<tr>
<td>Chemistry (CHE)</td>
</tr>
<tr>
<td>Chinese (CHI)</td>
</tr>
<tr>
<td>Cinematic Arts</td>
</tr>
<tr>
<td>Cinematic Arts (CIN.AA)</td>
</tr>
<tr>
<td>Collision Auto Repair</td>
</tr>
<tr>
<td>Collision Auto Repair - Body Repair Technician Assistant (CAR.NRT.CA)</td>
</tr>
<tr>
<td>Collision Auto Repair - Detailer/Painter Assistant (CAR.PRT.CA)</td>
</tr>
<tr>
<td>Collision Auto Repair - Non-Structural Repair Technology Option (CAR.NRT.CT)</td>
</tr>
<tr>
<td>Collision Auto Repair - Paint and Refinish Technology Option (CAR.PRT.CT)</td>
</tr>
<tr>
<td>Collision Auto Repair (CAR)</td>
</tr>
<tr>
<td>Communication (COM)</td>
</tr>
<tr>
<td>Computer Aided Design and Engineering (CAD)</td>
</tr>
<tr>
<td>Computer Aided Design and Engineering Technology</td>
</tr>
<tr>
<td>Computer Aided Design and Engineering Technology - Architectural Applications (CAD.ARC.CA)</td>
</tr>
<tr>
<td>Computer Aided Design and Engineering Technology - Computer Aided Engineering Option (CAD.CAE.AAS)</td>
</tr>
<tr>
<td>Computer Aided Design and Engineering Technology - Level I Fundamentals (CAD.LV1.CA)</td>
</tr>
<tr>
<td>Computer Aided Design and Engineering Technology - Level II Intermediate (CAD.LV2.CT)</td>
</tr>
<tr>
<td>Computer Aided Design and Engineering Technology - Product Design Option (CAD.PDO.AAS)</td>
</tr>
<tr>
<td>Computer Aided Design and Engineering Technology - Vehicle Design Option (CAD.VDO.AAS)</td>
</tr>
<tr>
<td>Computer Information Systems</td>
</tr>
<tr>
<td>Computer Information Systems - Business Systems Analysis Option (CIS.BSA.AAS)</td>
</tr>
<tr>
<td>Computer Information Systems - Cisco Internetworking Certification of Achievement (CIS.CIN.CA)</td>
</tr>
<tr>
<td>Computer Information Systems - Cybersecurity Certificate (CIS.CYS.CT)</td>
</tr>
<tr>
<td>Computer Information Systems - Cybersecurity Option (CIS.CYS.AAS)</td>
</tr>
<tr>
<td>Computer Information Systems - Information Technology Support Certificate (CIS.ITS.CT)</td>
</tr>
<tr>
<td>Computer Information Systems - Information Technology Support Option (CIS.ITS.AAS)</td>
</tr>
<tr>
<td>Computer Information Systems - Software Engineering Certificate (CIS.SWE.CT)</td>
</tr>
<tr>
<td>Computer Information Systems - Software Engineering Option (CIS.SWE.AAS)</td>
</tr>
<tr>
<td>Computer Information Systems - Web Designer Certificate (CIS.WDE.CT)</td>
</tr>
<tr>
<td>Computer Information Systems (CIS)</td>
</tr>
<tr>
<td>Construction Management</td>
</tr>
<tr>
<td>Construction Management (CMN)</td>
</tr>
<tr>
<td>Construction Management (CMN.AAS)</td>
</tr>
<tr>
<td>Construction Management (CMN.CT)</td>
</tr>
<tr>
<td>Construction Management Professional</td>
</tr>
<tr>
<td>Construction Management Professional (CMP.AAS)</td>
</tr>
<tr>
<td>Counseling (CNS)</td>
</tr>
<tr>
<td>Course Descriptions</td>
</tr>
<tr>
<td>Criminal Justice</td>
</tr>
<tr>
<td>Criminal Justice - Corrections (CRJ.CRO.AAS)</td>
</tr>
<tr>
<td>Criminal Justice - Generalist (CRJ.GEN.AAS)</td>
</tr>
<tr>
<td>Criminal Justice - Homeland Security (CRJ.HLS.CA)</td>
</tr>
<tr>
<td>Criminal Justice - Law Enforcement (CRJ.LAW.AAS)</td>
</tr>
<tr>
<td>Criminal Justice - Police Academy (CRJ.OPA.CA)</td>
</tr>
<tr>
<td>Criminal Justice - Police Evidence Technology (CRJ.PET.AAS)</td>
</tr>
<tr>
<td>Topic</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
</tr>
<tr>
<td>Criminal Justice (CRJ)</td>
</tr>
<tr>
<td>Culinary Arts</td>
</tr>
<tr>
<td>Culinary Arts - Baking and Pastry Arts (CUL.BPA.CT)</td>
</tr>
<tr>
<td>Culinary Arts (CUL)</td>
</tr>
<tr>
<td>Culinary Arts (CUL.AAS)</td>
</tr>
<tr>
<td>Foundational Studies (FSH)</td>
</tr>
<tr>
<td>French (FRE)</td>
</tr>
<tr>
<td><strong>G</strong></td>
</tr>
<tr>
<td>General Accounting (ACC.GA.CT)</td>
</tr>
<tr>
<td>General Education Distribution Requirements</td>
</tr>
<tr>
<td>General Education Requirements</td>
</tr>
<tr>
<td>General Science (GSC)</td>
</tr>
<tr>
<td>General Studies</td>
</tr>
<tr>
<td>Geography (GEO)</td>
</tr>
<tr>
<td>German (GER)</td>
</tr>
<tr>
<td>Global Studies</td>
</tr>
<tr>
<td>Global Studies (GLS)</td>
</tr>
<tr>
<td>Global Studies (GLS.AA)</td>
</tr>
<tr>
<td>Graduation Requirements</td>
</tr>
<tr>
<td>Graphic Design</td>
</tr>
<tr>
<td>Graphic Design (GRD)</td>
</tr>
<tr>
<td>Graphic Design (GRD.AAS)</td>
</tr>
<tr>
<td><strong>H</strong></td>
</tr>
<tr>
<td>Health Care Administration</td>
</tr>
<tr>
<td>Health Care Administration (HCA)</td>
</tr>
<tr>
<td>Health Care Administration (HCA.AAS)</td>
</tr>
<tr>
<td>Health Care Administration (HCA.CT)</td>
</tr>
<tr>
<td>Health (HEA)</td>
</tr>
<tr>
<td>Heating, Ventilation, Air Conditioning and Refrigeration Technician</td>
</tr>
<tr>
<td>Heating, Ventilation Air Conditioning (HVA)</td>
</tr>
<tr>
<td>History (HIS)</td>
</tr>
<tr>
<td>Humanities (HUM)</td>
</tr>
<tr>
<td>HVAC/R Systems Technology</td>
</tr>
<tr>
<td>HVAC/R Systems Technology - Air Conditioning (HVA.HVC.CT)</td>
</tr>
<tr>
<td>HVAC/R Systems Technology - Alternative Thermal Energy Systems</td>
</tr>
<tr>
<td>HVAC/R Systems Technology - Building Air and Water Balance/Retro-</td>
</tr>
<tr>
<td>Commissioning (HVA.AWB.CT)</td>
</tr>
<tr>
<td>HVAC/R Systems Technology - Heating (HVA.HVH.CT)</td>
</tr>
<tr>
<td>HVAC/R Systems Technology - Refrigeration (HVA.HVR.CT)</td>
</tr>
<tr>
<td><strong>I</strong></td>
</tr>
<tr>
<td>Industrial Technology</td>
</tr>
<tr>
<td>Interior Design</td>
</tr>
<tr>
<td>Interior Design (INT)</td>
</tr>
<tr>
<td>Interior Design (INT.AAS)</td>
</tr>
<tr>
<td>International Commerce</td>
</tr>
<tr>
<td>International Commerce (ICM.INT.AA)</td>
</tr>
</tbody>
</table>
J

Japanese (JPN) .................................................. 157

L

Library Services and Technology ........................................... 62
Library Services and Technology (LIB) .................................. 158
Library Services and Technology (LIB.AAS) ............................. 62
Library Services and Technology (LIB.CA) ............................. 63

M

Machine Tool Technology ................................................ 63
Machine Tool Technology (MTT) ......................................... 159
Machine Tool Technology (MTT.CNC.AAS) ............................. 63
Machine Tool Technology (MTT.CNC.CT) ............................. 64
Management Development ............................................... 64
Management Development - Business Management (MGT.BUS.AAS) 64
Management Development - Hospitality (MGT.HSP.AAS) .......... 65
Marketing (MKT) .................................................. 160
Material Science (MSE) ................................................. 160
Mathematics (MAT) .................................................. 160
Mechatronics (MCT) ................................................ 162
Medical Assisting .................................................... 66
Medical Assisting - Medical Insurance Coding and Billing (MDA.MIC.CA) 68
Medical Assisting - Medical Office Administrative Procedures (MDA.MOA.CA) 68
Medical Assisting - Phlebotomy (MDA.PHT.CA) ...................... 69
Medical Assisting (MDA) ............................................. 163
Medical Assisting (MDA.AAS) ......................................... 66
Medical Assisting (MDA.CT) ......................................... 67
Mental Health / Social Work (MHA) .................................... 165
Mental Health/Social Work .............................................. 69
Mental Health/Social Work (MHS.AAS) ................................ 69
Michigan Transfer Agreement Requirements ............................. 6
Music ............................................................... 70
Music (MUS) ...................................................... 166
Music (MUS.CT) ................................................... 71

N

Nursing ................................................................. 72
Nursing - Transitional LPN to ADN Track (NUR.TPN.APP) ........... 73
Nursing (NUR) ..................................................... 174
Nursing (NUR.APP) ................................................ 72

O

Occupational Therapy Assistant .......................................... 74
Occupational Therapy Assistant (OTA.MCC.REC) ..................... 74

P

Paralegal ............................................................... 75
Paralegal - Post-Bachelor Degree Professional Paralegal (PLG.CT) .... 76
Paralegal (PLG) .................................................... 176
Paralegal (PLG.APP) .............................................. 75
Philosophy (PHI) .................................................. 178
Photographic Technology ............................................... 77
Photographic Technology (PHO) ....................................... 178
Photographic Technology (PHT.AAS) .................................. 77
Photographic Technology (PHT.CT) .................................. 77
Physical Education and Recreation (PER) .............................. 180
Physical Science (PSC) .............................................. 183
Physical Therapist Assistant ............................................. 78
Physical Therapist Assistant (PTA.MCC.REC) ......................... 78
Physics (PHY) ..................................................... 183
Political Science (POL) ............................................. 183
Pre-Engineering (EGR) .............................................. 140
Procedure for Graduation ................................................ 5
Program Integrity and Guarantees ........................................ 11
Programs ..................................................................... 19
Psychology (PSY) .................................................... 184

R

Radiologic Technology .................................................... 79
Radiologic Technology (RAD) ........................................... 185
Radiologic Technology (RAL.APP) ..................................... 79
Respiratory Therapy ..................................................... 80
Respiratory Therapy (RSP) .............................................. 187
Respiratory Therapy (RSP.APP) ....................................... 80
Robotics / Automated Systems Technology (ROB) .................... 189
Robotics/Automated Systems Technology ............................... 81
Robotics/Automated Systems Technology - Programmable Controllers (ROB.PCT.CA) 83
Robotics/Automated Systems Technology (ROB.AUT.AAS) ....... 82
Robotics/Automated Systems Technology (ROB.AUT.CT) ........... 82

S

Science ................................................................. 83
Service Learning (SRV) ................................................. 190
Sign Language Interpreter ................................................. 84
Sign Language Interpreter (SLI) ......................................... 190
<table>
<thead>
<tr>
<th>Index</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sign Language Interpreter (SLI.AAS)</td>
<td>84</td>
</tr>
<tr>
<td>Sociology (SOC)</td>
<td>193</td>
</tr>
<tr>
<td>Spanish (SPA)</td>
<td>194</td>
</tr>
<tr>
<td>Surgical Technology</td>
<td>85</td>
</tr>
<tr>
<td>Surgical Technology (SUR)</td>
<td>195</td>
</tr>
<tr>
<td>Surgical Technology (SUR.APP)</td>
<td>85</td>
</tr>
<tr>
<td><strong>T</strong></td>
<td></td>
</tr>
<tr>
<td>Technical Internships (IND)</td>
<td>197</td>
</tr>
<tr>
<td>Technological Sciences</td>
<td>86</td>
</tr>
<tr>
<td>Technological Sciences (TSC)</td>
<td>197</td>
</tr>
<tr>
<td>Technological Sciences (TSC.AAS)</td>
<td>86</td>
</tr>
<tr>
<td>Theatre</td>
<td>87</td>
</tr>
<tr>
<td>Theatre (THE)</td>
<td>197</td>
</tr>
<tr>
<td>Theatre (THE.AA)</td>
<td>87</td>
</tr>
<tr>
<td><strong>V</strong></td>
<td></td>
</tr>
<tr>
<td>Veterinary Technician</td>
<td>88</td>
</tr>
<tr>
<td>Veterinary Technician (VET.MCC.REC)</td>
<td>88</td>
</tr>
<tr>
<td><strong>W</strong></td>
<td></td>
</tr>
<tr>
<td>Welding Technology</td>
<td>89</td>
</tr>
<tr>
<td>Welding (WEL)</td>
<td>199</td>
</tr>
<tr>
<td>Welding/Fabrication Technology • Level 1 Fundamentals (WEL.LV1.CA)</td>
<td>89</td>
</tr>
<tr>
<td>Welding/Fabrication Technology • Level 2 Intermediate (WEL.LV2.CT)</td>
<td>89</td>
</tr>
</tbody>
</table>