Pre-Engineering (PRE.EGR.AAS)

Associate in Applied Science

Engineering/Manufacturing and Industrial Technology

Auburn Hills Campus

The Pre-Engineering program provides students with the academic foundation needed for transfer to a bachelor's degree program in engineering science. OCC offers three engineering focus areas – Electrical/Computer, Mechanical/Civil, and Other. The Other focus area provides students with the opportunity to identify and take courses within disciplines applicable to engineering fields such as: Chemical, Biomedical, Embedded Systems, Environmental, Manufacturing, and Industrial Engineering.

Students are strongly encouraged to work with an advisor at the desired transfer institution and an OCC counselor to select courses that will maximize their applicability upon transfer.

Students must meet the requirements set by the institution to which they plan on transferring to. Completing the Pre-Engineering degree does not guarantee acceptance at another college or university.

Students who complete the degree are well qualified to work at an entry-level position within the electrical, mechanical, computer, or industrial industry, and should consider applying for summer employment to gain practical experience.

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

Program Outcomes and Full Time Plan Example - Electrical Computer Focus Area **(**https://www.oaklandcc.edu/program-plan/pre.egr.electrical.aas**)**

Program Outcomes and Part Time Plan Example - Electrical Computer Focus Area **(**https://www.oaklandcc.edu/program-plan/pre.egr.electrical.aas-pt/**)**

Program Outcomes and Full Time Plan Example - Mechanical Civil Focus Area **(**https://www.oaklandcc.edu/program-plan/pre.egr.mechanical.aas**)**

Program Outcomes and Part Time Plan Example - Mechanical Civil Focus Area **(**https://www.oaklandcc.edu/program-plan/pre.egr.mechanical.aas.pt**)**

Code	Title		Credit Hours
Major Requirements			
CHE 1510	General Chemistry I		4
EGR 1100	Introduction to Engineering		3
EGR 2010	Engineering Programming		4
ENG 1510	Composition I		3
or ENG 1510E	Composition I Enhanced	4	
or ENG 1510S	Composition I with Support	6	
ENG 1520	Composition II		3
or ENG 2200	Professional Communication	4	
MAT 1730	Calculus I		4
MAT 1740	Calculus II		4
MAT 2740	Calculus III		4
MAT 2810	Differential Equations		4
PHY 2400	Engineering Physics I		5
PHY 2500	Engineering Physics II		5
Required Supportive Courses			**8-10**
Complete one of the following focus areas.			
Electrical/Computer Focus Area select at least 2 courses			
EGR 2060	Engineering Digital Circuits	4	
EGR 2080	Engineering Microcontrollers	4	
EGR 2700	Engineering Circuits I	5	
Mechanical/Civil Focus Area select at least 3 courses			
CAD 1201	Introduction to Engineering Graphics	4	
EGR 2100	Statics	3	
EGR 2200	Mechanics of Materials	3	
EGR 2500	Dynamics	3	
Other Option Focus Area select at least 8 credits			
CIS 1200 or higher		3-4	
BIO 1530 or higher		3-4	
CHE 1520 or higher		3-4	
MAT 1580	Statistics	4	
MAT 2880	Linear Algebra	4	
Total Credit Hours for Program-Related Courses			**8-10**
General Education Requirements			
Communication / English (3-credits)			
Satisfied			
Fine Arts / Humanities (6 credits minimum)			**6-8**
Complete 6 credits from Fine Arts/Humanities courses listed in the General Education Distribution List (http://catalog.oaklandcc.edu/graduation-requirements/general-education-distribution/#fine-arts-humanities)			
Mathematics / Science (3-credits)			
Satisfied			
Social Science (6 credits)			**6**
Complete 2 courses from Social Science courses listed in the General Education Distribution List (http://catalog.oaklandcc.edu/graduation-requirements/general-education-distribution/#social-science)			
Written Communication (3-credits)			

Satisfied

Total Credit Hours   **63-67**

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