

# 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>)

**Program Outcomes** – Click Here (<https://www.oaklandcc.edu/programs/outcomes/CAD.PDO.AAS.ProgramOutcomes.pdf>)

Code	Title	Credit Hours
<b>Major Requirements</b>		
CAD 1101	Introduction to CAD	4
CAD 1105	Animation Design	3
CAD 1201	Introduction to Engineering Graphics	4
CAD 1450 <sup>1</sup>	Drafting and Design Co-op Internship	3
CAD 2102	Fundamentals of Part Design and Its Applications	4
CAD 2151	Introduction to Generative Surface Design	4
DDT 1000	Fundamentals for the Drafting Industry	3

MAT 1150 <sup>2</sup>	Intermediate Algebra (or higher level math except MAT 1525, MAT 2530 or MAT 2540)	3-4
Select one of the following ENG courses:		3-4
ENG 1350 <sup>2,3</sup>	Business Communications	3
ENG 1450 <sup>2,3</sup>	Writing and Reading for Problem Solving	3
ENG 1510 <sup>2</sup> or ENG 1510E	Composition I Enhanced	3-4 4
ENG 2200 <sup>2,3</sup>	Professional Communication	4

### Required Supportive Courses

CAD 1501	Special Topics in CAD: Fusion 360 Design	2
CAD 2000	Animation Design II	3
CAD 2110	NX I	3
CAD 2131	Product Design	4
CAD 2190	NX II	3
CAD 2340	Tool and Die Design	4
CAD 2450 <sup>1</sup>	Advanced Drafting and Design Co-op Internship	3

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

### General Education Requirements

Communication / English (3-credits)	3
Complete 3 credits from Communication / English courses listed in the General Education Distribution List ( <a href="http://catalog.oaklandcc.edu/graduation-requirements/general-education-distribution/#communication-english">http://catalog.oaklandcc.edu/graduation-requirements/general-education-distribution/#communication-english</a> )	
Fine Arts / Humanities (3-credits)	3
Complete 3 credits from Fine Arts/Humanities courses listed in the General Education Distribution List ( <a href="http://catalog.oaklandcc.edu/graduation-requirements/general-education-distribution/#fine-arts-humanities">http://catalog.oaklandcc.edu/graduation-requirements/general-education-distribution/#fine-arts-humanities</a> )	
Mathematics / Science (3-credits)	
Satisfied	
Social Science (3-credits)	3
Complete 3 credits from Social Science courses listed in the General Education Distribution List ( <a href="http://catalog.oaklandcc.edu/graduation-requirements/general-education-distribution/#social-science">http://catalog.oaklandcc.edu/graduation-requirements/general-education-distribution/#social-science</a> )	
Written Communication (3-credits)	
Satisfied	

**Total Credit Hours** **62-64**

<sup>1</sup> One of the following may be used as a co-op substitution: CAD 2141, CAD 2161, CAD 2602, or CAD 2702.

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

<sup>2</sup> Course may be used to meet General Education requirements.

<sup>3</sup> Students transferring to other institutions should select ENG 1510.

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