INDUSTRIAL DESIGN ENGINEERING (AS DEGREE S0331)

Technology and Health Division
Degree S0331
This program is designed to prepare the student for a career in a wide range of industries including product and industrial design firms and fabrication and manufacturing companies. Students are introduced to product development from design through prototyping and fabrication for manufacturing.

Portfolio or prototype development is required on each of the semester levels. In the Level Three certificate and AS Degree course work, this will culminate in a final "senior project," which is a portfolio that includes two and three-dimensional design, documentation (accountability measures), presentation, and fabrication. This project will demonstrate the student's mastery of the concepts and methodologies learned during the program.

Students desiring a Bachelor's Degree should consult with a counselor or an educational advisor to discuss transferability of courses.

This degree requires the completion of General Education coursework plus the following:

Required Courses

Course Prefix	Course Name	Units
IDE 110	Design Foundation-Visual Literacy	3
IDE 120	Introduction to CAD	3
IDE 130	Introduction to Shop Processes	3
IDE 150	Design Foundation II	3
IDE 160	Intermediate CAD	3
IDE 170	Introduction to Prototyping	3
IDE 210	Advanced Media	3
IDE 220	Advanced CAD	3
IDE 230	Introduction to Mechanical Principles	3
IDE 250	Product Design and Viability	6
IDE 270	Manufacturing Processes and Materials	3
Total Units		**36**

Recommended Electives

Course Prefix	Course Name	Units
ELEC 50A	Electronic Circuits - Direct Current (DC)	4
ELEC 81	Laboratory Studies in Electronics Technology	1-2
MATH 51	Elementary Algebra	4
PHYS 1	Physics	4
WELD 30	Metal Sculpture	2
WELD 40	Introduction to Welding	2

Guided Pathways of Study Suggested Course Sequence (https://www.mtsac.edu/guided-pathways/pathway-results.html?pthwyvar=S0331&desc=Industrial+Design+Engineering%2C+AS+S0331)

Looking for guidance? A counselor can help.This Guided Pathways for Success (GPS) is a suggested sequence of coursework needed for program completion. It is not an official educational plan. Schedule an appointment (https://esars2012.mtsac.edu/appointments/counseling/eSARS.asp?WCI=Init&WCE=Settings) with a counselor or advisor as soon as possible to create an individualized Mountie Academic Plan (MAP) specific to your goals and needs.

Course	Title	Units
Fall Term 1		
IDE 110	Design Foundation-Visual Literacy	3
IDE 120	Introduction to CAD	3
IDE 130	Introduction to Shop Processes	3
ARTD 20	Design: Two-Dimensional	3
	Units	**12**
Winter Term 1		
AA/S MATH	Meet AA/AS Math Comptcy Req	3
AA/S KINES	Phys Ed (KIN) Activity Course	.5
	Units	**3.5**
Spring Term 1		
IDE 150	Design Foundation II	3
IDE 160	Intermediate CAD	3
IDE 170	Introduction to Prototyping	3
ENGL 1A	Freshman Composition	4
Certificate: Industrial Design Engin., L1 N0651 [1]		
Submit petition: inside.mtsac.edu, Student Tab#45 [5]		
	Units	**13**
Summer Term 1		
AA/S SCNCE	Area B-1 or B-2 Science Course	3
AA/S BEHAV	Area D-2 Elective Course	3
	Units	**6**
Fall Term 2		
IDE 210	Advanced Media	3
IDE 220	Advanced CAD	3
IDE 230	Introduction to Mechanical Principles	3
AA/S USHIS	Area D-1 Hist/Pol Sc Course	3
Certificate: Industrial Design Engin., L2 N0620 [0]		
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	Units	**12**
Winter Term 2		
AA/S LIFE	Area E Lifelong Undrstg Course	3
SPCH 1A OR SPCH 2 [4]		
	Units	**3**
Spring Term 2		
IDE 250	Product Design and Viability	6
IDE 270	Manufacturing Processes and Materials	3
AA/S HUM	Area C-2 Humanities Course	4
Industrial Design Engineering, AS S0331 [1]		
Certificate: Industrial Design Engin., L3 T0328 [8]		
Submit petition: inside.mtsac.edu, Student Tab#45 [5]		
	Units	**13**
	Total Units	**62.5**

Program Learning Outcomes

Review Student Learning Outcomes (SLOs) (http://www.mtsac.edu/instruction/outcomes/sloinfo.html) for this program.