Engineering Design

Associate in Science

DIVISION OF SCIENCE, TECHNOLOGY, ENGINEERING & MATHEMATICS

Designers translate the ideas, sketches, and specifications of engineers into workable plans and models. Students develop skills and techniques by using the most
modern equipment and software, such as AutoCAD®, AutoDesk Revit®, PTC Creo®, SolidWorks®, and MS Project®. Instruction is given in mechanical, electrical, electro-mechanical, architectural, and multimedia design. Students will use the acquired computer and manual drafting skills from various courses to complete projects in the areas of their interest. Graduates may seek positions as detailers/designers/schedulers.

Upon successful completion, the Associate in Science Degree in Engineering Design is awarded.

PROGRAM FOOTNOTES

Humanities Electives:
Art, Communication, English (EN 103 or higher), Film, Foreign Language, Humanities, Literature, Music, Oral Communication, Philosophy, Photography, Sign Language, Theater Arts

Social Science Electives:
Anthropology, Economics, Geography, Government, History, Law, Psychology, Sociology

Program Electives: IN 102 Architectural Drawing for Interior Design, MN 241 Architectural Design, MN 251 Electro-Mechanical Design, MN 271 Project Design, MN 272 Designing Plastic Parts, and/or courses in Biology, Computer Science, (except CS 100), Chemistry, Electronics, Engineering, Environmental Science, Mathematics, Mechanical Engineering, Physics

Competency in mathematics is a MassBay graduation requirement. Prior to graduation, students must demonstrate competency at 100-level math. This may be accomplished by an appropriate placement test score or completion of any 100-level mathematics course or higher, except mathematics courses with a MAC prefix.

This program qualifies as an Alternative Transfer Agreement (MassTransfer) with select public institutions in Massachusetts. For more information, visit www.mass.edu/masstransfer.

COURSE	COURSE TITLE	CREDITS
First Year	*Semester 1*	
EN 101	Freshman English I	3
MN 101	Introduction to Computer Aided Design and Drafting	4
MN 130	Engineering Design with CAD I	4
MA 104	Pre-Calculus Mathematics	4
	credits:	15
First Year	*Semester 2*	
CS 110	Introduction to Computer Science	4
CT 100	Critical Thinking	3
EN 102	Freshman English II	3
MN 135	Engineering Design with CAD II	4
MN 141	Architecture & Civil CAD Applications	4
	credits:	18
Second Year	*Semester 1*	
MN 121	Mechanical Detailing	4
	Humanities Elective	3
	Program Elective	4
	Social Science Elective	3
	credits:	14
Second Year	*Semester 2*	
MN 261	Animation Materials 3D Molding	4
MN 140	Project Management	4
	Program Elective	3/4
	Humanities Elective	3
	or	
	Social Science Elective	3
	credits:	14/15
	Total Credits:	**61/62**