# **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 <a href="https://www.mass.edu/masstransfer">www.mass.edu/masstransfer</a>.

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	,
	1	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	Semester 1	
Year	Semester 1	
MN 121	Mechanical Detailing	4
	Humanities Elective	3
	Program Elective	4
ノし	Social Science Elective	3
	credits:	14
Second Year	Semester 2	GE
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