Electrical & Computer Engineering

Associate in Science

DIVISION OF SCIENCE, TECHNOLOGY, ENGINEERING & MATHEMATICS

This comprehensive program provides students with an overview of the electrical and computer engineering field. Students explore such areas as computer hardware, digital electronics, computer science, and engineering.

Upon successful completion, the Associate in Science Degree in Electrical and Computer Engineering is awarded.

PROGRAM FOOTNOTES

Students are advised to check transfer requirements at four-year institutions.

Some institutions require two Chemistry courses for specific engineering programs. CH 110 Principles of Chemistry I and CH 120 Principles of Chemistry II sequence is recommended in such cases.

Students are encouraged to take an additional computer science course from the following list:

- CS 123 Python Programming (required at UMass Lowell)
- CS 212 Systems Programming with "C"
- CS 242 Computer Networks (required at UMass Lowell)
- ET 211 iCREAT II
- Students planning to transfer to Northeastern University Electrical Engineering program are encouraged to take MA 210 Introduction to Linear Algebra

Humanities Electives:
Art, Communication, English (EN 103 or higher), ESL (ES 100 or higher; up to 6 credits), 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

Quantitative skills are a MassBay graduation competency for associate degree programs. Prior to graduation, students must demonstrate this competency by completing a 100-level math course (not MAC); or placing into a 200-level mathematics course.

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*	
PY 103	Engineering Physics I w/ Lab	4
EN 101	English Composition I	3
MA 200	Calculus I	4
ET 111	iCREAT I	3
MN 100*	Career Readiness and ePortfolio	1
CO 131°	Oral Communication	3
	credits:	18
First Year	*Semester 2*	
PY 104	Engineering Physics II w/ Lab	4
MN 125	Engineering Computation with Application Software	4
EN 102	English Composition II	3
MA 201	Calculus II	4
CT 100°	Critical Thinking	3
	credits:	18
Second Year	*Semester 1*	
CH 110	Principles of Chemistry I	4
EE 110*	Circuit Analysis I	4
MA 202	Calculus III	4
EE 120*	Digital Electronics	4
	credits:	16
Second Year	*Semester 2*	
MA 211	Differential Equations	4
EE 115**	Circuit Analysis II	4
EC 201°	Principles of Macroeconomics	3
PH 102 °	Ethics	3
	credits:	14
	Total Credits:	**66**

* Fall only course
** Spring only course
- CO 131 Oral Communication requirement can be substituted for a Humanities elective
- CT 100 Critical Thinking requirement can be fulfilled by passing the Critical Thinking Challenge Exam
- EC 201 Principles of Macroeconomics requirement can be substituted for EC 202 Principles of Microeconomics or another Social Science elective
- PH 102 Ethics requirement can be substituted for a Humanities elective