Electrical & Computer Engineering

Associate in Science

DIVISION OF SCIENCE, TECHNOLOGY, ENGINEERING & MATHEMATICS

This comprehensive program provides students 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 212 Systems Programming with "C,"
  - CS 242 Computer Networks (required at UMass Lowell)
  - CS 123 Python Programming (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
- CO 131 Oral Communications requirement can be substituted for a Humanities elective
- EC 201 Principles of Macroeconomics requirement can be substituted for EC 202 Principles of Microeconomics or another Social Science elective
- CT 100 Critical Thinking requirement can be fulfilled by passing the Critical Thinking Challenge Exam
- PHL 102 Philosophy: Ethics can be substituted for a Humanities elective

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

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.

COURSE	COURSE TITLE	CREDITS
First Year	*Semester 1*	
PY 103	Engineering Physics I w/ Lab	4
EN 101	Freshman English I	3
MA 200	Calculus I	4
ET 111	iCREAT I	3
MN 100 *	Career Readiness and ePortfolio	1
CO 131 °	Oral Communications	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	Freshman English 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
PHL 102 °	Philosophy: Ethics	3
	credits:	14
	Total Credits:	**66**

* Fall only course
** Spring only course

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