



Northern

## Associate in Engineering in INFORMATION ENGINEERING TECHNOLOGY

The curriculum for the Associate in Engineering (AEng) in Information Technology is designed for those engineering students who intend to launch a career in the design, installation, maintenance, and repair of computer networks used for critical data entry, transfer, retrieval, and management. Coursework in the program is practice-oriented and prepares students to work in a variety of computer-intensive environments, such as technical organizations, small or large businesses, product design or manufacturing companies, and data-directed services. The breadth of training in hardware, software, troubleshooting equipment, and other computer tools will enable the graduate to work in a variety of roles in such environments as network designer, network support and administrator, project manager, data applications or computer communications engineer, test and integration manager or technologist in business applications. The graduate of this curriculum will be a computer network specialist, but broadly versed in mathematics, physics, computer science, and business fundamentals. Failure to maintain an overall GPA of at least a 2.0 in all coursework is sufficient cause for being dropped from the program.

### GENERAL EDUCATION (35)

COMPLETED

Planned Timeline  
(By Semester)

#### Communications (9)

ENG 111 English Composition I (3)

*Pre-requisite: ENG 109 or adequate score on the Course Placement Evaluation*

ENG 116 Technical Writing (3)

*Pre-requisite: ENG 111*

SPCH 130 Public Speaking (3)

*Pre-requisite: ENG 109 or adequate score on the Course Placement Evaluation*

#### Mathematics (11)

MATH 145 Introduction to Probability &amp; Statistics (3)

*Pre-requisite: MATH 130 or adequate score on the Course Placement Evaluation*

MATH 162 Calculus I (4)

*Pre-requisites: MATH 150 and MATH 155*

MATH 163 Calculus II (4)

*Pre-requisite: MATH 162*

#### Laboratory Science (8)

PHYS 215/L Engineering Physics I with lab (4)

*Pre-requisite: ENGR 120 OR MATH 162; Co-requisite: PHYS 215L*

PHYS 216/L Engineering Physics II with lab (4)

*Pre-requisite: PHYS 215/L*

#### Social/Behavioral Sciences (3)

ECON 201 Microeconomics (3)

*Pre-requisite: ENG 109 or adequate score on the Course Placement Evaluation*

#### Humanities and Fine Arts (3)

HUM 100 First Year Experience: History and Culture of NNM (3)

#### Library Technology, Library Research Skills (1)

LT 101 Library Research Skill (1)

### PROGRAM REQUIREMENTS (30)

#### Business (3)

BA Lower division elective (3) \_\_\_\_\_

#### Electrical, Electronic and Computer Engineering (18)

EECE 105L Microcomputer Systems (4)

*Pre-requisite: ENG 109 or adequate score on the Course Placement Evaluation*

EECE 132 Computer Networks I (3)

*Pre-requisite: None*

EECE 152L	Computer Programming I (4)	_____	_____
<i>Pre-requisite: None</i>			
EECE 231	Intermediate Programming I (3)	_____	_____
<i>Pre-requisite: EECE 152L</i>			
EECE 238L	Computer Logic Design (4)	_____	_____
<i>Pre-requisite: MATH 150 and EECE 152L</i>			

**Information Technology (6)**

IT 210	IT Systems (3)	_____	_____
<i>Pre-requisite: EECE 152L</i>			
IT 250	Introduction to Databases (3)	_____	_____
<i>Pre-requisite: EECE 152L</i>			

**Information Technology (3)**

ENGR 110	Introduction to Engineering (3)	_____	_____
<i>Pre-requisite: MATH 102</i>			

**TOTAL CREDITS      65**

**SUGGESTED SEQUENCE OF COURSES**

**FIRST SEMESTER (17 crs)**

LT 101	Library Research Skills (1)
HUM 100	First Year Exp: Hist. Cult. NNM (3)
ENG 111	English Composition I (3)
EECE 152/L	Computer Programming I (4)
EECE 132	Computer Networks I (3)
ENGR 110	Introduction to Engineering (3)

**SECOND SEMESTER (18 crs)**

MATH 162	Calculus I (4)
IT 210	IT Systems (3)
EECE 238/L	Computer Logic Design (4)
EECE 231	Intermediate Programming (3)
EECE 105/L	Microcomputer Systems (4)

**THIRD SEMESTER (17 crs)**

ENG 116	Technical Writing (3)
MATH 162	Calculus II (4)
PHYS 215/L	Engineering Physics I with Lab (4)
ECON 201	Microeconomics (3)
IT 250	Intro. to Databases (3)

**FOURTH SEMESTER (13 crs)**

PHYS 216/L	Engineering Physics II with Lab (4)
BA	Elective (3)
MATH 145	Introduction to Probability and Statistics (3)
SPCH 130	Public Speaking (3)

## Educational Planning Form (Semester)

<b>Fall Semester</b>	<b>Spring Semester</b>	<b>Summer</b>
<b>Total Units</b>	<b>Total Units</b>	<b>Total Units</b>
<b>Fall Semester</b>	<b>Spring Semester</b>	<b>Summer</b>
<b>Total Units</b>	<b>Total Units</b>	<b>Total Units</b>
<b>Fall Semester</b>	<b>Spring Semester</b>	<b>Summer</b>
<b>Total Units</b>	<b>Total Units</b>	<b>Total Units</b>

Advisor's Signature \_\_\_\_\_

Student Signature \_\_\_\_\_