The curriculum of the BEng in Information Engineering 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-orientated 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 versed in mathematics, physics, computer science, and business fundamentals.

Students are advised to not attempt upper division coursework (300 and 400-level classes) until you have earned a GPA of 2.50 or better in all IT, CS, and CT coursework taken at the 100 and 200-level. Failure to maintain an overall GPA of 2.00 or better in all coursework will be sufficient cause for being dropped from the program.

<table>
<thead>
<tr>
<th>GENERAL EDUCATION REQUIREMENTS (47 crs)</th>
<th>COMPLETED</th>
<th>PLANNED TIMELINE (By Semester)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Area I: Communications (9 crs)</strong></td>
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<tr>
<td>ENG 111 English Composition I (3)</td>
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<tr>
<td><em>Prerequisite: ENG 109 or adequate score on the Course Placement Evaluation</em></td>
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<tr>
<td>ENG 116 Technical Writing (3)</td>
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<td><em>Prerequisite: ENG 111</em></td>
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<tr>
<td>SPC 130 Public Speaking (3)</td>
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<tr>
<td><strong>Area II: Mathematics (11 crs)</strong></td>
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<tr>
<td>MATH 145 Introduction to Probability and Statistics (3)</td>
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<tr>
<td><em>Pre-requisite: MATH 130 or adequate score on the Course Placement Evaluation</em></td>
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<tr>
<td>MATH 162E Calculus I (4)</td>
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<tr>
<td><em>Pre-requisite: MATH 155</em></td>
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<tr>
<td>MATH 163E Calculus II (4)</td>
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<tr>
<td><em>Pre-requisite: MATH 162E</em></td>
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<tr>
<td><strong>Area III: Laboratory Sciences (8 crs)</strong></td>
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<tr>
<td>PHYS 215 Engineering Physics I (3)</td>
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<tr>
<td><em>Pre-requisite: MATH 162; Co-requisite: PHYS 215L</em></td>
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<tr>
<td>PHYS 215L Engineering Physics Lab (1)</td>
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<tr>
<td><em>Co-requisite: PHYS 215</em></td>
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<tr>
<td>PHYS 216 Engineering Physics II (3)</td>
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<tr>
<td><em>Pre-requisite: PHYS 161/L; Pre-requisite: MATH 162 Co-requisite: PHYS 216L</em></td>
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<tr>
<td>PHYS 216L Engineering Physics II Lab (1)</td>
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<tr>
<td><em>Pre-requisite: PHYS 215/L; Co-requisite: PHYS 216</em></td>
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<tr>
<td><strong>Area IV: Social/Behavioral Sciences (6-9 crs)</strong></td>
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<tr>
<td><em>Pre-requisite: ENG 109 or adequate score on the Course Placement Evaluation</em></td>
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<tr>
<td>ECON 201 Microeconomics (3)</td>
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<tr>
<td>Elective (3)</td>
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<td>Elective (3)</td>
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<tr>
<td><em>You must select courses from at least one different discipline area</em> from the following list:</td>
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<tr>
<td>ANTH 101/L Physical Anthropology w/Lab (4)</td>
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<tr>
<td>ANTH 102 Intro to Social &amp; Cultural Anthropology (3) (Fall)</td>
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<tr>
<td>ANTH 111 Language and Culture (3)</td>
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<td>ANTH 207 Cultures of New Mexico (3)</td>
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<tr>
<td>ANTH 110 Indian Culture of the Southwest</td>
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<tr>
<td>ECON 200 Macroeconomics (3)</td>
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<tr>
<td>ECON 201 Microeconomics (3)</td>
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<tr>
<td>GEOG 111 World Geography (3)</td>
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<tr>
<td>PSCI 110 The Political World (3)</td>
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</tbody>
</table>
Area V: Humanities and Fine Arts (6-9 crs)

**Required**

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

HUM 100 First year Experience: History and Culture of Northern New Mexico (3)

*Pre-requisite: ENG 108 or adequate score on the Course Placement Evaluation*

**Electives (3-6 crs)**

You must select courses from at least two different discipline areas

Elective (3) ___________ ___________ ___________

Elective (3) ___________ ___________ ___________

**Choose two electives from the following list:**

ART 105 Introduction to Art (3)
ART 107 History of Art I (3)
ART 208 History of NM Art & Architecture (3)
ART 211 History of Art II (3)
DANC 240 Dance Appreciation (3)
ENG 270 Children’s Literature (3)

*Pre-requisite ENG 111*

ENG 262 Literature of the Southwest (3)

*Pre-requisite ENG 112*

ENG 265 Native American Literature I (3)

*Pre-requisite ENG 111*

ENG 266 Native American Literature II (3)

*Pre-requisite: ENG 111*

ENG 280 Readings in Literature (3)

*Pre-requisite ENG 111*

ENG 290 Study of Literature

*Pre-requisite ENG 111*

ENG 294 Mythology (3)

*Pre-requisite ENG 111*

HIST 101 Western Civilization I (3)
HIST 102 Western Civilization II (3)
HIST 161 History of the U.S. to 1877 (3)
HIST 162 History of the U.S. from 1877 (3)
HIST 200 History of the World Religions (3)
HIST 220 Southwestern Women’s History (3)
HIST 230 Chicano Experience in the US (3)
HIST 250 American Indian History (3)
HIST 260 History of New Mexico (3)
HUM 101 Humanities I (3)
HUM 102 Humanities II (3)
HUM 105 Humanities of the Southwest (3)
HUM 311 Why the Social Sciences Matter ** (3)
HUM 414 Humanity and Creativity ** (3)
HUM 421 History, Literature, Art & Philosophy ** (3)
MUS 103 Music History & Literature I (3)
MUS 105 Music Appreciation (3)
### Major Requirements (84 crs)

#### Computer Science (3 crs)
- **CS 201** Math Foundations of Computer Science (3)
  - **Pre-requisite:** EECE 152L

#### Electrical, Electronic, and Computer Engineering (39)
- **EECE 105L** Microcomputer Systems (3)
  - **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)
  - **Pre-requisite:** None
- **EECE 231L** Intermediate Programming I (3)
  - **Pre-requisite:** EECE 152L
- **EECE 238L** Computer Logic Design (4)
  - **Pre-requisite:** MATH 150, EECE 152
- **EECE 251L** Advanced Programming I (3)
  - **Pre-requisite:** EECE 231L
- **EECE 329** Human Computer Interaction (3)
  - **Pre-requisite:** EECE 231L
- **EECE 330** Computer Networks II (3)
  - **Pre-requisite:** EECE 132
- **EECE 342** Wireless and Mobile Computing (3)
  - **Pre-requisite:** EECE 132
- **EECE 355** Web Engineering (4)
  - **Pre-requisite:** EECE 231L and IT 250
- **EECE 435** Software Engineering (3)
  - **Pre-requisite:** EECE 231L and IT 250
- **EECE 440** Advanced Computer Networks (3)
  - **Pre-requisite:** EECE 330, EECE 342

#### Information Technology (17 crs)
- **IT 250** Introduction to Databases (3)
  - **Pre-requisite:** EECE 152L
- **IT 350** Database Management (3)
  - **Pre-requisite:** IT 250
- **IT 410** Information Assurance/Security (3)
  - **Pre-requisite:** IT 355 and IT 350
- **IT 490** Capstone I (4)
  - **Pre-requisite:** EECE 152L, Senior Standing
- **IT 491** Capstone II (4)
  - **Pre-requisite:** EECE 152L, Senior Standing

#### Business (9 crs)
- **ENGR 474** Engineering Project Management (3)
Pre-requisite: ENG 111, with Senior standing recommended
Electives in ENGR at 4xx-level (6)

Support Technologies (16 crs)
EECE 110 Introduction to Engineering (2)
Pre-requisites: None

ENGR 120 Introductory Math for Engineering Applications (4)
Pre-requisites: MATH 130

EECE 203L Circuit Analysis I (4)
Pre-requisites: PHYS 216/L

Upper-division electives from EECE/CS/IT/MATH (6)

TOTAL CREDIT HOURS 131

SUGGESTED SEQUENCE OF COURSES

First Semester (17 cr)
LT 101 Library Research Skills (1)
HUM 100 First Year Exp: Hist. Cult. NNMC (3)
EECE 152L Computer Programming I (4)
EECE 132 Computer Networks I (3)
ENGR 110L Introduction to Engineering (2)
ENGR 120L Introductory Math for Engineering Applications (4)

Second Semester (16 cr)
MATH 162E Calculus I (4)
EECE 330 Computer Networks II (3)
EECE 231 Intermediate Programming (3)
EECE 105L Microcomputer Systems (3)
ENG 111 English Composition I (3)

Third Semester (17 cr)
MATH 163E Calculus II (4)
PHYS 215/L Engineering Physics I with lab (4)
EECE 342 Wireless and Mobile Computing (3)
IT 250 Introduction to Databases (3)
EECE 251L Advanced Programming (3)

Fourth Semester (16 cr)
PHYS 216/L Engineering Physics II with lab (4)
CS 201 Math Foundations of CS (3)
FOR/LA Foreign Language (3)
MATH 145 Introduction to Probability and Statistics (3)
ENG 116 Technical Writing (3)

Fifth Semester (17 cr)
EECE 238L Computer Logic Design (4)
EECE 329 Human Computer Interaction (3)
EECE 203L Circuit Analysis I (4)
ECON 201 Microeconomics (3)
SPCH 130 Public Speaking (3)

Sixth Semester (16 cr)
IT 350 Database Management (3)
EECE 440 Advanced Computer Networks (3)
ENGR 474 Engineering Project Management (3)
EECE 355 Web Engineering (4)
EECE 435 Software Engineering (3)
Sexth Semester (16 cr)
  IT  410  Information Assurance/Security (3)
  IT  490  Capstone I (4)
  EECE/CS/IT/MATH Elective 3XX/4XX (3)
  ENGR 4XX  Elective (3)
  HUM/SOC  Elective (3)

Eighth Semester (16 cr)
  IT  491  Capstone II (4)
  EECE/CS/IT/MATH Elective 3XX/4XX (3)
  ENGR 4XX  Elective (3)
  HFA/SBS  Elective (3)
  HUM/SOC  Elective (3)