Bachelor of Engineering (BEng)
Information Engineering Technology

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.

GENERAL EDUCATION REQUIREMENTS (38 crs)

<table>
<thead>
<tr>
<th>Area I Communications (9 crs)</th>
<th>COMPLETED (By Semester)</th>
<th>PLANNED TIMELINE</th>
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<tbody>
<tr>
<td>ENG 111 English Composition I (3)</td>
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<tr>
<td>Prerequisite: ENG 109 or adequate score on the Course Placement Evaluation</td>
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<td>ENG 116 Technical Writing (3)</td>
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<tr>
<td>Pre-requisite: ENG 111</td>
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<tr>
<td>SPCCH 130 Public Speaking (3)</td>
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<tr>
<th>Area II Mathematics (3 crs)</th>
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<tbody>
<tr>
<td>MATH 145 Introduction to Probability and Statistics (3)</td>
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<tr>
<td>Pre-requisite: MATH 130 or adequate score on the Course Placement Evaluation</td>
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<tr>
<th>Area III Laboratory Sciences (8 crs)</th>
<th>COMPLETED (By Semester)</th>
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<tr>
<td>PHYS 215/L Engineering Physics I with lab (4)</td>
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<tr>
<td>Pre-requisite: ENGR 120 OR MATH 155; Co-requisite: PHYS 215L</td>
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<tr>
<td>Elective (4)</td>
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You must select a course from the following list:

- ASTR 110/L Intro to Astronomy with Lab (4)
- PHYS 122/L Applied Physics II with lab (4)
- PHYS 215/L Engineering Physics I with lab (4)
- PHYS 216/L Engineering Physics II with lab (4)
- CHEM 121/L General Chemistry I with Lab (4)
- ES 112/L Introduction to Environmental Science with Lab (4)
- BIOL 110/L Current Topics in Biology with Lab (4)
- GEOL 101/L Physical Geology with Lab (4)

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<tr>
<th>Area IV Social/Behavioral Sciences (6-9 crs)</th>
<th>COMPLETED (By Semester)</th>
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<tr>
<td>Pre-requisite: ENG 109 or adequate score on the Course Placement Evaluation</td>
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<tr>
<td>ECON 201 Microeconomics (3)</td>
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<tr>
<td>Electives (3-6 crs)</td>
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You must select courses from two different discipline areas (in case you take 6crs) from the following list:

- Elective (3) | ____ | ____ |
- ANTH 101/L Physical Anthropology w/Lab (4)
- ANTH 102 Intro to Social & Cultural Anthropology (3) (Fall)
- ANTH 111 Language and Culture (3)
- ANTH 207 Cultures of New Mexico (3)
- ANTH 110 Indian Culture of the Southwest
Area V Humanities and Fine Arts (6-9 crs)

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

Second Language (3)
Pre-requisite: ENG 109 or adequate score on the Course Placement Evaluation

Electives (3-6 crs)
You must select courses from two different discipline areas (in case you take 6crs) from the following list:

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)
** Why the Social Sciences Matter ** (3)
** Humanity and Creativity ** (3)
** History, Literature, Art & Philosophy ** (3)
** Music History & Literature I (3)
** Music Appreciation (3)
** Music History & Literature II (3)
** Intro to Philosophical Problems (3)
** History of Philosophy (3)
** Critical Thinking (3)
** Ethics (3)
** Introduction to Pueblo Indian Studies (3)
** Introduction to Theatre I (3)
** History of Theatre (3)

Plus, topic courses with advisor’s approval

* If your major is in the area of the Humanities/Fine Arts, unless otherwise regulated by a given department, you should select 9 hrs from Area V and 6 hrs. from Area IV; if in the Social/Behavioral Sciences, you should select 9 hrs from Area IV and 6 hrs from Area V. Consult your major advisor. In any case, you must complete a minimum spread of 15 hrs between Areas IV and V.

** Students in associate degree programs are advised that upper-division courses are not covered under financial aid.

** Area VI First Year Experience (3 crs)**
** FYE 100 First Year Experience (3)**
*Pre-requisite: None*

** SUPPORT COURSES (8 crs)**
** MATH 162E Calculus I (4)**
*Pre-requisite: MATH 155, ENGR 120*
** MATH 163E Calculus II (4)**
*Pre-requisite: MATH 162E*

** MAJOR REQUIREMENTS (77 crs)**
** Computer Science (3 crs)**
** CS 201 Math Foundations of Computer Science (3)**
*Pre-requisite: EECE 152L*

** Electrical, Electronic, and Computer Engineering (37)**
** EECE 105L Microcomputer Systems (3)**
*Pre-requisite: ENG 109 or adequate score on the Course Placement Evaluation*
** EECE 111 Introduction to Web Programming (3)**
*Pre-requisite: None*
** EECE 132 Computer Networks I (3)**
*Pre-requisite: None*
** EECE 152L Computer Programming I (3)**
*Pre-requisite: None*
** EET 200/L Electrical Systems I with Lab (4)**
*Pre-requisite: ENGR 120*
** EECE 230 Introduction to Routing and Switching (3)**
*Pre-requisite: EECE 132*
** EECE 231L Intermediate Programming (3)**
*Pre-requisite: EECE 152L*
** EECE 329 Human Computer Interaction (3)**
*Pre-requisite: EECE 231L*
** EECE 330 Computer Networks II (3)**
*Pre-requisite: EECE 132*
** EECE 351 Advanced Programming (3)**
*Pre-requisite: EECE 231L*
** EECE 355 Web Engineering (3)**
*Pre-requisite: EECE 231L and IT 250*
** EECE 440 Advanced Computer Networks (3)**
*Pre-requisite: EECE 330, EECE 342*

** Information Technology (15 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: EECE 230 and EECE 330

IT 490  Capstone I (3)
Pre-requisite: EECE 152L, Senior Standing

IT 491  Capstone II (3)
Pre-requisite: EECE 152L, Senior Standing

Business (4 crs)
ENGR 480  Engineering Management and Project Management (4)
Pre-requisite: Permission of Academic Advisor

Support Technologies (18 crs)
EECE 110  Introduction to Engineering (2)
Pre-requisites: None

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

Electives from EECE/CS/IT/MATH/ENGR (12). At least 9 upper division credits

TOTAL CREDIT HOURS 123

SUGGESTED SEQUENCE OF COURSES

First Semester (15 crs)
FYE 100  First Year Experience (3)
ENGR 110L  Introduction to Engineering (2)
EECE 111  Introduction to Web Design (3)
ENGR 120L  Introductory Math for Engineering Applications (4)
EECE 132  Computer Networks I (3)

Second Semester (17 crs)
ENG 111  English Composition I (3)
EECE 152L  Computer Programming I (3)
EET 200  Electrical Systems I with Lab (4)
PHYS 215/L  Engineering Physics I with lab (4)
EECE 230  Introduction to Routing and Switching (3)

Third Semester (16 crs)
EECE 105L  Microcomputer Systems (3)
ENG 116  Technical Writing (3)
MATH 145  Introduction to Probability and Statistics (3)
IT 250  Introduction to Databases (3)
Elective  Laboratory Science (4)

Fourth Semester (15 crs)
SPCH 130  Public Speaking (3)
ECON 201  Microeconomics (3)
EECE 231  Intermediate Programming (3)
EECE/IT/CS/MATH/ENGR Elective lower or upper division (3)
HFA  Elective (3)

Fifth Semester (16 crs)
MATH 162  Calculus I (4)
CS 201  Math Foundations of Computer Science (3)
EECE 329  Human Computer Interaction (3)
EECE 330  Computer Networks II (3)
IT 350  Database Management (3)

Sixth Semester (16 crs)
MATH 163  Calculus II (4)
EECE 350  Advanced Programming (3)
EECE 355  Web Engineering (3)
ENGR 480  Engineering Management and Project Management (3)
EECE/CS/IT/MATH/ENGR Elective 3XX/4XX (3)

**Seventh Semester (16 crs)**
- EECE 440  Advanced Computer Networks (3)
- IT 490  Capstone I (4)
- SBS  Elective (3)
- Second Language (3)
- EECE/CS/IT/MATH/ENGR Elective 3XX/4XX (3)

**Eighth Semester (12 crs)**
- IT 410  Information Assurance/Security (3)
- IT 491  Capstone II (3)
- SBS or HFA  Elective (3)
- EECE/CS/IT/MATH/ENGR Elective 3XX/4XX (3)

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**Educational Planning Form (Semester)**

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