ENGINEERING TECHNOLOGY - ELECTRONICS AND COMPUTER - BACHELOR OF SCIENCE IN ENGINEERING TECHNOLOGY

Electronics and Computer Engineering Technology (https://et.nmsu.edu/academics/electronics-and-computer-engineering-technology-ecet) (ECET) curriculum include design, building and testing a wide range of electronic and computer systems including digital and analog system, microprocessor systems, machine or micro-controllers, communications devices, applied power systems, digital signal processing, instrumentation, computer networking. Our program includes a diverse exposure to programming languages such as Java and C as well as the electronic design language of HDL.


Requirements (121 Total Credits)

General Education

State of New Mexico Common Core

Area I: Communications
ENGL 111G Rhetoric and Composition 4
Written Communications Elective (ENGL 218G Recommended) 3
Oral Communications Elective (COMM 265 Recommended) 3

Area II: Mathematics - see below

Area III: Laboratory Science
PHYS 211G General Physics I 3
or PHYS 215G Engineering Physics I
PHYS 211GL General Physics I Laboratory 1
or PHYS 215GL Engineering Physics I Laboratory
PHYS 212G General Physics II 3
or PHYS 216G Engineering Physics II
PHYS 212GL General Physics II Laboratory 1
or PHYS 216GL Engineering Physics II Laboratory

Areas IV & V: Social and Behavioral Sciences & Humanities and Fine Arts
Select 15 total credits from Area IV and V, with at least 6 credits from each area: 1

Area IV: Social and Behavioral Sciences: 1
Area V: Humanities and Fine Arts: 1

Institution Specific General Education

Viewing a Wider World Electives - must be from two different colleges 1 6

Program Specific Requirements

Mathematics
MATH 235 Calculus for the Technical Student I 3
or MATH 191G Calculus and Analytic Geometry I
MATH 236 Calculus for the Technical Student II 3
or MATH 192G Calculus and Analytic Geometry II

Technical

A ST 311 Statistical Applications 3
ENGR 100 Introduction to Engineering 3
I E 451 Engineering Economy 3
Technical Electives Upper Division - see advisor or pre-approved list 2 9

Engineering Technology

E T 182 Digital Logic 3
E T 190 Applied Circuits 4
E T 246 Electronic Devices I 4
E T 262 Software Technology I 3
E T 272 Electronic Devices II 4
E T 282 Digital Electronics 4
E T 314 Communications Systems I 3
E T 324 Signal Processing and Filtering 4
E T 344 Microcomputer Systems 3
E T 362 Software Technology II 3
E T 377 Computer Networking I 3
E T 381 Renewable Energy Technologies 3
E T 398 Digital Systems 3
E T 402 Instrumentation 3
E T 410 Senior Seminar 1
E T 435 Senior Project 3
E T 444 Hardware and Software Senior Design 3
E T 456 Applied Power Technologies 4

Total Credits 121

1 See the required courses (http://catalogs.nmsu.edu/nmsu/essential-information-students/general-education-courses) section of the catalog for a full list of courses

2 Technical electives 300 level and above may come from a pre-approved list (https://et.nmsu.edu/academics/electronics-and-computer-engineering-technology-ecet) or see your advisor for other options.

Concentrations are "optional" educational sequences that permit students to focus on particular areas related to their major. Concentrations "may" often be done without additional credits by judicious use of electives and other optional course requirements.

Concentration: Renewable-Energy Technologies

Students can fulfill the requirements for the Renewable Energy Technologies concentration within the ETEC majors by judicious selection of the three required technical electives. The selection of these electives may not require any additional credits beyond those of the major.

Requirements
Select four from the following: 12

E T 365 Building Utilities
WERC 300 Introduction to Pollution Prevention and Its Application
WERC 466 Fuel Cell and Hydrogen Technology
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ET 382</td>
<td>Solar Energy Technologies</td>
</tr>
<tr>
<td>ET 384</td>
<td>Wind and Water Energy Technologies</td>
</tr>
<tr>
<td>ET 401</td>
<td>Heating and Air-Conditioning Systems</td>
</tr>
<tr>
<td>or ME 401</td>
<td>Heating/Air-Conditioning System</td>
</tr>
<tr>
<td>ET 420</td>
<td>Senior Internship</td>
</tr>
<tr>
<td>or ET 435</td>
<td>Senior Project</td>
</tr>
</tbody>
</table>

Total Credits: 12

2. ET 420 Senior Internship must be carried out within a renewable energy field. ET 435 Senior Project must be related to a renewable energy application.

**Concentration: Digital Forensics**

Students can fulfill the Digital Forensics Concentration requirements by completing the following four courses.

**Technical Requirements**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>ICT 450</td>
<td>Ethical Hacking</td>
</tr>
<tr>
<td>ET 255</td>
<td>Linux System Administration</td>
</tr>
<tr>
<td>ET 339</td>
<td>Introduction to Digital Forensics and Incident Response</td>
</tr>
<tr>
<td>ET 439</td>
<td>Advanced Digital Forensics and Incident Response</td>
</tr>
</tbody>
</table>

Total Credits: 12

**Concentration: Information Security Technology**

Students can fulfill the Information Security Technology Concentration requirements by completing the following four courses.

**Technical Requirements**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 478</td>
<td>Computer Security</td>
</tr>
<tr>
<td>BCIS 482</td>
<td>Management of Information Security</td>
</tr>
<tr>
<td>ICT 450</td>
<td>Ethical Hacking</td>
</tr>
<tr>
<td>ICT 457</td>
<td>Introduction to Information Security Technology</td>
</tr>
</tbody>
</table>

Total Credits: 12