

Course Articulation between New Mexico State University  
and  
Southwestern Indian Polytechnic Institute

For students pursuing a bachelor of science degree in  
**ENGINEERING TECHNOLOGY**  
*“Linking Theory and Applications”*  
with a major in  
**Electronics and Computer Engineering Technology**

Students wishing to begin their studies at the Community College before transferring to NMSU typically spend at least four semesters and get an AAS or AS degree in Electronics Technology and the Instrumentation and Control Technology program. This is typically followed by four to six semesters at NMSU. An advisor in Engineering Technology should be consulted for all transfers. A complete description of the requirements for the degree may be found below and at the link:

[http://www.nmsu.edu/Academic\\_Progs/Undergraduate\\_Catalog/ch6/et.pdf](http://www.nmsu.edu/Academic_Progs/Undergraduate_Catalog/ch6/et.pdf)

This agreement voids all previous agreements and is valid for students transferring to NMSU until modified by the parties.

Note (1): According to 5 NMAC 55.3 a set of 35 semester hours of standardized General Education common core classes in five areas of study may be taken at the Community College and transferred to NMSU in any department. To fulfill all these requirements “may” require the student to take additional classes beyond their AS or AAS degree – see <http://hed.state.nm.us/>

Note (2): Math sequences may be taken at the Community College and a “math placement” exam will determine the students’ math level upon entering NMSU. It is strongly recommended that transferring students have at a minimum of College Algebra to permit the easiest transition to NMSU College of Engineering – the more math the better!

Note (3): Residency requirement. The last 30 credits used to meet degree requirements must be taken at NMSU, of which at least 20 of these must be upper division.

Note (4): C or better grade requirement. The NMSU College of Engineering requires a C or better grade in all required lower division science, mathematics, engineering and engineering technology courses. This requirement applies to NMSU courses and all transfer courses.

Courses which may be taken at Community College which will transfer to ETSE at NMSU are indicated in **blue italics** in the degree plan below:

**DEGREE: Bachelor of Science in Engineering Technology**  
**MAJOR: Electronics and Computer Engineering Technology (Total Credits 128)**

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Accredited by the Technology Accreditation Commission of the ABET, Inc.

**Freshman Year (32 credits)**

Gen Ed from Area I: Public Speaking	3
<i>Appropriate approved class from this area 3cr.</i>	
Gen Ed from Area I: English Composition	3-4
<i>Appropriate approved class from this area 3cr. (ENGL 101)</i>	
ET 101, Introduction to Engineering Technology	1
<i>ENGR 105 Intro. To Engr. and Design 3cr.</i>	
ET 120, Computational and Presentation Software	3
<i>COSC 107 Computer Literacy 3cr.</i>	
ET 182, Digital Logic	3
<i>ELEC 201A and ELEC 202L Digital Electronics &amp; Lab 5cr</i>	
<i>Or</i>	
<i>ENGR 222 and 222L Digital Design I with Lab 4cr.</i>	
ET 190, Applied Circuits	3
<i>ELEC 101A and ELEC 105A Basic AC/DC Electronics 6cr.</i>	
<i>Or</i>	
<i>ENGR 211 and ENGR 212 6cr.</i>	
ET 191, Applied Circuits Laboratory	1
<i>ELEC 101L and ELEC 105L AC/DC lab 4cr.</i>	
<i>Or</i>	
<i>ENGR 211L and ENGR 212L 2cr.</i>	
MATH 190, Precalculus	4
<i>MATH 123 Trigonometry and MATH 150 Adv. College Algebra</i>	
<i>Or appropriate MATH PLACEMENT 6cr</i>	
PHYS 211-211L, General Physics I, General Physics Lab I	4
<i>PHYS160 &amp; Lab Engineering Physics 4cr.</i>	
<i>Or</i>	
<i>PHYS 151 &amp; Lab General Physics 4cr</i>	
Gen Ed from Area V: Humanities and Fine Arts	3
<i>Appropriate approved class from this area 3cr.</i>	
Free elective	3
<i>Any 3 cr. class not otherwise used will count as transfer credit</i>	

**Sophomore Year (35 credits)**

Gen Ed from Area III: Laboratory Science	4
<i>Appropriate approved class from this area 3cr. (CHEM 121&amp;L)</i>	
Gen Ed from Area I: College Level Writing	3
<i>(ENGL 100 and ENGL 102) or ENGL 219 Techn. Writing 3cr.</i>	

ET 246, Electronic Devices I <i>ELEC 110A and ELEC 110L 5cr.</i>	4
ET 262, Software Technology I <i>COSC 275 Java Programming 3cr.</i> <i>or</i> <i>COSC 195 C++ 3cr.</i>	3
ET 272, Electronic Devices II	4
ET 282, Digital Electronics	4
MATH 235, 236, Calculus for the Technical Student I, II <i>Math placement or Math 162 and Math 163 Calc I &amp; II 6cr</i>	6
PHYS 212-212L, General Physics II, General Physics Lab II <i>PHYS 162 &amp; Lab Engineering Physics II 3cr.</i> <b>NOTE:</b> there is no lab component with PHYS 162 and the 212 Lab would still be required.	4
Gen Ed from Area IV: Social/Behavioral Sciences <i>Appropriate approved class from this area 3cr.</i>	3

### Junior Year (31 credits)

ET 302, Manufacturing Data Analysis	3
ET 324, Linear Integrated Circuits	4
ET 344, Microcomputer Systems	3
ET 362, Software Technology II	3
ET 377, Computer Networking	3
ET 398, Digital Systems	3
Viewing a Wider World from the Business College	3
Approved technical elective <i>An approved class or group of classes “may” fulfill this requirement</i> <i>For example: ELEC 205 &amp; L with ELEC 218 &amp; L</i>	3
Gen Ed from Area IV: Social/Behavioral Sciences <i>Appropriate approved class from this area 3cr.</i>	3
Gen Ed from Area V: Hum. And Fine Arts <i>Appropriate approved class from this area 3cr.</i>	3

### Senior Year (31 credits)

CE 450, Engineering Economy and Law	3
ET 381 Renewable Energy Technology or ET 365 Building Utilities	3
ET 402, Instrumentation	3
ET 314 Communication Systems I	3
ET 410, Senior Seminar	1
ET 444, Hardware Senior Design	3
ET 462, Remote Access Operating Systems and Advanced Scripting	3
Approved technical electives	6
Gen Ed from Area IV: Social/Behavioral Sciences <b>or</b> from Area V: Humanities and Fine Art <i>Appropriate approved class from this area 3cr.</i>	3

**Courses which must be taken at NMSU (do NOT have a corresponding transfer class at SIPI) in the Freshman and Sophomore years:**

ET 272, Electronic Devices II	4
ET 282, Digital Electronics	4

**For more information contact:**  
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### **Renewable Energy Technology Concentration**

What follows is a list of classes and the corresponding basic study areas that will result in a Concentration in “*Renewable Energy Technology*” within the ECET major. Students can fulfill this Concentration by using their three required technical electives without any additional credit requirements.

#### **Required**

ET 381 Renewable Energy Technology. Note: this class can not be considered to simultaneously fulfill the requirement for both a technical elective and that for a required class – see ET365 below

#### **2 Courses From:**

ET 365 Building Utilities – Note: this class can not serve both as a tech. elective and as a required ECET class, toward fulfilling degree requirements

ET 304 Electrical Machines,  
ET 374 Electric Power Distribution,  
ET 382 Solar Energy,  
ET 384 Wind Energy,  
ET 396 Heat Transfer and Applications,  
ET401 Heating & Air Conditioning Systems,  
EE 332 Introduction to Electric Power Engineering,  
CHE 466 Fuel Cell and Hydrogen Technology, or

Students may only take one class from the following choices:

1. ET 420 Senior Internship – (must be related to a renewable energy field)
2. ET 435 Senior Design and Project Management (must be related to a renewable energy application)
3. ET 440 Senior Design – (must be related to a renewable energy application)  
ET 441 Senior Project – (must be related to a renewable energy application)

Additionally, it is strongly “*recommended*” that students select the following courses from the General Education menu options:

**English Composition:** English 218G or 318G “Technical Writing”

**Basic Natural Sciences:** Chem. 110G or 111

**Human Thought and Behavior:** Phil 240G Ethics for Engineering and Scientific Careers

**Viewing a Wider World recommendations:**

- College of AG: AGE/ECON 337G “Natural Resource Economics” or AGHE 380G “Ecosystem Earth; The Impact of Human Activities”
- College of Arts & Science: Phys 303G “Energy and Society in the New Millennium” or Hist 302G “Science in Modern Society” or Hist 303G “History of Technology”
- College of BA&Econ: ECON 337G “Natural Resource Economics” or ECON 384G “Water Resource Economics”