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

The Electronics and Computer Engineering Technology (https://et.nmsu.edu/electronics-and-computer-engineering-technology/) (ECET) program includes the design, building, and testing of a wide range of electronic and computer circuits and systems, including hardware/software digital systems, microprocessor systems, analog circuits, renewable energy technologies, micro-controllers, communications devices, applied power systems, signal processing and filter circuits, instrumentation systems, and computer networks. Our program includes a diverse exposure to programming languages, as well as hardware description languages, such as VHDL.

The Electronics and Computer Engineering Technology program is accredited by the Engineering Technology Accreditation Commission of ABET, **https://www.abet.org**, under the General Criteria and Program Criteria for *Computer Engineering Technology and Similarly Named Programs* and *Electrical/Electronics Engineering Technology and Similarly Named Programs*.

Engineering Technology - Electronics and Computer (No Concentration)

Students must complete all University degree requirements, which include: General Education requirements, Viewing a Wider World requirements, and elective credits to total at least 122 credits with 48 credits in courses numbered 300 or above. Developmental coursework will not count towards the degree requirements and/or elective credits but may be needed in order to take the necessary English and Mathematics coursework.

Prefix	Title	Credits
General Education		
Area I: Communications		
English Composition - Level 1		
ENGL 1110G	Composition I	4
English Composition - Level 2		
ENGL 2210G	Professional and Technical Communication Honors (Recommended) [2]	3
Oral Communication		
COMM 1115G	Introduction to Communication	3
Area II: Mathematics		
MATH 1435	Applications of Calculus I [1]	3-4
or MATH 1511G	Calculus and Analytic Geometry I	
Area III: Laboratory Sciences		8
Choose a sequence from the following for eight credits: [3]		
Algebra-Based Sequence		
PHYS 1230G & PHYS 1230L	Algebra-Based Physics I and Algebra-Based Physics I Lab	
PHYS 1240G & PHYS 1240L	Algebra-Based Physics II and Algebra-Based Physics II Lab	
Calculus-Based Sequence		
PHYS 1310G & PHYS 1310L	Calculus -Based Physics I and Calculus -Based Physics I Lab	
PHYS 1320G & PHYS 1320L	Calculus -Based Physics II and Calculus -Based Physics II Lab	
Area IV: Social/Behavioral Sciences [2]		3
Area V: Humanities [2]		3
Area VI: Creative and Fine Arts [2]		3
General Education Elective		
MATH 1440	Applications of Calculus II [1]	3-4
or MATH 1521G	Calculus and Analytic Geometry II	
Viewing A Wider World [2,4]		**6**
Departmental/College Requirements		
A ST 311	Statistical Applications	3
E T 101	Introduction to Engineering Technology and Geomatics	1
E T 246	Electronic Devices I	4
E T 272	Electronic Devices II	4
E T 314	Communications Systems I	3
E T 324	Signal Processing and Filtering	4
E T 344	Microprocessor 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	4
E T 402	Instrumentation	3
E T 444	Computer Hardware Senior Design	3
E T 456	Applied Power Technologies	3
ENGR 120	DC Circuit Analysis	4
ENGR 130	Digital Logic	4
ENGR 140	Introduction to Programming and Embedded Systems	4
ENGR 190	Introduction to Engineering Mathematics	4
ENGR 230	AC Circuit Analysis	4
ENGR 401	Engineering Capstone I	3
ENGR 402	Engineering Capstone II	3
I E 451	Engineering Economy	3
Technical Electives (choose 3 courses from the list below) [4]		9
E T 305	Introduction to Product Design	
E T 382	Solar Energy Technologies	
E T 384	Wind and Water Energy Technologies	
E T 386	Sustainable Construction and Green Building Design	
E T 472	Intelligent Transportation Systems (ITS)	
E T 480	Innovation and Product Development	
ICT 339	Introduction to Digital Forensics and Incident Response	
ICT 457	Introduction to Information Security Technology	
Second Language: (not required)		
Electives, to bring the total credits to 123		
Total Credits		**121-123**

[1] Students may need to take any prerequisites needed to enter MATH 1511G Calculus and Analytic Geometry I/MATH 1435 Applications of Calculus I or MATH 1521G Calculus and Analytic Geometry II/MATH 1440 Applications of Calculus II before enrolling in either option of coursework.

For students wishing to pursue a technical master's degree, MATH 1511G Calculus and Analytic Geometry I and MATH 1521G Calculus and Analytic Geometry II are recommended and will satisfy both the Area II and General Education Elective requirements. Students who take MATH 1435 Applications of Calculus I and MATH 1440 Applications of Calculus II, will need to have an exception made for their degree audit.

[2] See the General Education (https://catalogs.nmsu.edu/nmsu/general-education-viewing-wider-world/#associatesbachelorsgetext) section of the catalog for a full list of courses. See the Viewing a Wider World (https://catalogs.nmsu.edu/nmsu/general-education-viewing-wider-world/#viewingawiderworldtext) section of the catalog for a full list of courses, rules, and alternative options.

[3] Students must select one of the two PHYS course sequences, from the following, in order to meet the 8 credits of the Area III: Laboratory Sciences requirement.

Algebra-Based Sequence
- PHYS 1230G Algebra-Based Physics I/PHYS 1230L Algebra-Based Physics I Lab
- PHYS 1240G Algebra-Based Physics II/PHYS 1240L Algebra-Based Physics II Lab

Calculus-Based Sequence
- PHYS 1310G Calculus -Based Physics I/PHYS 1310L Calculus -Based Physics I Lab
- PHYS 1320G Calculus -Based Physics II/PHYS 1320L Calculus -Based Physics II Lab

[4] Minors are "*optional*" educational sequences that permit students to focus on particular areas related to their major. Minors "*may*" often be done with few additional credits by judicious use of electives and other optional course requirements.