

ELECTRICAL ENGINEERING TECHNOLOGY, BS

Program Description

LSSU's Electrical Engineering Technology (EET) program integrates knowledge from areas of study such as science, math, computers, electrical engineering, management and economics in order to prepare you for an engineering technology career with the potential for growth into management. The EET program includes topics such as C programming, robotics, programmable logic controllers (PLCs), digital system design, embedded microprocessor systems, and circuit board layout and population. Most technical classes in the curriculum include a laboratory along with the lecture.

Students pursuing the BS degree in EET have the option to minor in Robotics Technology. LSSU is one of a few universities in the U.S. to offer an extensive Robotics Technology minor as part of the BS degree in EET and is home to one of the best robotics educational facilities in North America. The minor in Robotics Technology will be indicated on your transcripts.

Some of the program highlights are:

- The program provides an excellent mix of theory and practical laboratory experiences, preparing you to solve real-world problems.
- Engineering courses begin in the freshman year.
- Technical electives may be selected to obtain a minor in Robotics Technology.
- Less mathematics than the Electrical Engineering program.

Cooperative Education: Opportunities are available as part of this program for students who are academically qualified. A certificate that documents this practical training is available.

Additional Degree Information

- *Option in:* General
- *Minor:* Robotics Technology

Program Learning Outcomes

- Apply knowledge, techniques, skills and modern tools of mathematics, science, engineering, and technology to solve broadly defined engineering problems appropriate to the discipline
- Design systems, components, or processes meeting specified needs for broadly defined engineering problems appropriate to the discipline
- Apply written, oral, and graphical communication in broadly defined technical and non-technical environments; and an ability to identify and use appropriate technical literature
- Conduct standard tests, measurements, and experiments and to analyze and interpret the results to improve processes
- Function effectively as a member as well as a leader on technical teams

Degree Requirements

Code	Title	Hours
Departmental Requirements		
CHEM 108	Applied Chemistry	3
CHEM 109	Applied Chemistry Lab	1

ECON 302	Managerial Economics	4
EGEE 125	Digital Fundamentals (C or better required)	4
EGEE 250	Microcontroller Fundamentals	4
EGEE 320	Digital Design	4
EGEE 355	Microcontroller Systems	4
EGET 270	Applied Electricity (C or better required)	4
EGET 275	Applied Electronics (C or better required)	4
EGME 141	Solid Modeling	3
EGNR 101	Introduction to Engineering	2
EGNR 140	Linear Alg Num Apps Engineers	2
EGNR 245	Calculus Applications For Tech	3
EGNR 265	C Programming (C or better required)	3
EGNR 310	Quality Engineering	3
EGRS 325	Industrial Control Systems	3
EGRS 365	Programmable Logic Controllers	3
EGRS 380	Robotics Technology	2
EGRS 381	Robotics Technology Lab	1
MATH 111	College Algebra (C or better required)	3
MATH 112	Calculus Business/Life Science (C or better required)	4
MATH 131	College Trigonometry (C or better required)	3
MATH 207	Prin of Statistical Methods	3
MGMT 360	Management Concepts & Apps	3
or MGMT 371	Operations/Business Analytics	
PHYS 221	Principles of Physics I (C or better required)	4
PHYS 222	Principles of Physics II	4
Select one of the following Senior Sequence options to complete the 6-12 Electrical Engineering Technology Degree:		
Industrial Project		
EGNR 491	Engineering Design Project I	
EGNR 495	Engineering Design Project II	
Cooperative Project		
EGNR 250	Cooperative Education	
EGNR 450	Cooperative Educ Project I	
EGNR 451	Cooperative Educ Project II	
EGNR 491	Engineering Design Project I	
Research Project		
EGNR 260	Engineering Research Methods	
EGNR 460	Engineering Res Project I	
EGNR 461	Engr Research Project II	
Technical Electives:		12
(Select 12 credits from the following)		
CSCI 163	Troubleshooting/Repair of PC's	
CSCI 265	Int to Artificial Intelligence	
ECON 307	Environmental Economics	
EGME 110	Manufacturing Processes	
EGME 240	Assembly Modeling and GD&T	
EGME 275	Engineering Materials	
EGME 276	Strength of Materials Lab	
EGMT 216	CAM with CNC Applications	
EGMT 225	Statics, Strength of Materials	
EGNR 261	Energy Systems/Sustainability	

EGRS 215	Introduction to Robotics
EGRS 235	Industry 4.0
EGRS 305	Robot Safe/Collabtive Robotics
EGRS 372	Mobile Robotics
EGRS 375	Cyber-Physical Sys & Security
EGRS 430	Sys Integration/Machine Vision
EGRS 480	Manufacturing Automation
EGRS 481	Manufacturing Automation Lab
MATH 215	Fund Concepts of Mathematics (or higher level MATH course)

Students wishing to complete the Robotics Technology minor should take the following as technical or free electives: EGRS 215, EGRS 430, EGRS 480, EGRS 481 and EGNR 496

Free Electives 4

Total Hours 103-109

General Education: All LSSU bachelor's degree candidates must complete the LSSU General Education Requirements.

A minimum of 125 credits (at the 100 level or higher) must be earned for graduation with a cumulative gpa of 2.00 or higher. A gpa of 2.00 or higher is also required in your Major, as well as in your General Education Requirements.