

B.S. in Electrical Engineering

Electrical Engineering

The electrical engineering program at St. Mary's University is best known for its high academic standards and innovative student projects. Every engineering senior completes a year-long design project, some of which have even been patented. The curriculum emphasizes new research findings and industry advances, including computer-aided design tools.

Students become well-versed in science and mathematics; current and relevant technical knowledge; extensive, practical hands-on experience in laboratories; and the opportunity to participate in faculty research projects.

Unique facilities available to electrical engineering students include an electrical engineering laboratory accessible 24-hours a day; an energy conversion laboratory for motors, generators and transformers; a manufacturing and robotics laboratory; and a research laboratory equipped with both UNIX and Windows workstations.

The B.S. in Electrical Engineering is accredited by the Engineering Accreditation Commission of ABET.

Code	Title	Semester Hours
St. Mary's University Core ¹		
SMC 1301	Foundations of Civilization	3
SMC 1311	Foundations of Reflection:Self	3
SMC 1312	Foundations of Reflection: Nature	3
SMC 1313	Foundations of Reflection: Others	3
SMC 1314	Foundations of Reflection: God	3
SMC 2301	Foundations of Practice: Ethics	3
SMC 2302	Foundations of Practice: Civic Engagement and Social Action	3
SMC 2303	Foundations of Practice:Fine Arts and Creative Process	3
SMC 2304	Foundations of Practice: Literature	3
EG 4363	Senior Design Project II ²	3
School of Science, Engineering, and Technology Specific Core		
Foreign Languages		0
Computer, Electrical, Industrial and Mechanical Engineering majors are exempt from the foreign language requirement.		
Rhetoric & Composition ²		3
EN 1311	Rhetoric and Composition	
Fine Arts		3
EG 1301	Engineering Graphics and Design	
Social Science		3
EG 3334	Engineering Economy	
Speech		3
EG 4362	Senior Design Project I	
Theology		3
Select one of the following:		
Advanced Theology TH 33XX/43XX		
HU 3300	Perspectives and Themes in History, Philosophy and/or Theology	
BS Electrical Engineering Major Courses ⁴		
CH 1401	General Chemistry I	4
EG 1101	Introduction to Engineering	1
EG 1102	Intro to Electrical Engineering	1
EG 1302	Programming for Engineers	3
EG 2141	Logic Design Laboratory	1
EG 2152	Circuit Analysis Laboratory	1
EG 2307	Engineering Mechanics	3
EG 2341	Fundamentals of Logic Design	3
EG 2352	Circuit Analysis I	3

EG 2353	Circuit Analysis II	3
EG 3156	Electronics I Lab	1
EG 3157	Electronics II Lab	1
EG 3356	Electronics I	3
EG 3357	Electronics II	3
EG 3363	Microprocessors I	3
EG 3364	Microprocessors II	3
EG 3366	Electromagnetic Theory	3
EG 3368	Semiconductor Devices	3
EG 3372	Signals and Systems	3
EG 4160	Energy Conversion Lab	1
EG 4166	Adv Electronics Design Lab	1
EG 4350	Digital Signal Processing	3
EG 4360	Energy Conversion	3
EG 4366	Advanced Elec Design	3
EG 4369	Control Systems	3
EG 4370	Communication Theory	3
MT 2412	Calculus I	4
MT 2413	Calculus II	4
MT 3311	Differential Equations	3
MT 3315	Advanced Math for Electrical Engineers	3
MT 4331	Probability Theory	3
PY 1404	University Physics I	4
PY 2404	University Physics II	4

Proficiency in Information Technology and Information Literacy

For this major, this requirement will be fulfilled by passing coursework within the degree plan.

Total Semester Hours 133

- ¹ All St. Mary's Core SMC 13XX "Reflection" courses must be completed before registering for SMC 23XX "Practice" courses, unless authorized by student's adviser.
- ² EG 4363 fulfills SMC 4301 requirement.
- ³ Grade of "C" or better is required. International students may be required to take EN 1313 to fulfill this requirement.
- ⁴ Engineering students must make a grade of "C" or better in all engineering courses and their prerequisites. One exception applies to the graduating senior who may petition his/her adviser to allow one grade of "D". Students are not permitted to take an engineering, science, or mathematics course unless all prerequisites are passed with a grade of "C" or better.

This is a recommended degree plan subject to changes. Please meet with your advisor on a regular basis.

First Year

Fall	Semester Spring Hours	Semester Hours
SMC 1301	3 SMC 1311	3
EN 1311	3 SMC 1312	3
EG 1101	1 EG 1301	3
EG 1302	3 EG 1102	1
MT 2412	4 MT 2413	4
PY 1404	4 PY 2404	4
ND 0101	0	
	18	18

Second Year

Fall	Semester Spring Hours	Semester Hours
SMC 1313	3 SMC 1314	3
EG 2141	1 SMC 2301	3

EG 2152	1 EG 2353	3
EG 2307	3 EG 3156	1
EG 2341	3 EG 3356	3
EG 2352	3 MT 3315	3
MT 3311	3	
17		16

Third Year

Fall	Semester Spring Hours	Semester Hours
CH 1401	4 SMC 2303	3
EG 3157	1 EG 3364	3
EG 3357	3 EG 3366	3
EG 3363	3 EG 4166	1
EG 3372	3 EG 4350	3
MT 4331	3 EG 4366	3
17		16

Fourth Year

Fall	Semester Spring Hours	Semester Hours
SMC 2302	3 EG 4363	3
SMC 2304	3 Advanced Theology	3
EG 3368	3 EG 3334	3
EG 4360	3 EG 4160	1
EG 4362	3 EG 4370	3
EG 4369	3	
18		13

Total Semester Hours 133