

# B.S. in Computer Engineering

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## Computer Engineering

The Bachelor of Science degree program in Computer Engineering is accredited by the Engineering Accreditation Commission of ABET, <http://www.abet.org> (<http://www.abet.org>)

Computer Engineers are trained to solve problems in both computer hardware and software systems, from a laptop to an airplane, to make sure that they work properly.

Students in this program will specialize in learning computer programming, digital logic design, digital systems design, computer organization & architecture, computer networks, data structures & algorithms, parallel programming, software engineering, operating systems, data mining, and computer security. In addition, students gain extensive experience with the most advanced engineering tools including both computer hardware and software.

## Careers

The job opportunities for computer engineers are abundant. Computer engineers can work for the government or in industries such as telecommunications, computers, semiconductors, biomedical and aerospace, to name a few. Graduates of the Computer Engineering program at St. Mary's have been employed by companies of all sizes, including Texas Instruments, Intel, Microsoft, IBM, Rackspace, USAA, National Instruments, Southwest Research Institute, Boeing, Accenture, Samsung, and the University of Texas Health Science Center.

*Click on the course number to view course title and description.*

Code	Title	Semester Hours
<b>BS Computer Engineering Degree Plan (128 hours) - ABET Accredited</b>		
<b>Core Requirements (41 hours)</b>		
First Year Seminar		3
FYE 1301	First Year Seminar	
Freshmen Composition I		3
EN 1311	Rhetoric and Composition	
or EN 1313	Rhetoric and Composition for International Students	
Literature		3
Any EN 23XX literature course		
History		3
Any 1000, 2000, or 3000-level HS course		
Social Science		6
EG 1303	Engineering and Society	
EG 2393	Engineering Economy	
Mathematics		4
MT 2412	Calculus I	
Natural or Physical Sciences		4
PY 1404	University Physics I	
Fine Arts		3
EG 1341	Graphics and Design	
Philosophy - Self		3
PL 1301	Intro to Philosophy	
Philosophy - Ethics		3
PL 2301	Foundations of Ethics	
Theology - God		3
TH 1301	Introduction to Theology	
Intermediate Theology		3
Any TH 33xx course		
<b>Computer Engineering Major Courses (87 hours)</b>		
CH 1401	General Chemistry I	4

CS 3350	Operating Systems	3
EG 1113	C Programming for Engineering Lab	1
EG 1213	C Programming for Engineering	2
EG 1316	Object-Oriented Programming and Design	3
EG 2113	Logic Design Laboratory	1
EG 2121	Circuit Analysis Laboratory	1
EG 2126	Electronics I Laboratory	1
EG 2312	Data Structures and Algorithms	3
EG 2313	Fundamentals of Logic Design	3
EG 2321		3
EG 2324	Circuits Analysis II	3
EG 2326	Electronics I	3
EG 2343	Statics	3
EG 3101	Eng. Design & Analysis Workshop I	1
EG 3102	Eng. Design & Analysis Workshop II	1
EG 3112	Digital Sys Design Laboratory	1
EG 3212	Digital Systems Designs	2
EG 3313	Computer Organization and Architecture	3
EG 3323	Microprocessors I	3
EG 3324	Microprocessors II	3
EG 3365	Software Engineering	3
EG 3395	Industrial Statistics and Design of Experiments	3
EG 4101	Eng. Design & Analysis Workshop III	1
EG 4301	Senior Design Project I	3
EG 4302	Senior Design Project II	3
EG 4315	Cryptography Principles and Practices	3
EG 4316	Computer Networks	3
EG 4318	Parallel Programming	3
MT 2323	Discrete Math Structures	3
MT 2332	Advanced Math for Engineers I	3
MT 2413	Calculus II	4
MT 4331	Probability Theory	3
PY 2404	University Physics II	4
<b>Total Semester Hours</b>		<b>128</b>

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

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### First Year

Fall	Semester Spring Hours	Semester Hours
EG 1113	1 FYE 1301	3
EG 1213	2 EG 1316	3
EG 1303	3 EG 1341	3
EN 1311	3 MT 2413	4
MT 2412	4 PY 2404	4
PY 1404	4	
<b>17</b>		<b>17</b>

### Second Year

Fall	Semester Spring Hours	Semester Hours
EG 2113	1 EG 2126	1
EG 2121	1 EG 2312	3

EG 2313	3 EG 2324	3
EG 2321	3 EG 2326	3
MT 2323	3 CH 1401	4
MT 2332	3 Literature	3
History	3	
<b>17</b>		<b>17</b>

**Third Year**

<b>Fall</b>	<b>Semester Spring Hours</b>	<b>Semester Hours</b>
EG 3101	1 PL 2301	3
EG 3313	3 TH 1301	3
EG 3323	3 EG 2343	3
EG 3365	3 EG 3102	1
EG 3395	3 EG 3112	1
PL 1301	3 EG 3212	2
	EG 3324	3
<b>16</b>		<b>16</b>

**Fourth Year**

<b>Fall</b>	<b>Semester Spring Hours</b>	<b>Semester Hours</b>
EG 4101	1 EG 4302	3
EG 4301	3 EG 4316	3
EG 4315	3 EG 4318	3
CS 3350	3 EG 2393	3
MT 4331	3	
Advanced Theology	3	
<b>16</b>		<b>12</b>

**Total Semester Hours 128**