

# B.S. in Applied Physics - Engineering Option

Code	Title	Semester Hours
<b>St. Mary's University Core <sup>1</sup></b>		
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
SMC 4301	Capstone Seminar: Prospects for Community & Civilization	3
<b>School of Science, Engineering, and Technology Specific Core</b>		
Speech		3
Select one of the following:		
CM 1341	Fundamentals of Oral Communication	
CM 2333	Business and Professional Communication	
CM 3391	Argumentation and Debate	
Rhetoric & Composition <sup>2</sup>		3
EN 1311	Rhetoric and Composition	
Foreign Languages		6
Select one of the following:		
6 hours at the sophomore level (2311, 2312) in a Foreign Language previously studied for a minimum of one year		
6 hours of introductory level (1311, 1312) in a Foreign Language not previously studied		
12 hours of CLEP/AP credit		
History/Social Science		3
Select one of the following:		
Any HS course		
BA 1310	Fundamentals of Business Enterprise	
CJ 1301	Introduction to Criminal Justice	
CJ 3300	Adjudication of Social Issues	
EC 2301	Introductory Macroeconomic Theory	
EC 2303	Introductory Microeconomic Theory	
MN 3330	Organizational Behavior	
PO 1311	American National Government	
PO 1312	Texas State & Local Government	
PO 1314	Introduction to Global Affairs	
PS 1301	General Psychology	
PS 3386	Human Factors	
SC 1311	Introductory Sociology	
SC 3321	Social Issues	
HU 3300	Perspectives and Themes in History, Philosophy and/or Theology	
HU 3303	Perspectives and Themes in Social Science	
Theology		3
Select one of the following:		
Advanced Theology TH 33XX/43XX		
HU 3300	Perspectives and Themes in History, Philosophy and/or Theology	
Fine Arts		3

Select one AR, DM, MU or any EN 23XX literature course

### BS Applied Physics Engineering Option Major Courses

CS 1310	Programming I	3
EG 2341	Fundamentals of Logic Design	3
EG 2141	Logic Design Laboratory	1
EG 2152	Circuit Analysis Laboratory	1
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
MT 2412	Calculus I	4
MT 2413	Calculus II	4
MT 3311	Differential Equations	3
MT 3414	Calculus III	4
MT 4351	Numerical Analysis I	3
MT 4331	Probability Theory	3
PY 1404	University Physics I	4
PY 2404	University Physics II	4
PY 3101	Modern Physics Lab	1
PY 3125	Special Topics Laboratory	1
PY 3301	Modern Physics	3
PY 3304	Thermodynamics	3
PY 3307	Mechanics	3
PY 3308	Quantum Mechanics	3
PY 3309		3

### Elective

An elective can be any course taken from any discipline. 1

### Proficiency in Information Technology and Information Literacy

For this major, this requirement will be fulfilled by successfully completing PY 3301 with a grade of "C" or higher.

Total Semester Hours 120

<sup>1</sup> All St. Mary's Core SMC 13XX "Reflection" courses must be completed before registering for SMC 23XX "Practice" courses.

<sup>2</sup> Grade of "C" or better is required. International students may be required to take EN 1313 to fulfill this requirement.

*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 13XX	3 SMC 13XX	3
CS 1310	3 SMC 13XX	3
MT 2412	4 EN 1311	3
PY 1404	4 MT 2413	4
ND 0101	0 PY 2404	4
	14	17

### Second Year

Fall	Semester Spring Hours	Semester Hours
SMC 13XX	3 SMC 13XX	3
EG 2341	3 Speech	3
EG 2141	1 History/Social Science	3
MT 3311	3 MT 3414	4

PY 3301	3 PY 3304	3
PY 3101	1	
14		16

**Third Year**

Fall	Semester Spring Hours	Semester Hours
SMC 23XX	3 SMC 23XX	3
Foreign Language	3 SMC 23XX	3
EG 2352	3 Fine Arts/Literature	3
EG 2152	1 Foreign Language	3
MT 4351	3 EG 2353	3
PY 3307	3 PY 3125	1
16		16

**Fourth Year**

Fall	Semester Spring Hours	Semester Hours
SMC 23XX	3 SMC 4301	3
EG 3356	3 Advanced Theology	3
EG 3156	1 EG 3357	3
MT 4331	3 EG 3157	1
PY 3308	3 PY 3125	1
	PY 3309	3
13		14

Total Semester Hours 120

Minors in Chemistry and Biology require 20 credit hours while minors in Computer Science and Environmental Science require 18 credit hours.