

# B.S. Applied Physics

Code	Title	Semester Hours
<b>B.S. in Applied Physics (120 hours)</b>		
<b>Core Requirements (47 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
Select two from the following: BA 1310, CJ 1301, CPH 1301, EC 2301, EC 2303, ED 2330, HU 3300, HU 3303, PO 1311, PO 1312, PO 1314, PS 1301, PS 2310, PS 2353, PS 2355, PS 2363, PS 2337, SC 1311, SC 2321, SC 2371, 3 hrs. of Communication Studies (CM 1341, CM 2333, CM 2334)		
Mathematics		4
MT 2412	Calculus I	
Natural or Physical Sciences		4
PY 1404	University Physics I	
Fine Arts		3
AR 1300, AR 1301, AR 1311, AR 1312, AR 2301, AR 2321, AR 2361, AR 2362, AR 3331, AR 3351, AR 3381, AR 3392, 3 hrs. DM, 3 hrs. of MU		
Foreign Language and International Engagement		6
This requirement is satisfied through one of four ways: (1) One 3-hour course in any language at the 3000 level or above, with a grade of B or better; (2) Two courses (1311 and 1312) in a language not previously studied; (3) Two courses (2311 and 2312) in a language previously studied at the high school or college level; (4) Qualifying scores on an AP or CLEP exam, or both the ACTFL OPI and WPT exams		
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>Applied Physics Major Courses (38 hours)</b>		
MT 2413	Calculus II	4
MT 2317	Differential Equations	3
MT 2323	Discrete Math Structures	3
PY 2404	University Physics II	4
PY 3101	Modern Physics Lab	1
PY 3110	Computational Physics Lab	1
PY 3120	Robotics Lab	1
PY 3301	Modern Physics	3
PY 3303	Mathematical Methods in Physics	3
PY 3304	Thermodynamics	3
PY 3307	Mechanics	3
PY 3308	Quantum Mechanics	3
PY 4308	Advanced Quantum Mechanics	3

PY 4310	Advanced Electromagnetic Theory	3
<b>Concentration (Computer Science, Engineering or Environmental Science)</b>		<b>24</b>
<b>Computer Science Concentration:</b>		
MT 3324, MT 4351, CS 1310, CS 1311, CS 2313, CS 2315, plus six hours of advanced Computer Science courses CS33XX/43XX		
<b>Engineering Concentration:</b>		
24 hours of engineering courses within the choice of specialty (Electrical Engineering or Mechanical Engineering)		
<b>Environmental Science Concentration</b>		
24 hours from the environmental science requirements with approval of environmental science co-adviser		
<b>Electives (11 hours)</b>		<b>11</b>
Free electives (Electives courses from any discipline)		
Total Semester Hours		120

**First Year**

Fall	Semester Hours	Spring	Semester Hours
FYE 1301		3 PY 2404	4
EN 1311		3 MT 2413	4
MT 2412		4 PL 1301	3
PY 1404		4 Literature	3
		History	3
		14	17

**Second Year**

Fall	Semester Hours	Spring	Semester Hours
MT 2317		3 PY 3304	3
PY 3301		3 PY 3120	1
PY 3101		1 MT 2323	3
PY 3303		3 TH 1301	3
Concentration Course		3 Concentration Course	3
		Elective	3
		13	16

**Third Year**

Fall	Semester Hours	Spring	Semester Hours
PY 3110		1 PY 4308	3
PY 3307		3 Concentration Course	3
PY 3308		3 Social Science	3
Concentration Course		3 Elective	2
Concentration Course		3 Foreign Language	3
Foreign Language		3	
		16	14

**Fourth Year**

Fall	Semester Hours	Spring	Semester Hours
PY 4309		3 PL 2301	3
Concentration Course		3 Concentration Course	3
Concentration Course		3 Social Science	3
Fine Arts		3 Advanced Theology	3
Elective		3 Elective	3
		15	15

Total Semester Hours 120