

BACHELOR OF SCIENCE - MAJOR: APPLIED PHYSICS – OPTION I: Engineering (132 semester hours)

This option aims to give the student a solid theoretical background in physics, supplemented by applications specific to Electrical Engineering. The student will learn how the principles of solid-state physics, quantum mechanics, and electromagnetic theory are used in Engineering.

UNIVERSITY CORE REQUIREMENTS (63HOURS)

Fine Arts 1101, 1102, 1103 from + 3 hours of Art, Drama, or Music	6
English 1311, 3300 + 6 hours Sophomore Literature	12
Foreign Language*	6
Philosophy 1310, 2332 + 3 advanced hours	9
Theology 2301 + 3 hours from: 3301, 3302, 3330, 3332, 3334, 3350, 3352, 3356, 3380, 3382	6
Speech - 3 hours from: SE 1321, 1341, 2333, 3391	3
Social Science	15
Information Technology Proficiency (CS 1101, 1102, 1103)	3
Biology 1301	3

APPLIED PHYSICS CORE (72 SEMESTER HOURS)

Physics 1404, 2404, 3301, 3101, 3304, 3307, 3308, 3309	24
Math 2412, 2413, 3311, 3312, 3414, 4331, 4351	24
Engineering: EG 1305, 2152W, 2341, 2352, 2353, EG 3356 (Or PY 3313), EG 3357 or PY 3314), EG 3156 (or PY 3113), EG 3157 (or PY 3114)	21

Total Hours 132

BACHELOR OF SCIENCE DEGREE - MAJOR: APPLIED PHYSICS – OPTION 2: Computer Science (133 semester hours)

This option provides the student an opportunity to develop skills in computer modeling and simulation relevant to Physics applications to various other disciplines. The student will learn to take a specific system of interest and create appropriate models and simulations to study the system further in an attempt to understand the fundamental science behind a physical concept.

UNIVERSITY CORE REQUIREMENTS (63 SEMESTER HOURS)

Fine Arts 1101, 1102, 1103 + 3 hours of Art, Drama, or Music	6
English 1311, 3300 + 6 hours Sophomore Literature	12
Foreign Language*	6
Philosophy 1310, 2332 + 3 advanced hours	9
Theology 2301 + 3 hours from: 3301, 3302, 3330, 3332, 3334, 3350, 3352, 3356, 3380, 3382	6
Speech - 3 hours from: SE 1321, 1341, 2333, 3391	3
Social Science	15
Information Technology Proficiency (CS 1101, 1102, 1103)	3
Biology 1301	3

Applied Physics Core (70 semester hours)

Physics 1404, 2404, 3301, 3101, 3304, 3307, 3308, 3309	24
Math 2412, 2413, 3311, 3323, 3324, 4351	20
Computer Science 1410, 1411, 2313, 2315, 4350 + 3 hours	20
Technical Electives	6

Total Hours 133

Note: Technical electives to be selected from Biology, Chemistry, Computer Science, Engineering, Earth Sciences and Mathematics, provided appropriate prerequisites have been met. The major adviser must approve the course before it can be counted toward the degree option.

**6 hours of Introductory level (1311, 1312) foreign language if no prior knowledge or education with language.*

Or 6 hours of Second Year level (2311, 2312) foreign language if prior knowledge or education with language.

Or 12 hours of CLEP credit.