

St. Mary's University
BS in Applied Physics Degree Plan – 120 Hours

The maximum credit transferable from a junior college, or any combination of junior colleges, is 66 semester hours.

St. Mary's Core (47hours)

Requirements	Texas Common Course Equivalency	Hours Required
___ First Year Experience	Not required for transfer students accepted with 30 or more credit hours however a student may need to take three (3) additional hours of elective credits in order to meet the required hours for this degree.	3
___ Freshmen Composition I	ENGL 1301	3
___ Literature	ENGL 1302 or any ENGL 23XX Literature course	3
___ History	Any HIST 13XX or 23xx course	3
___ Social Science	Any two of the following courses: BUSI 1301, CRIJ 1301, ECON 2301, ECON 2302, GOVT 2305, GOVT 2306, PSYC 1301, PSYC 2306, PSYC 2316, PSYC 2314, SOCI 1301, SOCI 1306, SOCI 2319, SPCH 1311, SPCH 1315, SPCH 1321, SPCH 2335	6
___ Mathematics	MATH 2413	
___ Natural or Physical Sciences	PHYS 2425 or PHYS 2325 and PHYS 2125	4
___ Fine Arts	Any 3-credit hour Fine Arts course from the following: ARTS, MUSI, DRAM	3
___ Foreign Language and International Engagement	Two courses (1411 and 1412) in a language not previously studied or two courses (2311 and 2312) in a language previously studied	6
___ Philosophy – Self	PHIL 1301	3
___ Philosophy – Ethics	PHIL 2306	3
___ Theology	Theology courses from other universities may be transferable with the approval of the Theology Department	3
___ Intermediate Theology	Theology courses from other universities may be transferable with the approval of the Theology Department	3

Physics Major Courses (53 hours)

Requirements for this major:	Texas Common Course Equivalency	Hours Required
___ MT 2413 – Calculus II	MATH 2414	4
___ MT 2317 – Differential Equations	MATH 2320 or MATH 2420	3
___ MT 2323 – Discrete Math Structures	MATH 2305	3
___ PY 2404 – University Physics II	PHYS 2426 or PHYS 2326 and PHYS 2126	4
___ PY 3101 – Modern Physics Lab	No equivalent	1
___ PY 3110 – Computational Physics Lab	No equivalent	1
___ PY 3120 – Robotics Lab	No equivalent	1
___ PY 3301 – Modern Physics	No equivalent	3
___ PY 3303 – Mathematical Methods in Physics	No equivalent	3

—	PY 3304 – Thermodynamics	No equivalent	3
—	PY 3307 – Mechanics	No equivalent	3
—	PY 3308 – Quantum Mechanics	No equivalent	3
—	PY 4308 – Advanced Quantum Mechanics	No equivalent	3
—	PY 4310 – Advanced Electromagnetic Theory	No equivalent	3
—	Science Electives	Any science. Check with your adviser.	9
Electives (11 hours)			11

An elective can be any course taken from any discipline. Students can use these hours to pursue certificates, minors, or second majors.

Computer Science Concentration (24 hours)

COSC 1336 (or 1446), COSC 2336 (or 2436). Remaining hours must be taken at St. Mary's.

Or Engineering Concentration (24 hours)

Electrical or Mechanical Engineering. Consult with Chair.

Or Computer Science Concentration (24 hours)

Consult with Chair.

Total Semester Hours: 120

Updated 11/19/2025