

St. Mary's University

BS in Engineering Science with Chemistry Concentration – 125 Hours

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

St. Mary's Core (47 hours)

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	ENGR 1201. The remaining 4 hours must be taken at St. Mary's.	6
— Mathematics	MATH 2413	
— Natural or Physical Sciences	PHYS 2425 or PHYS 2325 and PHYS 2125	4
— Fine Arts	ENGR 1304	3
— Foreign Language	Two courses (1411 and 1412) in a language not previously studied or two courses (2311 and 2312) in a language previously studied	
— 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

Engineering Science (Chemistry) Major Courses

Requirements for this major:	Texas Common Course Equivalency	Hours Required
— CH 1401 – General Chemistry I	CHEM 1411 or CHEM 1311 and CHEM 1111	4
— CH 1402 – General Chemistry II	CHEM 1412 or CHEM 1412 and CHEM 1412	4
— CH 2411 – Organic Chemistry I	CHEM 2423 or CHEM 2323 and CHEM 2123	4
— CH 2412 – Organic Chemistry II	CHEM 2425 or CHEM 2325 and CHEM 2125	4
— CH 3423 – Analytical Chemistry	No equivalent	4
— CH 3424 – Instrumental Analysis	No equivalent	4
— CH 3433 – Physical Chemistry I	No equivalent	4
— CH 3434 – Physical Chemistry II	No equivalent	
— EG 1194 – Python Programming for Engineering Lab	ENGR 2304 or COSC 1336 or COSC 1436	1
— EG 1294 – Python Programming for Engineering	ENGR 2304 or COSC 1336 or COSC 1436	3
— EG 2123 – Circuits and Systems Lab	ENGR 2405 or ENGR 2105	1

—	EG 2323 – Circuits and Systems	ENGR 2405 or ENGR 2305	3
—	EG 2343 – Statics	ENGR 2301	3
—	EG 2346 – Strength of Materials	ENGR 2432 or 2332	3
—	EG 3101 – Engineering Analysis and Design Workshop I	No equivalent	1
—	EG 3102 – Engineering Analysis and Design Workshop I	No equivalent	1
—	EG 3191 – Data Visualization and Analytics Lab	No equivalent	1
—	EG 3391 – Data Analytics and Information Engineering	No equivalent	3
—	EG 3342 – Engineering Thermodynamics I	No equivalent	3
—	EG 3343 – Fluid Mechanics	No equivalent	3
—	EG 4101 – Engineering Design and Analysis Workshop III	No equivalent	1
—	EG 4301 – Senior Design Project I	No equivalent	3
—	EG 4302 – Senior Design Project II	No equivalent	3
—	EG 4342 – Heat Transfer	No equivalent	3
—	EG 4395 – Stochastic Modeling and Risk Analysis	No equivalent	3
—	MT 2332 – Advanced Math for Engineers I	MATH 2318 & MATH 2320	3
—	MT 2413 – Calculus II	MATH 2414	4
—	MT 3303 – Probability and Statistics for Engineers	No equivalent	3
—	PY 2404 – University Physics II	PHYS 2426 or PHYS 2326 and PHYS 2126	3

Total Semester hours for this degree: 128

Updated 08/04/2026