

# B.S. Engineering Science - Chemistry concentration

Code	Title	Semester Hours
<b>BS Engineering Science - Chemistry Degree Plan (125 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
EG 1303	Engineering and Society	
EG 2393	Engineering Economy	
Mathematics		4
MT 2412	Calculus I	
Natural or Physical Sciences		4
PY 1404	University Physics I	
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		
Fine Arts		3
EG 1341	Graphics and Design	
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>Engineering Science Major Courses - Chemistry Concentration (78 hours)</b>		
CH 1401	General Chemistry I	4
CH 1402	General Chemistry II	4
CH 2411	Organic Chemistry I	4
CH 2412	Organic Chemistry II	4
CH 3423	Analytical Chemistry	4
CH 3424	Instrumental Analysis	4
CH 3433	Physical Chemistry I	4
CH 3434	Physical Chemistry II	4
EG 1194	Python Programming for EG Lab	1
EG 1294	Python Programming for Eng	2
EG 2121	Circuit Analysis Laboratory	1
EG 2321		3
EG 2324	Circuits Analysis II	3

EG 2343	Statics	3
EG 2346	Strength of Materials	3
EG 3101	Eng. Design & Analysis Workshop I	1
EG 3102	Eng. Design & Analysis Workshop II	1
EG 3191	Data Visualization and Analytics Laboratory	1
EG 3391	Data Analytics and Information Engineering	3
EG 3395	Industrial Statistics and Design of Experiments	3
EG 4101	Eng. Design & Analysis Workshop III	1
EG 4301	Senior Design Project I	3
EG 4302	Senior Design Project II	3
EG 4395	Stochastic Modeling and Risk Analysis	3
MT 2332	Advanced Math for Engineers I	3
MT 2413	Calculus II	4
PY 2404	University Physics II	4
Total Semester Hours		125

*This is a recommended degree plan subject to changes. Please meet with your advisor on a regular basis.*

### First Year

Fall	Semester Hours	Spring	Semester Hours
CH 1401		4 CH 1402	4
EG 1303		3 MT 2413	4
EG 1341		3 EG 1194	1
EN 1311		3 EG 1294	2
MT 2412		4 FYE 1301	3
		History	3
		17	17

### Second Year

Fall	Semester Hours	Spring	Semester Hours
CH 2411		4 CH 2412	4
PY 1404		4 PY 2404	4
EG 2121		1 PL 1301	3
EG 2321		3 EG 2346	3
MT 2332		3 EG 2324*	3
EG 2343		3	
		18	17

### Third Year

Fall	Semester Hours	Spring	Semester Hours
CH 3423		4 CH 3424	4
EG 3101		1 EG 3102	1
TH 1301		3 PL 2301	3
EG 3395		3 Theology II	3
EG 3191		1 Foreign Language II	3
EG 3391		3	
Foreign Language I		3	
		18	14

### Fourth Year

Fall	Semester Hours	Spring	Semester Hours
CH 3433		4 CH 3434	4

EG 4101	1	EG 4302	3
EG 4301	3	Literature	3
EG 4395	3	EG 2393	3
EG 3343*	3		
		14	13

Total Semester Hours 128

\* Students in combined BS-MS program may register for an equivalent EG63XX or EG73XX (with EG Chairs' approval)