B.S. Engineering Science - Mathematics concentration

Click on the course number to view course title and description.

Code	Title	Semester Hours
BS Engineering Science - Mathematics concentration Degree Plan (128 hours)		
Core Requirements (47 hours)		
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	Introduction 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		
Engineering Science Major Courses - Mathematics concentration (81 hours)		
CH 1401	General Chemistry I	4
CH 1402	General Chemistry II	4
EG 1122	MATLAB Programming	1
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 2344	Dynamics	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 4193	Optimization and Decision Analytics Lab	1
EG 4393	Optimization	3
EG 4395	Stochastic Modeling and Risk Analysis	3
MT 2323	Discrete Math Structures	3
MT 2332	Advanced Math for Engineers I	3
MT 2413	Calculus II	4
MT 2414	Calculus III	4
MT 3324	Linear Algebra	3
MT 3392	Elementary Math Analysis	3
MT 4311	Complex Variables	3
MT 4331	Probability Theory	3
MT 4351	Numerical Analysis I	3
PY 2404	University Physics II	4
Total Semester Hours		**128**

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

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First Year

Fall	Semester Hours	Spring	Semester Hours
EG 1303	3	MT 2413	4
EG 1341	3	PY 2404	4
EN 1311	3	EG 1122	1
MT 2412	4	EG 1194	1
PY 1404	4	EG 1294	2
		FYE 1301	3
		History	3
	17		**18**

Second Year

Fall	Semester Hours	Spring	Semester Hours
CH 1401	4	MT 2414	4
EG 2121	1	MT 3324	3
EG 2321	3	PL 1301	3
MT 2323	3	EG 2344	3
MT 2332	3	EG 2324*	3
MT 4332	3		
	17		**16**

Third Year

Fall	Semester Hours	Spring	Semester Hours
EG 3101	1	EG 3102	1
MT 4341	3	MT 4331	3
MT 4351	3	PL 2301	3
EG 3395	3	TH 1301	3

EG 3191	1 Literature	3
EG 3391	3 CH 1402*	4
EG 4393	3	
	17	**17**

Fourth Year

Fall	**Semester Hours**	**Spring**	**Semester Hours**
EG 4101	1	EG 4302	3
EG 4301	3	Theology II	3
MT 3392	3	Foreign Language II	3
EG 4395	3	EG 2393	3
EG 4193	1		
Foreign Language I	3		
	14		**12**

Total Semester Hours 128

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