

B.S. Biomedical Engineering - Bioinformatics and Data Science

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

Code	Title	Semester Hours
BS Biomedical Engineering Degree Plan (128 hours)		
Core Requirements (41 hours)		
First Year Seminar		3
FYE 1301	First Year Seminar	
Freshmen Composition I		3
EN 1311	Rhetoric and Composition	
EN 1313 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	
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		
Biomedical Engineering Major Courses		
BL 1401	General Biology for Majors I	4
BL 1402	General Biology for Majors II	4
BL 2330	Genetic Principles	3
BL 2332	Cell Biology	3
BL 3430	General Physiology	4
CH 1401	General Chemistry I	4
CH 1402	General Chemistry II	4
EG 1232	Fundamentals of Biomedical Engineering	2
EG 2331	Frontiers in Biotechnology	3
EG 2346	Strength of Materials	3
EG 3331	FDA Regulation and Product Development	3
EG 3332	Compatibility and Immune Response to Medical Devices	3
MT 2413	Calculus II	4
MT 2332	Advanced Math for Engineers I	3
MT 3303	Probability and Statistics for Engineers	3

Engineering Core Courses

EG 1194	Python Programming for EG Lab	1
EG 1294	Python Programming for Eng	2
EG 2343	Statics	3
EG 2344	Dynamics	3
EG 3101	Engineering Design & Analysis Workshop I	1
EG 3102	Engineering Design & Analysis Workshop II	1
EG 3342	Engineering Thermodynamics I	3
EG 3343	Fluid Mechanics	3
EG 4101	Eng. Design & Analysis Workshop III	1
EG 4301	Senior Design Project I	3
EG 4302	Senior Design Project II	3

Bioinformatics and Data Science Track

BL 3310	Introduction to Bioinformatics	3
EG 4313	Machine Learning	3
BIO 4311	Bioinformatics Programming with R	3
BL 4411	Genes, Genomes and Genomics	4

Total Semester Hours		128
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This is a recommended degree plan subject to changes. Please meet with your adviser on a regular basis.

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First Year

Fall	Semester Spring Hours	Semester Hours
FYE 1301	3 BL 1402	4
MT 2412	4 MT 2413	4
PY 1404	4 EG 1341	3
EG 1303	3 EG 1194	1
BL 1401	4 EG 1294	2
	EG 1232	2
	18	16

Second Year

Fall	Semester Spring Hours	Semester Hours
EN 1311	3 History	3
CH 1401	4 CH 1402	4
EG 2331	3 BL 2332	3
EG 2343	3 EG 2346	3
MT 2332	3 EG 2344	3
	16	16

Third Year

Fall	Semester Spring Hours	Semester Hours
EG 3101	1 EG 3102	1
BL 2330	3 BL 3430	4
PL 1301	3 PL 2301	3
EG 3342	3 EG 3332	3
EG 3343	3 MT 3303	3
TH 1301	3 BL 3310	3
	16	17

Fourth Year

Fall	Semester Spring Hours	Semester Hours
EG 4301	3 EG 2393	3
EG 3331	3 EG 4302	3
EG 4101	1 BL 4411	4
EG 4313	3 Intermediate Theology	3
BIO 4311	3 Literature	3
	13	16
Total Semester Hours 128		