

Prerequisite Chart for the B.S. BME Degree Program

Course	Title	Prerequisite
Core Courses		
BMED 2210	Conservation Principles in BME	CHEM 1211K and MATH 1552
BMED 2250	Problems in Biomedical Engineering	BMED 2210
BMED 2310	Intro to BME Design	BMED 2210 and BMED 2250 and PHYS 2211
BMED 2400	Intro to Bioengineering Statistics	MATH 1552 and CS 1371
BMED 3100	Systems Physiology	CHEM 1315 or CHEM 2311 or Junior Standing
BMED 3110	Quantitative Engr Physiology Lab I	BMED 3400 and BMED 3100 ¹ and BMED 2400 (or CEE/ISYE 3770) ¹ and CS 1371
BMED 3310	Biotransport	BMED 2210 and MATH 2551 and MATH 2552 and CS 1371 and PHYS 2211
BMED 3400	Intro to Biomechanics	MATH 2551 and COE 2001
BMED 3520	Biomedical Systems and Modeling	BMED 2210 and BMED 3100 and MATH 2552 and CS 1371
BMED 3600	Physio of Cellular and Molecular Sys	BMED 3100
BMED 3610	Quantitative Engr Physiology Lab II	BMED 2310 and BMED 3310 and BMED 3110 and BMED 3600 ¹
BMED 4602	Capstone Design	BMED 3610 ¹ and BMED 2310

Depth Elective Courses

BMED 3101	Introduction to Biomed Data Science	BMED 2250 and BMED 2400 (or CEE/ISYE 3770)
BMED 4477	Biological Networks and Genomics	BMED 3520 and BMED 2400 (or CEE/ISYE 3770)
BMED 4500	Cell & Tissue Engineering Lab	BMED 3610 ¹
BMED 4603	Advanced Biomedical Eng. Design	BMED 4602
BMED 4739	Medical Robotics	None
BMED 4740	Bio-Inspired Design	BMED 3100
BMED 4750	Diagnostic Imaging Physics	BMED 3110
BMED 4751	Introduction to Biomaterials	MSE 2001
BMED 4757	Biofluid Mechanics	BMED 3310
BMED 4758	Biosolid Mechanics	BMED 3400
BMED 4765	Drug Design, Develop & Delivery	CHEM 3511 or CHEM 4511
BMED 4781	Biomedical Instrumentation	ECE 3710 or ECE 3040
BMED 4782	Biosystems Analysis	BMED 3520 or CHBE 4400 or ECE 2040 or ME 3015
BMED 4783	Intro to Medical Image Processing	ECE 2026 and BMED 2400 (or CEE/ISYE 3770)
BMED 4784	Engineering Electrophysiology	BMED 3520 or ECE 3040
ECE 2026	Intro to Signal Processing	MATH 1552 and 1553 and CS 1371 ²

Required Science, Math and Engineering Courses

CHEM 1211K	Chemical Principles I	None
CHEM 1315	Survey of Organic Chemistry	CHEM 1211K (or CHEM 1310)
CHEM 3511	Survey of Biochemistry	CHEM 1315 (or CHEM 2312 or CHEM 2313)
COE 2001	Statics	MATH 1552 and PHYS 2211
CS 1371	Computing for Engineers	None
ECE 3710	Circuits & Electronics	PHYS 2212
ECE 3741	Instrumentation & Electron Lab	ECE 3710
ISYE 3770	Statistics & Applications	MATH 2551
MATH 1551	Differential Calculus	SAT MATH SCORE of 600 or ACT MATH SCORE of 26 or MATH 1113
MATH 1552	Integral Calculus	MATH 1551
MATH 1553	Introduction to Linear Algebra	SAT MATH SCORE of 600 or ACT MATH SCORE of 26 or MATH 1113 or MATH 1552
MATH 2551	Multivariable Calculus	MATH 1552 and 1553
MATH 2552	Differential Equations	MATH 1552 and 1553
MSE 2001	Prin & Appl of Engineering Materials	CHEM 1211K or CHEM 1310
PHYS 2211	Intro to Physics I	MATH 1552
PHYS 2212	Intro to Physics II	PHYS 2211

¹ Prerequisite w/concurrency

² Minimum grade of C required