Mechanical Engineering/BioMedical Engineering (BioMechanics) Suggested Academic Plan

Semester 1 17 cr	Semester 2 17cr	Semester 3 16 cr	Semester 4 15/16 cr	Semester 5 17.5 cr	Semester 6 16 cr	Semester 7 15 cr	Semester 8 16.5 cr	Semester 9 18 cr
CHEM 110* 3 *Chem Principles*	**CHEM 112** 3 *Chem Principles II* P: CHEM 100	**EMCH 210** 5 *Statics & Strengths* P: MATH 140	**EMCH 212** 3 *Dymanics* P: EMCH 210 & MATH 141	**ME 300** 3 *ENGR Thermodymanics* P: CHEM 110 P/C: MATH 141	**MATSE 259** 3 *Prop&Proc ENGR Matrls* P: EMCH 210	**IE 312** 3 *Product Design...* P: EMCH 213 P/C: MATSE 259	**Elective** 3 *BME Related* ME: ETE	**BME 408** 3 *Bio-Fluid Mechanics* P: MATH 230, MATH 251 CMPSC 200, EMCH 210
CHEM 111 1 *Experimental Chem* P/C: CHEM 110	**CHEM 113** 1 *Experimental Chem II* P: CHEM 111 P/C: CHEM 112	**MATH 251** 4 *Diff Equations* P: MATH 141	**MATH 230** 4 *Statics & Strengths* P: MATH 141	**BME 303*** 3 *Bio-continuum Mech* P: BIOL 141, EMCH210, MATH 230, MATH 251	**BME 409** 3 *Biofluid Mechanics* P:MATH 230, MATH 251, BIOL 141	**ME 370** 3 *Vibration of Mech Syst.* P: EMCH 212,MATH 220 MATH 251, CMPSC 200	**ME 410** 3 *Heat Transfer* P: ME 320, MATH 220 CMPSC 200	**METE** 3 *ME Tech elective*
MATH 140 4 *Calc 1*	**Math 141** 4 *Calc 2* P: MATH 140	**PHYS 212** 4 *Elect & Magnetism* P: MATH 140; PHYS 211 P/C: MATH 141	**MATH 220** 2 or 3 *Matricies* P: MATH 140	**BME 301*** 4 *Anyl.Physiologocal Sys.* P: BIOL 141, PHYS 212, MATH 251, CMPSC200	**BME 401** 3 *Num. Simulation in BME* P: BME 301, BME 313 P/C: BME 201	**ME 340** 3 *ME Design Methofology* P: EDSGN 100 P/C: ME 320, ME 360	**Capstone** 3 ***BME 450W*** *- P: BME 401, BME 403, ENGL 202C* ***OR ME 440W*** *- P: ME 340* *P/C: ENGL 202C, IE 312*	**ME 450** 3 *Modeling Dynam.. Syst.* P: ME 370 P/C: ME 348
EDSGN 100 3 *Intro Engr Design*	**PHYS 211*** 4 Mechanics P/C: MATH 140	**CMPSC 200** 3 *MATLAB* P: MATH 140 P/C: MATH 141	**BME 201*** 3 *Fund. Cells & Molecules* P:BIOL141, CHEM112, MATH 141 P/C: CMPSC200	**ME 360** 3 *Mech. Design* P: EMCH 210 P/C: CMPSC 200	**BME 402** 3 *BME Inst & Measuremnt* P: MATH 251, BME 301	**ENGL 202C** 3 *Technical Writing* P: ENGL 15	**ME 454** 3 *Mechatronics* P: BME 402	**Gen ed*** 3
ENGL 15 3 Rhetoric & Comp.	**BIOL 141** 3 *Intro to Human Phys*		**EMCH 315** 2 *Statics & Strengths* P: MATH 140	**Gen ed*** 3	**BME 403** 1 *BME Instrument Lab* C: BME 402	**BME 440** 1 BME Prof Seminar	**Gen ed*** 3	**Gen ed*** 3
ECON 102/104 3 Micro or Macro Econmics *Gen ed: GS	**BIOL 162** 1 *A&P lab* P/C: BIOL 141		**EMCH 316** 1 *Statics & Strengths* P: MATH 140	**Gen ed*** 1.5 *GHW*	**Gen ed*** 3	**BME 429** 2 BME Techniques Lab P: BME 201, BME 303, BME 401	**Gen ed*** 1.5 *GHW*	**CAS 100** 3 Effective Speech
	FYS 1 *Seminar*							

P = prerequsite
C = concurrent

ME degree requirement

BME degree requirement

[1] **US Cultures and IL Cultures and integrative studies** requirements are satisfied in conjunction with gen ed courses.
[2] **BIOL 240W** can be taken as an alternate option to **BIOL 141 & 162 or 164**
*BME courses are offered only in the semester shown:
Fall = Odd-numbered semesters, **Spring** = Even-numbered semesters

ME Substitutions (for ME/BME students):

^ EMCH 210 and ^CHEM 111 for EMCH 211 & EMCH 213
^ BME 303 & BME 409 for ME 320 & ETE
^BME 401 for ME 330
^BME 402 for ME 348
BME 440 for ME 390/490
^BME 429 and ^BME 403 for ME 435

^C or higher required

9/11/2025