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Bachelor of BIOMEDICAL ENGINEERING (BME)

4-Year Recommended *General BME Course Sequence*

Updated March 2026

Click on the Course Name to access the course in the Undergraduate Catalog 24-25

Fall Semester 1	Spring Semester 2	Fall Semester 3	Spring Semester 4	Fall Semester 5	Spring Semester 6	Fall Semester 7	Spring Semester 8
★INQ 170 [3] Engineering Launch	CHM 262 [3] Gen. Chem. II CHM 267 [1] Gen. Chem. Lab II (CHM 261)	BME 300 [3] Intro to Biomedical Engr. (CHM 262, *PHY 242)	ESC 201 [3] Statics (MTH 181, PHY 241 or PHY 243)	BME 302 [3] Biofluids / Bio transport (ESC 250 or MTH 286, *BME 300, *BME 304)	Global Human Perspectives Elective [3]	BME 440 [3] BME Senior Design I *(WAC)* (Gen Ed Eng/Comp, BME 390, MCE 315)	BME 441 [3] BME Senior Design II (BME 440)
MCE 180 [2] Computer Aided Design I	ESC 130 [1] Engineering & CS Career Prep	PHY 242 [5] University Physics II (PHY 241, MTH 182)	ESC 152 [3] Programming with MatLab	BME 304 [3] Cell & Tissue Biology BME 305(BIO 309) [1] Cell & Tissue Biology Lab (*BME 300, CHM 331)	MCE 315 [3] Electrical Engineering Concepts (MTH 182, ESC 250 or MTH 286, PHY 242)	PHL 215 [3] Technology Ethics Human Culture & Creativity	BME 430 [3] Biomedical Signals & Instrumentation (ESC 152, MCE 315, ESC 250 or MTH 286, Senior standing)
MTH 181 [4] Calculus I	MTH 182 [4] Calculus II (MTH 181- C or better)	ESC 250 [3] Diff EQ for Eng. (MTH 182) OR MTH 286 [3] Intro. to Diff EQ (MTH 182- C or better)	ESC 310 [3] Statistics and Probability (MTH 182) OR STA 323 [3] Statistical Methods (MTH 182- C or better)	ESC 270 [3] Materials Science (CHM 261)	BME 390 [1] Clinical Experience *(WAC)* (Gen-ed Eng/Comp, BME 304, BME 302, BME 307)	BME 451 [3] Biomechanics (BME 306, ESC 211, ESC 270, BIO 266)	C BME Technical Elective **[3] 300-400 Level
ENG 100 [3] Intensive Writing OR ENG 101 [3] College Writing I	ENG 108 [3] AI & Writing (Preferred) (ENG 101) OR ENG 102 [3] College Writing II (ENG 101)	CHM 331 [3] Organic Chemistry CHM 336 [1] Organic Chem. Lab (CHM 262)	BME 307 [3] Systems Physiology I (BME 300)	ESC 211 [3] Strength of Materials (ESC 201)	BME 455 [3] Biomaterials (ESC 270, BME 302, BME 304)	C BME Technical Elective ** 300-400 Level [3]	C BME Technical Elective **[3] 300-400 Level
CHM 261 [3] Gen. Chem. 1 CHM 266 [1] Gen. Chem. Lab 1	PHY 241 [5] University Physics I (MTH 181)	MCE 181 [2] Computer Aided Design II (MCE 180)	MTH 283 [2] Multivariable Calculus (MTH 182- C or better)	BME 308 [3] Systems Physiology II (*BME 300, ESC 250/MTH 286, ESC 152)	Society and Human Behavior Elective [3]	American Civic Literacy Elective [3]	Complexities of Pluralistic Society Elective [3]
			MTH 284 [2] Matrices for Engineers (MTH 182- C or better)		ESC 282 [3] Engineering Economy (MTH 182)		
16 Total Credit Hours	17 Total Credit Hours	17 Total Credit Hours	16 Total Credit Hours	16 Total Credit Hours	16 Total Credit Hours	15 Total Credit Hours	15 Total Credit Hours

Degree Total Hours: 128

(Prerequisites) • (*Pre/co-requisite) • [# of Course Credits] • BME XXX = Only Offered That Fall/Spring Semester • **3 semesters of co-op will satisfy 1 Technical Elective

- Required BME Courses
- Required Science Courses
- Required English Courses
- Required Writing Across the Curriculum (WAC) Courses
- Required BME 300-400 Level Electives
- Required Math Courses
- Core Curriculum Electives
- C 500-level courses that satisfy Undergraduate and Master's degree credits

★**ESC 120** Intro to Engineering Design can replace **INQ 170** for transfer students and students who completed an inquiry launch course other than INQ 170. Neither course is required for transfer students with an Associates of Applied Science degree.

Begin to earn credits toward a Master's Degree while taking undergraduate courses!
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BIOMEDICAL ENGINEERING (BME)

Updated March 2026

4-Year Recommended Course Sequence with *Pre-Medicine Track*

Click on the Course Name to access the course in the Undergraduate Catalog 24-25

Fall Semester 1	Spring Semester 2	Fall Semester 3	Spring Semester 4	Fall Semester 5	Spring Semester 6	Fall Semester 7	Spring Semester 8
★INQ 170 [3] Engineering Launch	CHM 262 [3] Gen. Chem. II CHM 267 [1] Gen. Chem. Lab II (CHM 261)	BME 300 [3] Intro to Biomedical Engr. (BIO 200, CHM 262, *PHY 242)	ESC 152 [3] Programming with MatLab	BME 302 [3] Biofluids / Bio transport (ESC 250 or MTH 286, BME 300, *BME 304)	SOC 101 [3] Intro to Sociology	BME 440 [3] BME Senior Design I *(WAC)* (Gen Ed Eng/Comp, BME 308, BME 390,	BME 441 [3] BME Senior Design II (BME 440)
MCE 180 [2] Computer Aided Design I	ESC 130 [1] Engineering & CS Career Prep	PHY 242 [5] University Physics II (PHY 241, MTH 182)	CHM 331 [3] Organic Chemistry (CHM 262) CHM 336 [1] Organic Chem. Lab (*CHM 331)	BME 304 [3] Cell & Tissue Biology BIO 309 [1] Cell & Tissue Biology Lab (*BME 300, CHM 331)	MCE 315 [3] Electrical Engineering Concepts (MTH 182, ESC 250 or MTH 286, PHY 242)	PHL 215 [3] Technology Ethics Human Culture and Creativity	BME 430 [3] Biomedical Signals & Instrumentation (ESC 152, MCE 315, ESC 250 or MTH 286, Senior standing)
MTH 181 [4] Calculus I	MTH 182 [4] Calculus II (MTH 181- C or better)	ESC 250 [3] Diff EQ for Eng. (MTH 182) OR MTH 286 [3] Intro. to Diff EQ (MTH 182- C or better)	BME 307 [3] Systems Physiology I (*BME 300, ESC 250, ESC 152)	ESC 270 [3] Materials Science (CHM 261)	BME 390 [1] Clinical Experience *(WAC)* (Gen-ed Eng/Comp, Junior standing)	ESC 282 [3] Engineering Economy (MTH 182)	BME Technical Elective ** [3] 300-400 Level
ENG 100 [3] Intensive Writing OR ENG 101 [3] College Writing I	ENG 108 [3] AI & Writing (Preferred) (ENG 101) OR ENG 102 [3] College Writing II (ENG 101)	BIO 200 [3] Intro Biology I (2.0 High School GPA) BIO 201 [1] Intro Biology I Lab	BIO 202 [3] Introductory Biology II BIO 203 [1] Introductory Biology II Lab (BIO 200- C or better)	CHM 332 [3] Organic Chemistry II (CHM 331) CHM 337 [1] Organic Chem. Lab II (*CHM 332)	PSY 101 [3] Psychology 101 Society and Human Behavior	ESC 310 [3] Statistics and Probability (MTH 182) OR STA 323 [3] Statistical Methods (MTH 182- C or better)	Global Human Perspectives Elective [3]
CHM 261 [3] Gen. Chem. 1 CHM 266 [1] Gen. Chem. Lab 1	PHY 241 [5] University Physics I (MTH 181)	MCE 181 [2] Computer Aided Design II (MCE 180)	MTH 284 [2] Matrices for Engineers (MTH 182- C or better)	BME 308 [3] Systems Physiology II (BME 300)	CHM 402 [3] Biochemistry 1 (CHM 332)	American Civic Literacy Elective [3]	BME 455 [3] Biomaterials (ESC 270, BME 302, BME 304)
					BME 495 [2] Biomedical Engineering Research	Complexities of Pluralistic Society Elective [3]	
16 Total Credit Hours	16 Total Credit Hours	17 Total Credit Hours	16 Total Credit Hours	17 Total Credit Hours	15 Total Credit Hours	15 Total Credit Hours	15 Total Credit Hours

Degree Total Hours: 131

(Prerequisites) • (*Pre/co-requisite) • [# of Course Credits] • BME XXX = Only Offered That Fall/Spring Semester • **3 semesters of co-op will satisfy 1 Technical Elective

- Required BME Courses
- Required Science Courses
- Required English Courses
- Required Writing Across the Curriculum (WAC) Courses
- Required BME 300-400 Level Electives
- Required Math Courses
- Core Curriculum Elective

★**ESC 120** Intro to Engineering Design can replace **INQ 170** for transfer students and students who completed an inquiry launch course other than INQ 170. Neither course is required for transfer students with an Associates of Applied Science degree.