

2026-27 Bachelor of Science in Biomedical Engineering Checklist

TRANSFORMATIONAL JOURNEY PROGRAM (TJP)

First Year Experience (3 credits)

____ FYS 110 First Year Seminar

Faith and Ethics (9 credits)

____ THL 105 Introduction to Theology

____ PHL 130 Human Nature & Person

____ Second THL*

Scientific Problem Solving

Fulfilled by major requirements

Quantitative Problem Solving

Fulfilled by major requirements

Civics Problem Solving

Fulfilled by major requirements (EGR 317)

Communication (6 credits)

____ ENG 112 Writing and Community

____ COM 101 Public Speaking

Cultural and Global Awareness (6 credits)

____ World Language (determined by placement)

One of the following courses:

____ GLS 101 Global Perspectives

____ HUM 210 Meaning Through Culture

Health and Well-Being (6 credits)

____ HWB 110 Holistic Health: Mind, Body, and Spirit

One of the following courses:

____ PSY 101 General Psychology

____ PSY 220 Human Growth and Development

____ SOC 101 Introduction to Sociology

Broad Integrative Knowledge Outside Major (at least 3 credits)**

- Completion of a minor
- Completion of a second major
- Completion of a Pathway

*Please refer to catalog or MUHUB Progress tab for a complete list of courses that meet these requirements.

**Please refer to catalog or MUHUB Progress tab for a description of acceptable major/minor options.

General Math and Science Requirements (30 hours)

____ MAT 230 Calculus I 4

____ MAT 231 Calculus II 4

____ MAT 305 Calculus III 4

____ EGR 210 Engineering Computation and Modeling 3

____ EGR 326 Engineering Statistics 3

____ CHE 140 General Chemistry I 3

____ CHE 141L General Chemistry I Lab 1

____ PHY 201 University Physics I 4

____ PHY 202 University Physics II 4

Engineering Core Requirements (18 hours)

____ EGR 101 Introduction to Engineering 3

____ EGR 151 Programming for Engineers 3

____ EGR 156 Intro Computer Aided Design 3

____ EGR 301 Global Engineering 3

____ EGR 317 Engineering Economics 3

____ EGR 491 Senior Design 3

Biomedical Engineering Requirements

(11 hours in science, and 37 hours in BME/EGR courses, totaling 48 hours)

____ BIO 212 Principles of Biology II 3

____ BIO 213L Principles of Biology II Lab 1

____ CHE 142 General Chemistry II 3

____ CHE 143L General Chemistry II Lab 1

____ EGR 221 Engineering Mechanics: Statics 3

____ EGR 242 Linear Circuit Analysis 3

____ BME 203 Intro to Biomedical Engineering 3

____ BME 223 Quantitative Physiology 3

____ BME 226 Biomechanics 3

____ BME 330 Biomaterials 3

____ BME 352 Biosignals and Systems 3

____ BME 366 Biotransport 4

____ BME 451 Bioinstrumentation 3

____ BME 492 Senior Design II 3

____ Biomedical Engineering Elective 3

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Total Earned Hours 129

A minimum 2.0 cumulative GPA and a minimum 2.0 major GPA are required for graduation. A grade of "C-" or better is required on all prerequisites to engineering courses to make progress towards your degree.

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2026-27 Bachelor of Science in Biomedical Engineering Sample Four-Year Plan

This plan is only a sample and will vary by student and course availability. Depending on your minor, some courses listed without a minimum grade requirement may still have one for the minor.

Year One							
Fall Semester				Spring Semester			
Requirement Category	Course	Credit Hrs	Min. Grade	Requirement Category	Course	Credit Hrs	Min. Grade
Gen Math & Sci: Calculus I	MAT 230	4	C-	Gen Math & Sci: Calculus II	MAT 231	4	C-
Gen Math & Sci: Gen Chem I	CHE 140	3		Gen Math & Sci: University Physics I	PHY 201	4	C-
Gen Math & Sci: Gen Chem I Lab	CHE 141L	1		CORE: Intro Computer Aided Design	EGR 156	3	C-
CORE: Intro Engineering	EGR 101	3		MAJ: Gen Chem II	CHE 142	3	
CORE: Programming for Engineers	EGR 151	3	C-	MAJ: Gen Chem II Lab	CHE 143L	1	
TJP: First Year Seminar	FYS 110	3		TJP: Holistic Health	HWB 110	3	
Semester Hours	17			Semester Hours	18		
Cumulative Hours	17			Cumulative Hours	35		
Year Two							
Fall Semester				Spring Semester			
Requirement Category	Course	Credit Hrs	Min. Grade	Requirement Category	Course	Credit Hrs	Min. Grade
Gen Math & Sci: Calculus III	MAT 305	4	C-	Gen Math & Sci: Comp & Modeling	EGR 210	3	C-
Gen Math & Sci: University Physics II	PHY 202	4	C-	MAJ: Lin Circuit Analysis	EGR 242	3	C-
MAJ: Engr Mechanics: Statics	EGR 221	3	C-	MAJ: Principles of Biology II	BIO 212	3	
MAJ: Intro to BME	BME 203	3		MAJ: Principles of Biology II Lab	BIO 213L	1	
MAJ: Quantitative Physiology	BME 223	3	C-	MAJ: Biomechanics	BME 226	3	C-
				TJP: Writing and Community	ENG 112	3	
Semester Hours	17			Semester Hours	16		
Cumulative Hours	52			Cumulative Hours	68		
Year Three							
Fall Semester				Spring Semester			
Requirement Category	Course	Credit Hrs	Min. Grade	Requirement Category	Course	Credit Hrs	Min. Grade
General Math & Sci: Minor Elect		3		CORE: Engineering Economics	EGR 317	3	
CORE: Global Engineering	EGR 301	3		Gen Math & Sci: Engr Statistics	EGR 326	3	
MAJ: Biomaterials	BME 330	3	C-	MAJ: Biosignals & Systems	BME 352	3	C-
MAJ: Biotransport	BME 366	4	C-	TJP: Public Speaking	COM 101	3	
TJP: World Language		3		TJP: Human Nature & Person	PHL 130	3	
Semester Hours	16			Semester Hours	15		
Cumulative Hours	84			Cumulative Hours	99		
Year Four							
Fall Semester				Spring Semester			
Requirement Category	Course	Credit Hrs	Min. Grade	Requirement Category	Course	Credit Hrs	Min. Grade
CORE: Senior Design I	EGR 491	3	C-	MAJ: Senior Design II	BME 492	3	C-
MAJ: Bioinstrumentation	BME 451	3	C-	MAJ: BME Program Elective II	BME XXX	3	
MAJ: BME Prog Elective I	BME XXX	3		MAJ: BME Prog Elective III	BME XXX	3	
TJP: Health & Well-Being	PSY/SOC	3		TJP: Cultural/Global	HUM/GLS	3	
TJP: Intro Theology	THL 105	3		TJP: Faith & Ethics #2	2 nd THL	3	
Semester Hours	15			Semester Hours	15		
Cumulative Hours	114			Cumulative Hours	129		