

Name _____

Student ID _____

Date _____

2026-27 Bachelor of Science in Chemical Engineering Checklist

TRANSFORMATIONAL JOURNEY PROGRAM (TJP, at least 30 credits)

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, ARH 235 Global

Art History I, GLS 220 Global Humanities, HUM 210

Search of Meaning Through Culture, MUS 140 Global

Music, THE 112 Global Traditions in Theater

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**

a. Completion of a minor

b. Completion of a second major

c. 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

Chemical Engineering Requirements (12 additional hours in Chemistry and 43 hours in CEN/EGR, a total of 55)

____ CHE 142 General Chemistry II 3

____ CHE 143L General Chemistry II Lab 1

____ CHE 305 Organic Chemistry I 4

____ CHE 305L Organic Chemistry I Lab 0

____ CHE 3XX Chemistry Elective 4

____ EGR 242 Linear Circuit Analysis 3

____ EGR 261 Thermodynamics 3

____ EGR 365 Fluid Mechanics 3

____ EGR 366 Heat Transfer 3

____ EGR 440 Thermo-Fluids Laboratory 1

____ EGR 451 Control Systems 3

____ CEN 210 Mass and Energy Balance 3

____ CEN 262 Thermodynamics II 3

____ CEN 366 Mass Transfer and Separations 3

____ CEN 376 Chemical Reaction Engineering 3

____ CEN 421 Chemical Engineering Laboratory 3

____ CEN 435 Chemical Process Design 3

____ CEN 492 Senior Design II 3

____ Chemical Engineering Elective 3

____ Chemical Engineering Elective 3

Total Earned Hours 133

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.

MARIAN UNIVERSITY

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2026-27 Bachelor of Science in Chemical 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	C-	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	
CORE: Intro Engineering	EGR 101	3		MAJ: Gen Chem II	CHE 142	3	
CORE: Programming for Engineers	EGR 151	3		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	
MAJ: Thermodynamics	EGR 261	3	C-	CORE: Engineering Economics	EGR 317	3	
MAJ: Mass and Energy Balance	CEN 210	3	C-	MAJ: Thermodynamics II	CEN 262	3	C-
MAJ: Organic Chem I	CHE 305	4		TJP: Writing and Community	ENG 112	3	
MAJ: Organic Chem I Lab	CHE 305L	0		TJP: Intro Theology	THL 105	3	
Semester Hours	18			Semester Hours	18		
Cumulative Hours	53			Cumulative Hours	71		
Year Three							
Fall Semester				Spring Semester			
Requirement Category	Course	Credit Hrs	Min. Grade	Requirement Category	Course	Credit Hrs	Min. Grade
CORE: Global Engineering	EGR 301	3		TJP: Health & Well-Being	PSY/SOC	3	
TJP: Public Speaking	COM 101	3		MAJ: Engr Statistics	EGR 326	3	
TJP: Faith & Ethics #2	2 nd THL	3		MAJ: Mass Transfer & Separations	CEN 366	3	C-
MAJ: Fluid Mechanics	EGR 365	3	C-	MAJ: Chem Reaction Engineering	CEN 376	3	C-
MAJ: Chemistry Elective	CHE 3XX	4		MAJ: Heat Transfer	EGR 366	3	
				MAJ: Thermo-Fluids Laboratory	EGR 440	1	
Semester Hours	16			Semester Hours	16		
Cumulative Hours	87			Cumulative Hours	103		
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	CEN 492	3	C-
TJP: World Language	World Lang.	3		MAJ: CEN Program Elective	CEN XXX	3	
MAJ: Chemical Engineering Lab	CEN 421	3		MAJ: CEN Program Elective	CEN XXX	3	
MAJ: Chemical Process Design	CEN 435	3	C-	TJP: Cultural/Global	HUM/GLS	3	
MAJ: Control Systems	EGR 451	3		TJP: Human Nature & Person	PHL 130	3	
Semester Hours	15			Semester Hours	15		
Cumulative Hours	118			Cumulative Hours	133		