

Name _____

Student ID _____

Date _____

2024-25 Mechanical 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**

- 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 (27 hours)

____ MAT 230 Calculus I 4

____ MAT 231 Calculus II 4

____ MAT 305 Calculus III 4

____ EGR 210 Engineering Computation and Modeling 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 (24 hours)

____ EGR 101 Introduction to Engineering 3

____ EGR 151 Programming for Engineers 3

____ EGR 156 Intro Computer Aided Design 3

____ EGR 221 Engineering Mechanics: Statics 3

____ EGR 242 Linear Circuit Analysis 3

____ EGR 301 Global Engineering 3

____ EGR 317 Engineering Economics 3

____ EGR 491 Engineering Senior Design 3

Mechanical Engineering Requirements (47 hours)

____ EGR 222 Engineering Mechanics: Dynamics 3

____ EGR 226 Mechanics of Materials 3

____ EGR 230 Engineering Materials 3

____ EGR 261 Engineering Thermodynamics 3

____ EGR 326 Engineering Statistics 3

____ EGR 365 Fluid Mechanics 3

____ EGR 451 Control Systems 3

____ MEN 320 Dynamic Systems 3

____ MEN 337 Design of Mechanisms 3

____ MEN 362 Heat Transfer 3

____ MEN 401 Machine Design and Manufacturing 3

____ MEN 440 Mechanical Engineering Lab I 1

____ MEN 441 Mechanical Engineering Lab II 1

____ MEN 492 Senior Design II 3

____ Mechanical Engineering Elective 3

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Total Earned Hours 128

MARIAN UNIVERSITY

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2024-25 B.S. Mechanical Engineering Major Sample Four-Year Plan

Year One					
Fall Semester			Spring Semester		
Requirement Category	Course	Credit Hrs	Requirement Category	Course	Credit Hrs
Gen Math & Sci: Calculus I	MAT 230	4	Gen Math & Sci: Calculus II	MAT 231	4
CORE: Intro Engineering	EGR 101	3	Gen Math & Sci: University Physics I	PHY 201	4
CORE: Programming for Engineers	EGR 151	3	Gen Math & Sci: Gen Chem I	CHE 140	3
TJP: First Year Seminar	FYS 110	3	Gen Math & Sci: Gen Chem I Lab	CHE 141L	1
TJP: Public Speaking	COM 101	3	CORE: Intro Computer Aided Design	EGR 156	3
			TJP: Holistic Health	HWB 110	3
Semester Hours		16	Semester Hours		18
Cumulative Hours		16	Cumulative Hours		34
Year Two					
Fall Semester			Spring Semester		
Requirement Category	Course	Credit Hrs	Requirement Category	Course	Credit Hrs
Gen Math & Sci: Calculus III	MAT 305	4	Gen Math & Sci: Comp & Modeling	EGR 210	3
Gen Math & Sci: University Physics II	PHY 202	4	CORE: Lin Circuit Analysis	EGR 242	3
CORE: Engr Mechanics: Statics	EGR 221	3	MAJ: Engr Mechanics: Dynamics	EGR 222	3
MAJ: Thermodynamics	EGR 261	3	MAJ: Mechanics of Materials	EGR 226	3
TJP: Writing and Community	ENG 112	3	MAJ: Engineering Materials	EGR 230	3
			TJP: Human Nature & Person	PHL 130	3
Semester Hours		17	Semester Hours		18
Cumulative Hours		51	Cumulative Hours		69
Year Three					
Fall Semester			Spring Semester		
Requirement Category	Course	Credit Hrs	Requirement Category	Course	Credit Hrs
CORE: Global Engineering	EGR 301	3	TJP: Health & Well-Being	PSY/SOC	3
TJP: Intro Theology	THL 105	3	CORE: Engineering Economics	EGR 317	3
TJP: World Language	World Lang.	3	MAJ: Engr Statistics	EGR 326	3
MAJ: Design of Mechanisms	MEN 337	3	MAJ: Dynamic Systems	MEN 320	3
MAJ: Fluid Mechanics	EGR 365	3	MAJ: Mechanical Engineering Lab I	MEN 440	1
			MAJ: Heat Transfer	MEN 362	3
Semester Hours		15	Semester Hours		16
Cumulative Hours		84	Cumulative Hours		100
Year Four					
Fall Semester			Spring Semester		
Requirement Category	Course	Credit Hrs	Requirement Category	Course	Credit Hrs
CORE: Senior Design I	EGR 491	3	TJP: Faith & Ethics #2	2 nd THL	3
MAJ: Machine Des & Manuf.	MEN 401	3	MAJ: Senior Design II	MEN 492	3
MAJ: Mechanical Engineering Lab II	MEN 441	1	MAJ: MEN Program Elective	MEN XXX	3
MAJ: Control Systems	EGR 451	3	MAJ: MEN Program Elective	MEN XXX	3
MAJ: MEN Program Elective	MEN XXX	3			
TJP: Cultural/Global	HUM/GLS	3			
Semester Hours		16	Semester Hours		12
Cumulative Hours		116	Cumulative Hours		128

*A minimum 2.0 cumulative GPA and a minimum 2.0 major GPA are required for graduation, so monitor your GPA closely. To meet degree requirements, some disciplines require higher grades in each course or a higher cumulative GPA.

This plan is only a sample and will vary by student and course availability.