

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

Indianapolis®

## 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 155	3
			TJP: Holistic Health	HWB 110	3
<b>Semester Hours</b>		<b>16</b>	<b>Semester Hours</b>		<b>18</b>
<b>Cumulative Hours</b>		<b>16</b>	<b>Cumulative Hours</b>		<b>34</b>
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 241	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
<b>Semester Hours</b>		<b>17</b>	<b>Semester Hours</b>		<b>18</b>
<b>Cumulative Hours</b>		<b>51</b>	<b>Cumulative Hours</b>		<b>69</b>
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	3
			MAJ: Heat Transfer	MEN 362	3
<b>Semester Hours</b>		<b>15</b>	<b>Semester Hours</b>		<b>16</b>
<b>Cumulative Hours</b>		<b>84</b>	<b>Cumulative Hours</b>		<b>100</b>
Year Four					
Fall Semester			Spring Semester		
Requirement Category	Course	Credit Hrs	Requirement Category	Course	Credit Hrs
CORE: Senior Design I	EGR 490	3	TJP: Faith & Ethics #2	2 <sup>nd</sup> 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			
<b>Semester Hours</b>		<b>16</b>	<b>Semester Hours</b>		<b>12</b>
<b>Cumulative Hours</b>		<b>116</b>	<b>Cumulative Hours</b>		<b>128</b>

\*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.