

Name _____
 Student ID _____
 Date _____

2024-25 Engineering Physics 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 (3 credits)

____ EGR 317 Engineering Economics

____ BUS 109 Business Plan Competition

____ HIS 100 Civics and Democratic Engagement

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.

Engineering Physics Major Core Requirements (30 hours)

____ MAT 230 Calculus I 4

____ MAT 231 Calculus II 4

____ PHY 201 University Physics I 4

____ PHY 202 University Physics II 4

____ PHY 212 Modern Physics 4

____ PHY 220 Astrophysics and Cosmology 3

____ PHY 440 Intro. to Nanotech. and Nanosystems 3

____ PHY 460 or 498 Physics Internship/Research 2

____ PHY 490 Senior Seminar 2

Engineering Physics Major Requirements (6 – 7 hours) (CHOOSE 2)

____ CHE 325 Physical Chemistry 4

____ PHY 330 Electricity and Magnetism 3

____ PHY 350 Biophysics 3

Engineering Physics Electives (EGR 200 and above, CST 200 and above, MAT 305 and above, CHE 300 or 425) (24 hours)

Elective Credits (Including Minor) (35 hours)

Total Earned Hours 128

MARIAN UNIVERSITY

Indianapolis®

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

Year One					
Fall Semester			Spring Semester		
Requirement Category	Course	Credit Hrs	Requirement Category	Course	Credit Hrs
Major: Calculus I	MAT 230	4	Major: Calculus II	MAT 231	4
Elective: Intro to Engineering	EGR 101	3	Major: University Physics I	PHY 201	4
Elective: Programming for Engineers	EGR 151	3	Elective: Computer Aided Design	EGR 156	3
TJP: First Year Seminar	FYS 110	3	TJP: Holistic Health	HWB 110	3
TJP: Public Speaking	COM 101	3	TJP: Writing and Community	EGR 155	3
Semester Hours		16	Semester Hours		17
Cumulative Hours		16	Cumulative Hours		33
Year Two					
Fall Semester			Spring Semester		
Requirement Category	Course	Credit Hrs	Requirement Category	Course	Credit Hrs
Major: University Physics II	PHY 202	4	Major: Modern Physics	PHY 212	4
Major: Elective	EGR XXX	3	Major: Elective	EGR XXX	3
Major: Elective	EGR XXX	3	Major: Elective	EGR XXX	3
Elective: Minor		3	TJP: Human Nature & Person	PHL 130	3
TJP: Intro to Theology	THL 105	3	Elective: Minor		3
Semester Hours		16	Semester Hours		16
Cumulative Hours		49	Cumulative Hours		65
Year Three					
Fall Semester			Spring Semester		
Requirement Category	Course	Credit Hrs	Requirement Category	Course	Credit Hrs
Major: Astrophysics and Cosmology	PHY 220	3	Major: Elective	EGR XXX	3
Major: Electricity and Magnetism	PHY 330	3	Major: Elective	EGR XXX	3
Major: Elective	EGR XXX	3	TJP: Civics	HIS/BUS	3
TJP: Second Theology	THL 2XX	3	TJP: World Language	Language	3
Elective: Minor		3	Elective: Minor		3
			Elective: Minor		3
Semester Hours		15	Semester Hours		18
Cumulative Hours		80	Cumulative Hours		98
Year Four					
Fall Semester			Spring Semester		
Requirement Category	Course	Credit Hrs	Requirement Category	Course	Credit Hrs
Major: Biophysics	PHY 350	3	Major: Intro to Nano	PHY 440	3
Major: Internship	PHY 460	2	Major: Elective	EGR XXX	3
Major: Senior Seminar	PHY 490	2	Elective		3
Elective		3	Elective		2
Elective		3	TJP: Social Science	PSY/SOC	3
TJP: Cultural/Global	HUM/GLS	3			
Semester Hours		16	Semester Hours		14
Cumulative Hours		114	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.