MARIAN UNIVERSITY
Indianapolis ®

Name_____
Student ID_____
Date_____

2022-23 Computer Engineering Checklist

TRANSFORMATIONAL JOURNEY PROGRAM (TJP)
First Year Experience (3 credits)
____FYS110 First Year Seminar

Faith and Ethics (9 credits)
____THL105 Introduction to Theology
____PHL130 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)
____ENG112 Writing and Community
____COM101 Public Speaking

Cultural and Global Awareness (6 credits)
____World Language (determined by placement)
One of the following courses:
____GLS101 Global Perspectives
____HUM210 Meaning Through Culture

Health and Well-Being (6 credits)
____HWB110 Holistic Health: Mind, Body, and Spirit
One of the following courses:
____PSY101 General Psychology
____PSY220 Human Growth and Development
____SOC101 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
____MAT 310 Linear Algebra	3
____MAT 315 Differential Equations	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 (27 hours)

____EGR 101 Introduction to Engineering	3
____EGR 151 Programming for Engineers	3
____EGR 155 Intro Computer Aided Design	3
____EGR 221 Engineering Mechanics: Statics	3
____EGR 241 Linear Circuit Analysis	3
____EGR 261 Engineering Thermodynamics	3
____*EGR 301 Global Engineering	3
____EGR 317 Engineering Economics	3
____EGR 490 Engineering Senior Design	3

Computer Engineering Requirements (46 hours)

____EGR 326 Engineering Statistics	3
____CST 200 Data Structures and Algorithms	4
____CST 220 Comp Org & Assembly Lang Prog	3
____CPE 246 Advanced Programming	3
____CPE 303 Introduction to Operating Systems	3
____CPE 341 Linear Circuit Analysis II	3
____CPE 343 Digital System Design	3
____CPE 344 Signal and Systems	3
____CPE 356 Microprocessor Design	3
____CPE 402 Mechatronics	3
____CPE 404 Comp Network & Communications	3
____CPE 492 Senior Design II	3
____EGR 451 Control Systems	3
____CPE xxx Computer Engineering Elective	3
____CPE xxx Computer Engineering Elective	3

Total Earned Hours__133__

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2022-23 B.S. Computer 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: Univ Physics I	PHY 201	4
CORE-Egr Programming	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: Intro Theology	THL 105	3	CORE- Comp Aided Design	EGR 155	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: Differential Eqns	MAT 315	3
Gen Math & Sci: Univ Physics II	PHY 202	4	CORE: Linear Circuit Analysis	EGR 241	3
CORE: Engr Mechanics	EGR 221	3	TJP: Writing and Community	ENG 112	3
CORE: Thermodynamics	EGR 261	3	MAJ: Comp Org/Assembly Lang	CST 220	3
MAJ: Data Structures	CST 200	4	MAJ: Advanced Programming	CPE 246	3
			TJP: Cultural/Global	HUM/GLS	3
Semester Hours		**18**	**Semester Hours**		**18**
Cumulative Hours		**52**	**Cumulative Hours**		**70**

Year Three

Fall Semester			Spring Semester		
Requirement Category	**Course**	**Credit Hrs**	**Requirement Category**	**Course**	**Credit Hrs**
Gen Math & Sci: Linear Algebra	MAT 310	3	TJP: Health & Well-Being	PSY/SOC	3
TJP: Public Speaking	COM 101	3	CORE-Global Engineering	EGR 301	3
MAJ: Digital System Design	CPE 343	3	MAJ: Signals & Systems	CPE 344	3
MAJ: Linear Circuit Analysis II	CPE 341	3	MAJ: Microprocessor Design	CPE 356	3
MAJ: Intro to Operating Systems	CPE 303	3	MAJ: Engineering Statistics	EGR 326	3
			MAJ: Comp Networks & Comms	CPE 404	3
Semester Hours		**15**	**Semester Hours**		**18**
Cumulative Hours		**85**	**Cumulative Hours**		**103**

Year Four

Fall Semester			Spring Semester		
Requirement Category	**Course**	**Credit Hrs**	**Requirement Category**	**Course**	**Credit Hrs**
TJP: World Language	World Lang.	3	TJP: Faith & Ethics #2	2nd THL	3
TJP: Human Nature & Person	PHL 130	3	CORE: Engineering Economics	EGR 317	3
CORE: Senior Design	EGR 490	3	MAJ: Comp EGR Senior Design II	CPE 492	3
MAJ: Control Systems	EGR 451	3	MAJ: Mechatronics	CPE 402	3
MAJ: CPE electives	CPE 4xx	3	MAJ: CPE electives	CPE 4xx	3
Semester Hours		**15**	**Semester Hours**		**15**
Cumulative Hours		**118**	**Cumulative Hours**		**133**

*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.

CPE electives:

- Advanced Microcontroller Design
- Integrated Circuit Engineering
- Software Engineering
- Robotics
- Machine Learning
- Computer Architecture
- Wireless Communications
- Intro VLSI Design