

## 2022-23 Computer Engineering Checklist

### GENERAL EDUCATION

#### I. Faith and Ethics (12 hours)

- \_\_\_ THL 105 Intro to Theology  
 \_\_\_ PHL 130 Human Nature and the Person  
 \_\_\_ FYS 110 First Year Seminar  
 \_\_\_ THL 3XX Engineering Ethics

#### II. Health and Well-Being (6 hours)

- \_\_\_ PSY 220 Human Development  
     OR SOC 101 Intro to Sociology  
 \_\_\_ Health & Well-being in Practice I  
 \_\_\_ Health & Well-being in Practice II  
 \_\_\_ Health & Well-being in Practice III

#### III. Problem Solving

Fulfilled by major requirements

#### IV. Cultural and Global Awareness (6 hours)

- \_\_\_ HIS 102 History of the Modern World  
     OR GLS 101 Global Perspectives  
 \_\_\_ Language Course OR HUM 210 Search for  
 Meaning Through Culture

#### V. Communication (6 hours)

- \_\_\_ ENG 112 Writing and Community OR  
     ENG 1XX Transformational Texts  
 \_\_\_ COM 101 Public Speaking  
 \*\*Writing Intensive Course within the major  
 \*Public Speaking Intensive Course within the major

#### VI. Disciplinary Knowledge and Skills

- \_\_\_ Pathway or Minor

**Total Earned General Education Hours**  
 \_\_\_\_\_ **30 without minor or pathway** \_\_\_\_\_

### 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 200 Microelectronics 3  
 \_\_\_ CPE 300 Digital System Design 3  
 \_\_\_ CPE 301 Advanced Programming 3  
 \_\_\_ CPE 302 Introduction to Operating Systems 3  
 \_\_\_ CPE 303 Signal and Systems 3  
 \_\_\_ CPE 304 Microprocessor Design 3  
 \_\_\_ CPE 400 Mechatronics 3  
 \_\_\_ CPE 401 Comp Network & Communications 3  
 \_\_\_ CSE 402 Introduction to VLSI Design 3  
 \_\_\_ CPE xxx Computer Engineering Elective 3  
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**Total Earned**  
**Hours** 133

# MARIAN UNIVERSITY

— Indianapolis —®

## 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	PHY 140	3
Gen Ed: Faith & Ethics	FYS 110	3	Gen Math & Sci: Gen Chem I Lab	CHE 141L	1
Gen Ed: Faith & Ethics	THL 105	3	CORE- Comp Aided Design	EGR 155	3
			Gen Ed: Writing	ENG 112	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: 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	Gen Ed: Faith & Ethics	PHL 130	3
CORE: Thermodynamics	EGR 261	3	MAJ: Comp Org/Assembly Lang	CST 220	3
MAJ: Data Structures	CST 200	4	MAJ: Microelectronics	CPE 200	3
			Gen Ed: Health & Well-Being	HWB XXX	1
<b>Semester Hours</b>		<b>18</b>	<b>Semester Hours</b>		<b>16</b>
<b>Cumulative Hours</b>		<b>52</b>	<b>Cumulative Hours</b>		<b>67</b>
Year Three					
Fall Semester			Spring Semester		
Requirement Category	Course	Credit Hrs	Requirement Category	Course	Credit Hrs
Gen Math & Sci: Linear Algebra	MAT 310	3	Gen Ed: Health/Well Being	PSY/SOC	3
Gen Ed: Health & Well-Being	HWB XXX	1	CORE-Global Engineering	EGR 301	3
Gen Ed: Public Speaking	COM 101	3	MAJ: Signals & Systems	CPE 303	3
MAJ: Digital System Design	CPE 300	3	MAJ: Microprocessor Design	CPE 304	3
MAJ: Advanced Programming	CPE 301	3	MAJ: Engineering Statistics	EGR 326	3
MAJ: Intro to Operating Systems	CPE 302	3	MAJ: Comp Networks & Comms	CPE 401	3
<b>Semester Hours</b>		<b>16</b>	<b>Semester Hours</b>		<b>18</b>
<b>Cumulative Hours</b>		<b>83</b>	<b>Cumulative Hours</b>		<b>99</b>
Year Four					
Fall Semester			Spring Semester		
Requirement Category	Course	Credit Hrs	Requirement Category	Course	Credit Hrs
Gen Ed: Cult Global	HIS/HUM	3	Gen Ed: Faith & Ethics-Engr Ethics	THL 3xx	3
Gen Ed: Health & Well-Being	HWB XXX	1	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
Gen Ed: Cult/Global	HIS/HUM	3			
<b>Semester Hours</b>		<b>16</b>	<b>Semester Hours</b>		<b>15</b>
<b>Cumulative Hours</b>		<b>115</b>	<b>Cumulative Hours</b>		<b>133</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.

#### CPE electives:

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