# MARIAN UNIVERSITY
## — Indianapolis — ®

| Name_____ |
| Student ID_____ |
| Date_____ |

## 2020-21 DDEP Math/Computer Engineering Checklist

### GENERAL EDUCATION

**I. Foundational Intellectual Skills (12-13 hours)**
_____FYS110 First Year Seminar
_____ENG112 Writing and Community
_____COM101 Public Speaking
_____Mathematics (MAT230)

**II. Knowledge Acquisition (19-20 hours)**
_____Science with lab (CHE151)
_____HUM210 Meaning Through Culture
_____PHL130 Human Nature & Person
_____Foreign Language

**One course from each group A and B:**
**Group A**
_____ EGR327 Engineering Economics
_____ ECN200 Introductory Economics
**Group B**
_____PSY101 General Psychology
_____PSY220 Human Growth and Development
_____GST200 Introduction to Gender Studies
_____SOC101 Introduction to Sociology
_____SOC175 Introduction to Anthropology

**III. Faith, Ethics, and Foundation (6 hours)**
_____THL105 Introduction to Theology
_____Second Approved THL

**IV. Greater Depth Cluster**
Fulfilled by major requirements

**Required Supporting Courses**
_____ TCM360 Communication in Engineering Practice
_____ PHY201 Mechanics I
_____PHY202 Heat, Electricity, and Optics

    **Total Earned General Education Hours_____**

### MATHEMATICS MAJOR REQUIREMENTS

| | |
|---|---|
| _____MAT 230 Calculus I | 4 |
| _____MAT 231 Calculus II | 4 |
| _____MAT 250 Logic and Sets | 3 |
| _____MAT 305 Calculus III | 4 |
| _____MAT 310 Linear Algebra | 3 |
| _____MAT 315 Differential Equations | 3 |
| _____MAT 322 Stat. Inference & Data Analysis I | 3 |
| _____MAT 323 Stat. Inference & Data Analysis II | 3 |
| _____MAT 350 Numerical Methods | 3 |
| _____MAT 425 Mathematical Modeling | 3 |
| _____MAT 450 Real Analysis | 3 |
| _____MAT 490 Mathematics Seminar | 3 |
| _____CST 171 Procedural Programming | 3 |
| _____CST 270 Object Oriented Programming | 3 |

### COMPUTER ENGINEERING MAJOR REQUIREMENTS

| | |
|---|---|
| _____ENGR195 Intro to the Engineering Profession | 1 |
| _____ENGR196   Intro to Engineering | 3 |
| _____ECE201 Linear Circuit Analysis I | 3 |
| _____ECE202 Linear Circuit Analysis II | 3 |
| _____ECE207 Electronic Measurement Techniques | 1 |
| _____ECE210 ECE Sophomore Seminar | 1 |
| _____ECE261 Engineering Programming Lab | 1 |
| _____ECE263 C Programming Class | 3 |
| _____ECE270 Introduction to Digital System Design | 4 |
| _____ECE282 UNIX Programming for Engineers | 1 |
| _____ECE301 Signals and Systems | 3 |
| _____ECE302 Probabilistic Methods in ECE | 3 |
| _____ECE362 Microprocessor Systems and Interfacing | 4 |
| _____ECE365 Intro to the Design of Digital Computers | 3 |
| _____ECE401 Engineering Ethics and Professionalism | 1 |
| _____ECE408 Operating Systems | 3 |
| _____ECE487 Senior Design I | 1 |
| _____ECE488 Senior Design II | 2 |
| _____CSCI240 Computing II | 3 |
| _____CSCI340 Discrete Computational Structures | 3 |
| _____CSCI362 Data Structures | 3 |
| _____CmpE Elective | 3 |
| _____CmpE Elective | 3 |
| _____CmpE Elective | 3 |
| _____Advanced CmpE Elective | 3 |
| _____Advanced CmpE Elective | 3 |

    **Total Earned Major Hours_____**

# MARIAN UNIVERSITY
## — INDIANAPOLIS — ®

**2020-21 Dual-Degree Engineering Major**
**B.S. Mathematics with concentration in Applied Math**
**& B.S. Computer Engineering**
**Sample Five-Year Plan**

### Year One

| Fall Semester | | | Spring Semester | | |
|---|---|---|---|---|---|
| Requirement Category | Course | Credit Hours | Requirement Category | Course | Credit Hours |
| First Year Seminar | FYS 110 | 3 | Major | MAT 231 | 4 |
| Major | MAT 230 | 4 | Major | CST171 | 3 |
| Major | CHE151 | 4 | Major | PHY201 | 4 |
| *Major* | *ENGR196* | 3 | General Education | ENG112 | 3 |
| Major | EGR195 | 1 | General Education | THL105 | 3 |
| General Education | COM101 | 3 | | | |
| **Semester Hours** | 18 | | **Semester Hours** | 17 | |
| **Cumulative Hours** | 18 | | **Cumulative Hours** | 35 | |

### Year Two

| Fall Semester | | | Spring Semester | | |
|---|---|---|---|---|---|
| Requirement Category | Course | Credit Hours | Requirement Category | Course | Credit Hours |
| Major | MAT 305 | 4 | Major | MAT250 | 3 |
| Major | PHY202 | 4 | Major | MAT315 | 3 |
| Major | MAT310 | 3 | *Major* | *ECE201* | *3* |
| Major | MAT211 | 1 | *Major* | *ECE207* | *1* |
| Major | CST270 | 3 | *Major* | *ECE261* | *1* |
| | | | *Major* | *ECE263* | *3* |
| **Semester Hours** | 15 | | **Semester Hours** | 14 | |
| **Cumulative Hours** | 50 | | **Cumulative Hours** | 64 | |

### Year Three

| Fall Semester | | | Spring Semester | | |
|---|---|---|---|---|---|
| Requirement Category | Course | Credit Hours | Requirement Category | Course | Credit Hours |
| *Major* | *ECE202* | 3 | Major | MAT323 | 3 |
| *Major* | *ECE210* | 1 | *Major* | *CSCI340* | 3 |
| *Major* | *ECE270* | 4 | *Major* | *ECE301* | 3 |
| Major | MAT425 | 3 | Major | MAT350 | 3 |
| Major | MAT322 | 3 | General Education | Second THL | 3 |
| *Major* | *CSCI240* | *3* | | | |
| **Semester Hours** | 17 | | **Semester Hours** | 15 | |
| **Cumulative Hours** | 81 | | **Cumulative Hours** | 96 | |

### Year Four

| Fall Semester | | | Spring Semester | | |
|---|---|---|---|---|---|
| Requirement Category | Course | Credit Hours | Requirement Category | Course | Credit Hours |
| *Major* | *ECE302* | 3 | *Major* | *ECE365* | 3 |
| *Major* | *ECE362* | 4 | *General Education* | *TCM360* | 2 |
| *Major* | *CSCI362* | 3 | *Major* | *ECE401* | *1* |
| *Major* | *ECE282* | 1 | *Major* | *CmpE Elective* | *3* |
| Major | MAT490 | 3 | *Major* | *CmpE Elective* | *3* |
| General Education | HUM210 | 3 | General Education | EGR327 | 3 |
| **Semester Hours** | 17 | | **Semester Hours** | 15 | |
| **Cumulative Hours** | 113 | | **Cumulative Hours** | 128 | |

# MARIAN UNIVERSITY
## — Indianapolis — ®

## *2020-21 DDEP Math/Computer Engineering Checklist*

| Year Five | | | | | |
|---|---|---|---|---|---|
| **Fall Semester** | | | **Spring Semester** | | |
| **Requirement Category** | **Course** | **Credit Hours** | **Requirement Category** | **Course** | **Credit Hours** |
| *Major* | *Advc. CmpE Elec.* | *3* | Major | MAT450 | 3 |
| General Education | Foreign Language | 4 | *Major* | *Advc. CmpE Elec.* | *3* |
| *Major* | *CmpE Elective* | *3* | *Major* | *ECE488* | *2* |
| *Major* | *ECE408* | *3* | General Education | GST/PSY/SOC | 3 |
| *Major* | *ECE487* | *1* | General Education | PHL130 | 3 |
| **Semester Hours** | **14** | | **Semester Hours** | **14** | |
| **Cumulative Hours** | **142** | | **Cumulative Hours** | **156** | |

*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.

Courses listed in italics indicate courses taken at IUPUI.