SEYMOUR AND ESTHER PADNOS COLLEGE OF ENGINEERING
GRAND VALLEY STATE UNIVERSITY

Bachelor of Science in Engineering (B.S.E.)

# Computer Engineering

## Honors College: MTH 201 Start, 4 Year Plan

Secondary Admission Required

**2025 – 2026 Catalog Year**

### 1st Year

| Fall | | Winter | | Spring/Summer | |
|---|---|---|---|---|---|
| *MTH 201: Calculus 1 | 4 | *MTH 202: Calculus 2 | 4 | *EGR 185: First-Year EGR Design | 2 |
| *EGR 100: Intro to EGR | 1 | *PHY 230: Physics 1 | 5 | *CHM 125 + 126: Chemistry 1 | 4 |
| *EGR 111: Intro to EGR Graphics | 1 | *EGR 113: Intro to CAD/CAM | 1 | *MTH 203: Calculus 3 | 4 |
| *EGR 112: Appl Program for EGR | 2 | HNR 153: Interdisciplinary Seq. 3 | 3 | | |
| HNR 151: Interdisciplinary Seq. 1 | 3 | HNR 154: Interdisciplinary Seq. 4 | 3 | | |
| HNR 152: Interdisciplinary Seq. 2 | 3 | | | | |
| **Total** | **14** | **Total** | **16** | **Total** | **10** |

### 2nd Year

| Fall | | Winter | | Spring/Summer | |
|---|---|---|---|---|---|
| *PHY 231: Physics 2 | 5 | *MTH 302: Linear Algebra/Diff Eq | 4 | EGR 290: Engineering Co-op 1 | 3 |
| *STA 220: Stat Modeling for EGR | 2 | *EGR 223: Prob. & Signals Analysis | 3 | | |
| * EGR 220: EGR Measure & Data | 1 | *CIS 163: Computer Science 2 | 4 | | |
| *EGR 224: Intro to Digital System | 3 | *EGR 214: Circuit Analysis 1 | 3 | | |
| * EGR 226: Microcontroller Program | 3 | *EGR 215: Circuit Analysis 1 Lab | 1 | | |
| * EGR 227: Microcontroller Progr. Lab | 1 | | | | |
| *EGR 289: EGR Professionalism | 1 | | | | |
| *CIS 159: Obj. Oriented Prog. for EGR | 1 | | | | |
| **Total** | **17** | **Total** | **15** | **Total** | **3** |

### 3rd Year ~ Admission Required

| Fall | | Winter | | Spring/Summer | |
|---|---|---|---|---|---|
| EGR 314: Circuit Analysis 2 | 4 | EGR 390: Engineering Co-op 2 | 3 | ^CIS 241: Sys-level Program & Util | 3 |
| EGR 315: Electronic Circuits 1 | 4 | | | CIS 350: Intro to Software EGR | 3 |
| EGR 326: Embedded Sys. Design | 4 | | | ^CIS 263: Data Struct & Algorithms | 3 |
| HNR 201: Live. Learn. Lead. | 3 | | | ECO 210 or 211: Economics | 3 |
| **Total** | **15** | **Total** | **3** | **Total** | **12** |

### 4th Year ~ Admission Required

| Fall | | Winter | | Spring/Summer | |
|---|---|---|---|---|---|
| EGR 490: Engineering Co-op 3 | 3 | EGR 485: Senior Egr Project 1 | 1 | EGR 486: Senior EGR Project 2 | 2 |
| | | CIS 452: Operating Sys Concepts | 3 | CE Elective | 3-4 |
| | | CE Electives (Select 2) | 6-8 | HNR 350: Integrative Seminar | 3 |
| | | Supplemental Writing Skills | 3 | | |
| **Total** | **3** | **Total** | **13-15** | **Total** | **8-9** |

- This is a suggested curriculum guide that might not be applicable to every student
- Foundation courses are required for secondary admission and are designated by an asterisk (*) on this guide
- ^CIS 241 is completed in the 1st 6 weeks of Summer and CIS 263 is completed in the 2nd 6 weeks of Summer. A Registration Override Request via Banner will be required to register for both courses simultaneously.
- Student must have a **minimum of 120 credits** to graduate, with **58 of the 120 credits** being from a senior level institution and the **final 30 of the 120 credits** completed at GVSU

**Padnos College of Engineering Undergraduate Advising Center**
Innovation Design Center, Suite 212
(616) 331-6025 or online at www.gvsu.edu/pce/advising

| CE Foundation Course Requirements | | | |
|---|---|---|---|
| WRT 150 (or WRT 130) | MTH 201 | MTH 202 | MTH 203 |
| MTH 302 | PHY 230 | PHY 231 | CHM 125 + 126 |
| STA 220/EGR 220 | EGR 100 | EGR 111 | EGR 112 (or EGR 104+108) |
| EGR 113 | EGR 185 | EGR 224 | EGR 226/227 |
| EGR 289 | EGR 223 | EGR 214/215 | CIS 159 (or CIS 162) |
| CIS 163 | | | |

| Honors Requirements | |
|---|---|
| HNR 151 | HNR 152 |
| HNR 153 | HNR 154 |
| HNR 300 (fulfilled by EGR 290) | HNR 201 |
| HNR 251 (fulfilled by EGR 100 + EGR 185) | HNR 350 |
| HNR 401/499 (fulfilled by EGR 485 + EGR 486) | |

**Secondary Admission Requirements:**

*Detailed application and admission requirements available at https://www.gvsu.edu/engineering/secondary-admission-to-engineering-majors-44.htm*

- ✓ A GPA of 2.7 or above in Engineering Foundation courses. Foundation courses are designated by an asterisk (*) on this guide.
- ✓ Completion of each course in the Engineering Foundation with a grade of C (2.0) or above, with no more than one repeat.
- ✓ Completion of preparation for placement in the cooperative engineering education course, EGR 289.

**Honors:**

The Frederik Meijer Honors College and the School of Engineering have approved the following substitutions for the honors curriculum:

1) Together, EGR 100 and EGR 185 fulfill the HNR 251 requirement.
2) EGR 290 fulfills the HNR 300 requirement.
3) EGR 485 fulfills the HNR 401 requirement.
4) EGR 486 fulfills the HNR 499 requirement.
5) The completion of the honors curriculum will fulfill the engineering ethics requirement.
6) All GVSU students must earn credit for two Supplemental Writing Skills (SWS) courses. Honors students can earn credit for one SWS course by completing HNR 154 (the winter semester of a first-year sequence) with a grade of C or better. They must earn their second SWS course credit outside of the Honors requirements.

**Recommendations:**

1. It is strongly encouraged that students do not begin or break curriculum thread by taking courses at other institutions.
    a. *For example*: Taking MTH 201 equivalent elsewhere, then return to Grand Valley and continuing in the math thread with MTH 202.
2. MTH 302, Linear Algebra and Differential Equations = MTH 204, Linear Algebra **+** MTH 304, Analysis of Differential Equations
    a. Completing the split (2 class) version can be advantageous to students completing a math minor. See your advisor for additional information.