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

2022 – 2023 Catalog Year

Computer Engineering

MTH 108 Start, 5 Year Plan

Secondary Admission Required

| | | | 1st Year | | | |
|---|------|------------------------------|-----------------------------------|-------|---------------------------------------|-------|
| Fall | | | Winter | | Coning /Cummon | |
| MTH 108: Stretch MTH 110- Part 1 | | 3 | MTH 109: Stretch MTH 110- Part 2 | 3 | Spring/Summer MTH 124: Precalculus | 5 |
| *WRT 150: Strategies in Writing | | 4 | *EGR 100: Intro to EGR | 1 | Will 124. Freedicalds | 3 |
| or WRT 120 <u>and</u> WRT 130 | | 7 | General Education | 3 | | |
| General Education | | 3 | General Education | 3 | | |
| General Education | | 3 | General Education | 3 | | |
| | otal | 13 | Total | 13 | Total | 5 |
| | | | 2nd Year | | | |
| Fall | | | Winter | | Spring/Summer | |
| *MTH 201: Calculus 1 | | 4 | *MTH 202: Calculus 2 | 4 | *EGR 185: First-Yr EGR Design | 2 |
| | | 1 | *PHY 230: Physics 1 | 5 | | |
| *EGR 104: Appl Program for EGR I | | 2 | *EGR 113: Intro to CAD/CAM | 1 | | |
| | | 4 | *EGR 108: Appl Program for EGR II | 2 | | |
| General Education | | 3 | *STA 220: Stat Modeling for EGR | 2 | | |
| | | | *EGR220: EGR Measure & Data | 1 | | |
| T | otal | 14 | Total | 15 | Total | 2 |
| | | | 3rd Year | | | |
| Fall | | | Winter | | Spring/Summer | |
| *MTH 203: Calculus 3 | | 4 | *MTH 302: Linear Algebra/Diff Eq | 4 | EGR 290: Engineering Co-op 1 | 3 |
| *PHYS 234 or PHYS 231: Physics 2 | | 4-5 | *EGR 223: Prob. & Signal Analysis | 3 | | |
| *EGR 224: Intro to Digital Systems 3 | | 3 | *CIS 163: Computer Science 2 | 4 | | |
| *EGR 226: Microcontroller Program 3 | | *EGR 214: Circuit Analysis 1 | 3 | | | |
| *EGR 227: Microcontroller Program Lab 1 | | 1 | *EGR 215: Circuit Analysis 1 Lab | 1 | | |
| *EGR 289: EGR Professionalism | | 1 | | | | |
| *CIS 159: Java Programming for EGR | | 1 | | | | |
| Т | otal | 17-18 | Total | 15 | Total | 3 |
| | | 4 | Ith Year ~ Admission Required | | | |
| Fall | | | Winter | | Spring/Summer | |
| EGR 314: Circuit Analysis 2 | | 4 | EGR 390: Engineering Co-op 2 | 3 | ^CIS 241: Sys-level Progr. & 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. & Algorith. | 3 |
| | | | | | ECO 210 or ECO 211: Econ. | 3 |
| Т | otal | 12 | Total | 3 | Total | 12 |
| | | 5 | th 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 | 4 | CE Elective | 3-4 |
| | | | CE Elective (Select 2) | 6-8 | General Education | 3 |
| | | | General Education | 3 | General Education | 3 |
| T | otal | 3 | Total | 14-16 | Total | 11-12 |

- 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

| √ | CE Foundation Course Requirements | √ | General Education Requirements |
|----------|-----------------------------------|---|---|
| | WRT 150 | | WRT 150: Strategies in Writing (grade of "C" or higher required) or WRT 120 and WRT 130 |
| | MTH 201 | | Life Sciences (consider BIO 105) |
| | MTH 202 | | Physical Sciences (CHM 115) |
| | MTH 203 | | Philosophy and Literature (PHI 102) |
| | MTH 302 | | Arts |
| | PHY 230 | | Mathematical Sciences (MTH 201) |
| | PHY 231 or PHY 234 | | Social Behavioral Sciences (ECO 210 or ECO 211) |
| | CHM 115 | | Social Behavioral Sciences |
| | STA 220/EGR 220 | | Historical Analysis (consider HSC 202) |
| | EGR 100 | | U.S. Diversity |
| | EGR 111 | | Global Perspectives |
| | EGR 112 or EGR 104 + EGR 108 | | 2 Supplemental Writing Skills Courses (prerequisite: WRT 150) |
| | EGR 113 | | 2 Issues Courses (must have 55+ credits) |
| | EGR 185 | | |
| | EGR 224 | | |
| | EGR 226/227 | | |
| | EGR 289 | | |
| | EGR 223 | | |
| | EGR 214/215 | | |
| | CIS 159 | | |
| | CIS 163 | | |

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.

Major Notes:

- 1) 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.
- 2) Consider taking a course that fulfills the U.S. Diversity category and one non-ECO Social and Behavioral Science course.
- 3) Consider taking a course that fulfills the Global Perspectives category and one Issues course.
- 4) An ethics course is required in the engineering program. It is recommended to take **ONE** of the following:
 - a. PHI 102 in the Philosophy and Literature category
 - b. BIO 328, BIO 338, COM 438, EGR 302, MGT 340, MGT 438, MKT 375, PHI 325 OR PLS 338 in the Issues category
 - c. For Honors College students, the ethics requirement is fulfilled by completion of the Honors Curriculum
- 5) ECO 210 or 211 is required for the engineering major AND fulfills one Social and Behavioral Science course.
- 6) Two Supplemental Writing Skills (SWS) courses are required for graduation. These can be fulfilled via other general education categories. For example, EGR 302 will fulfill ONE SWS requirement, one Issues requirement AND the engineering ethics requirement.

Recommendations:

It is strongly encouraged that students do not begin or break curriculum thread by taking courses at other institutions.

For example: Taking MTH 201 equivalent elsewhere, then return to Grand Valley and continuing in the math thread with MTH 202.