Computer Engineering

Grand Valley State University 2021-22 Catalog MTH 201 Placement – 5 year program

Secondary Admission Criteria

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

1st Semester Fall: 15 credits

| *MTH 201 | Calculus 1 | 4 credits |
|--|-----------------------|-----------|
| *WRT 150 | Writing Strategies | 4 credits |
| OR WRT 120/WRT 130 (may change timeline) | | |
| *EGR 100 | Intro to EGR | 1 credit |
| *EGR 111 | Intro to EGR Graphics | 1 credit |
| *EGR 112 | Appl Program for EGR | 2 credits |
| General Education | 3 credits | |

2nd Semester Winter: 15 credits

| *MTH 202 | Calculus 2 | 4 credits |
|---------------|-------------------------|-----------|
| *CHM 115 | Chemistry 1 | 4 credits |
| *EGR 113 | Intro to CAD/CAM | 1 credit |
| General Educa | tion Courses (Select 2) | 6 credits |

3rd Semester Fall: 15 credits

| *MTH 203 | Calculus 3 | 4 credits |
|------------------|-----------------------|-----------|
| *EGR 185 | First-Year EGR Design | 2 credits |
| *STA 220 | Stat Modeling for EGR | 2 credits |
| *EGR 220 | EGR Measure & Data | 1 credit |
| General Educatio | 6 credits | |

4th Semester Winter: 15 credits

| *MTH 302 | Linear Algebra/Diffy Q | 4 credits |
|------------------|------------------------|-----------|
| *PHY 230 | Physics 1 | 5 credits |
| General Educatio | 6 credits | |

5th Semester Fall: 13-14 credits

| *PHY 234 or 231 | Physics 2 | 4/5 credits |
|-----------------|-----------------------------|-------------|
| *EGR 224 | Intro to Digital System | 3 credits |
| *EGR 226 | Microcontroller Program | 3 credits |
| *EGR 227 | Microcontroller Program Lab | 1 credit |
| *CIS 159 | Java Programming for Egr | 1 credit |
| *EGR 289 | EGR Professionalism | 1 credit |
| | | |

6th Winter Semester: 14 credits

| *EGR 223 | Prob. & Signal Analysis | 3 credits |
|-------------------|-------------------------|-----------|
| *CIS 163 | Computer Science 2 | 4 credits |
| *EGR 214 | Circuit Analysis 1 | 3 credits |
| *EGR 215 | Circuit Analysis 1 Lab | 1 credit |
| General Education | on Course | 3 credits |

Spring/Summer Semester: 3 credits

| EGR 290 | Engineering Co-on 1 | 3 credits |
|---------|---------------------|-----------|
| EGR 290 | Engineering Co-op 1 | 3 credits |

7th Fall Semester: 15 credits

| EGR 314 | Circuit Analysis 2 | 4 credits |
|-------------------|-----------------------|-----------|
| EGR 315 | Electronic Circuits 1 | 4 credits |
| EGR 326 | Embedded Sys. Design | 4 credits |
| General Education | on Course | 3 credits |

Winter Semester: 3 credits

EGR 390 Engineering Co-op 2 3 credits

8th Semester Spring/Summer: 12 credits

| CIS 241 | Sys-level Program & Util | 3 credits |
|--------------------------|--------------------------|-----------|
| CIS 350 | Intro to Software Egr | 3 credits |
| CIS 263 | Data Struct & Algorithms | 3 credits |
| FCO 210 OR 211 Fconomics | | 3 credits |

Fall Semester: 3 credits

EGR 490 Engineering Co-op 3 3 credits

9th Semester Winter: 11-13 credits

EGR 485 Senior Egr Project 1 1 credit
CIS 452 Operating Sys Concepts 4 credits
Computer Engineering Electives (Select 2) 3-4 credits

10th Semester Spring/Summer: 5-6 credits

EGR 486 Senior Egr Project 2 2 credits Computer Engineering Elective 3-4 credits

It is important to meet with a professional advisor in the PCEC Advising Center on a regular basis. The PCEC Advising Center is located in B-3-241 Mackinac Hall and 101 Eberhard Center. Please call 616-331-6025 or go online at www.gvsu.edu/pcec/advising to schedule an appointment.

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General Education

| Category | Completed? | Category | Completed? | <u>Category</u> | Completed? | Category | Completed? |
|---------------|------------|-------------------------|------------|-----------------|------------|------------------|------------|
| Physical | | Mathematical Sciences | | Global | - | Writing | |
| Sciences | | (MTH 201) | | Perspectives | | (WRT 130 or 150) | |
| (CHM 115) | | | | | | | |
| Life Sciences | | Social & Behavioral | | U.S. | | SWS #1 | |
| | | Sciences (ECO 210/211) | | Diversity | | | |
| Philosophy & | | Social & Behavioral | | Issues | | SWS #2 | |
| Literature | | Sciences | | | | | |
| Arts | | Historical Perspectives | | Issues | | | |

- 1) Consider taking a course that fulfills the U.S. Diversity category and one non-ECO Social and Behavioral Science course.
- 2) Consider taking a course that fulfills the Global Perspectives category and one Issues course.
- 3) 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
- 4) ECO 210 or 211 is required for the engineering major AND fulfills one Social and Behavioral Science course.
- 5) 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.