

Interdisciplinary Engineering (Renewable Energy Emphasis – Solar/All Track)
Grand Valley State University 2021-22 Catalog
MTH 201 Placement – 5 year Honors 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: 14 credits

*MTH 201	Calculus 1	4 credits
*EGR 100	Intro to EGR	1 credit
*EGR 111	Intro to EGR Graphics	1 credit
*EGR 112	Appl Program for EGR	2 credits
HNR 151	Interdisciplinary Seq. 1	3 credits
HNR 152	Interdisciplinary Seq. 2	3 credits

2nd Semester Winter: 13 credits

*MTH 202	Calculus 2	4 credits
*EGR 113	Intro to CAD/CAM	1 credit
*EGR 185	First-Year EGR Design	2 credits
HNR 153	Interdisciplinary Seq. 3	3 credits
HNR 154	Interdisciplinary Seq. 4	3 credits

3rd Semester Fall: 14 credits

*MTH 203	Calculus 3	4 credits
*CHM 115	Chemistry 1	4 credits
*STA 220	Stat Modeling for EGR	2 credits
*EGR 220	EGR Measure & Data	1 credit
ECO 210 OR 211	Economics	3 credits

4th Semester Winter: 15 credits

*MTH 302	Linear Algebra/Diff Eq	4 credits
*PHY 230	Physics 1	5 credits
EGR 224	Intro to Digital System	3 credits
HNR 201	Live. Learn. Lead.	3 credits

5th Semester Fall: 13-14 credits

*PHY 234 or 231	Physics 2	4-5 credits
*EGR 209	Mechanics and Machines	4 credits
*EGR 226	Microcontroller Program	3 credits
*EGR 227	Microcontroller Program Lab	1 credit
*EGR 289	EGR Professionalism	1 credit

6th Semester Winter: 14 credits

*EGR 223	Prob. & Signal Analysis	3 credits
*EGR 257	Elec. Materials & Devices	4 credits
*EGR 214	Circuit Analysis 1	3 credits
*EGR 215	Circuit Analysis 1 Lab	1 credit
BIO 105	Environmental Science	3 credits

Spring/Summer Semester: 3 credits

EGR 290	Engineering Co-op 1	3 credits
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7th Semester Fall: 11-12 credits

EGR 314	Circuit Analysis 2	4 credits
EGR 326 or 345		4 credits
EGR 360 or IE Track Elec.	(See Notes)	3-4 credits

Winter Semester: 3 credits

EGR 390	Engineering Co-op 2	3 credits
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8th Semester Spring/Summer: 12-15 credits

EGR 330 or IE Track Elec.	(See Chart)	3-4 credits
EGR 323 or IE Track Elec.	(See Chart)	3-4 credits
EGR 362 or IE Track Elec.	(See Notes)	3-4 credits
HNR 200	C/C Engagement	3 credits

Fall Semester: 7 credits

EGR 490	Engineering Co-op 3	3 credits
EGR 463	Alt Energy Sys & Appl.	4 credits

9th Semester Winter: 13-14 credits

EGR 485	Senior EGR Project 1	1 credits
EGR 406	Renewable Energy Sys.	3 credits
EGR 413	Materials:Energy Storage	3 credits
IE Track Elec.	(See Chart)	3-4 credits
GEO 360	Earth Res. Transition	3 credits

10th Semester Spring/Summer: 8-9 credits

EGR 486	Senior EGR Project 2	2 credits
IE Track Elec.	(See Chart)	3-4 credits
HNR 350	Integrative Seminar	3 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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Major Notes

- 1) An emphasis area is required for the Interdisciplinary Engineering major. Emphasis areas include: Data Science, Design & Innovation, Engineering Management, Environmental Engineering, Mechatronics and Renewable Energy.
 - a. To declare this emphasis, login to MyBanner, select “Student Records” and then “Change Major.”
 - b. Click on “Change Major 1” and select **Interdisciplinary Engineering – Renewable Energy Emphasis**.
 - c. Click “Submit” and then “Change to New Program.”
 - d. EGR 224, EGR 330 and EGR 323 are prerequisite courses for selected upper-level electives. Students are required to take **four** IE Track electives. **Please plan ahead!** Course descriptions are listed in the [GVSU Academic Catalog](#).
- 2) Students must complete **EITHER** EGR 360 **OR** 362. A track elective should be taken in the other semester.

Electives	Credits	Title	Semester	Course Prerequisites	Energy Focus
EGR 314	4	Circuit Analysis II	Fall	Only if not taken for required course, no double dipping	Solar
EGR 326	4	Embedded Systems	Fall		Solar
EGR 315	4	Electronic Circuits I	Fall		Solar
EGR 430	4	Electromechanics	Winter	EGR 330	All
EGR 455	4	Automatic Control	Summer	EGR 323	All
EGR 435	3	Mathematical Modeling of Physiologic Systems	Winter	MTH 302	All

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 485 fulfills the HNR 401 requirement.
- 3) EGR 486 fulfills the HNR 499 requirement.
- 4) The completion of the honors curriculum will fulfill the engineering ethics requirement.

Students are encouraged to plan ahead and submit a proposal for how they plan to fulfill the HNR 200 requirement. All students must complete 3 credits of HNR 200 before graduation. It can be take as a 1-credit, 2-credit, or 3-credit course. There are three options for fulfilling this honors requirement: **pre-approved activity**, **pre-approved course substitution**, or **an activity or course**. Please work with an honors advisor to determine the best fit for you.

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.

PCEC Advisors

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