

**Interdisciplinary Engineering:
Engineering Management Emphasis**

MTH 123 Start, 5 Year Plan

Secondary Admission Required

1st Year		
Fall		Winter
MTH 123: Trigonometry 3		*MTH 201: Calculus I 4
*WRT 150: Strategies in Writing 4		*CHM 115: Chemistry 1
Or WRT 120 <u>and</u> WRT 130		*EGR 108: Applied Programming II 2
*EGR 100: Intro to Engineering 1		*EGR 113: Intro to CAD/CAM 1
*EGR 111: Intro to Engineering Graphics 1		General Education 3
*EGR 104: Applied Programming I 2		
General Education 3		
Total 14		Total 14
2nd Year		
Fall		Winter
*MTH 202: Calculus 2 4		*MTH 203: Calculus 3 4
*EGR 185: First-Year EGR Design 2		*PHY 230: Physics I 5
General Education 3		*STA 220: Statistical Modeling for EGR 2
General Education 3		*EGR 220: EGR Measure & Data 1
		ECO 210 or 211: Economics 3
Total 12		Total 15
3rd Year		
Fall		Winter
*PHY 234 or 231: Physics 2 4-5		*MTH 302: Linear Algebra/Differential EQ 4
*EGR 226: Microcontroller Program 3		*EGR 214: Circuit Analysis 1 3
*EGR 227: Microcontroller Program Lab 1		*EGR 215: Circuit Analysis 1 Lab 1
*EGR 209: Mechanics & Machines 4		*EGR 309: Machine Design 1 3
*EGR 289: EGR Professionalism 1		*EGR 310: Machine Design 1 Lab 1
		*EGR 250: Materials Science & EGR 3
		*EGR 251: Materials Science & EGR Lab 1
Total 13-14		Total 16
Spring/Summer		
		EGR 290: Engineering Co-Op I 3
		Total 3
4th Year ~ Admission Required		
Fall		Winter
EGR 345: Dynamic System Modeling 4		EGR 390: Engineering Co-Op 2 3
EGR 367: Mfg Processes 3		
EGR 368: Mfg Processes Lab 1		
ACC 212: Prin. of Financial Accounting 3		
BUS 201: Legal Env. for Business 3		
Total 14		Total 3
Spring/Summer		
		EGR 362: Thermal & Fluid Sys 4
		EGR 440: Intro to Production 3
		EGR 441: EGR Economics 4
		ACC 213: Prin of Mgr Accounting 3
		Total 14
5th Year ~ Admission Required		
Fall		Winter
EGR 490: Engineering Co-Op 3 3		EGR 485: Senior EGR Project 1 1
		FIN 300: Fund of Fin for Non-Bus Majors 3
		MGT 300: Fund of Mgt for Non-Bus Majors 3
		General Education 3
		General Education 3
		General Education 3
Total 3		Total 13
Spring/Summer		
		EGR 486: Senior EGR Project 2 2
		MKT 300: Fund of Mkt for Non-Bus Majors 3
		General Education 3
		General Education 3
		General Education 3
		Total 14

- 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
- 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

√	IE-EGR MGT Foundation Requirements	√	General Education Requirements
	MTH 201		WRT 150: Strategies in Writing (grade of "C" or higher required) or WRT 120 and WRT 130
	MTH 202		Life Sciences (consider BIO 105)
	MTH 203		Physical Sciences (CHM 115)
	MTH 302		Philosophy and Literature (consider PHI 102)
	CHM 115		Arts
	PHY 230		Mathematical Sciences (MTH 201)
	PHY 231 or 234		Social Behavioral Sciences (ECO 210 or 211)
	WRT 150		Social Behavioral Sciences
	EGR 100		Historical Analysis (consider HSC 202)
	EGR 111		U.S. Diversity
	EGR 112 or EGR 104 + EGR 108		Global Perspectives
	EGR 113		2 Supplemental Writing Skills Courses (prerequisite: WRT 130 or 150)
	EGR 185		2 Issues Courses (must have 55+ credits)
	EGR 289		
	EGR 220+STA 220		
	EGR 214+215		
	EGR 226+227		
	EGR 209		
	EGR 309+310		
	EGR 250+251		

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 Declaration Steps:

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.

- 1) To declare this emphasis, login to MyBanner, select "Student Records" and then "Change Major."
- 2) Click on "Change Major 1" and select **Interdisciplinary Engineering – Engineering Management Emphasis**.
- 3) Click "Submit" and then "Change to New Program."
- 4) Please also declare a **Business General** minor in MyBanner, by selecting "Student Records", then "Change Major" and "Add a Minor."

Major Notes:

- 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.