

Mechanical Engineering

MTH 201 Start, 4 Year Honors Program Plan

Secondary Admission Required

1 st Year					
Fall		Winter		Spring/Summer	
*MTH 201: Calculus 1	4	*MTH 202: Calculus 2	4	*MTH 203: Calculus 3	4
*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	*EGR 185: First-Year EGR Design	2
*EGR 112: Applied Programing 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
2 nd Year					
Fall		Winter		Spring/Summer	
*PHY 231: Physics 2	5	*MTH 302: Linear Algebra/Differential EQ	4	EGR 290: Engineering Co-op 1	3
*STA 220: Statistical Modeling for EGR	2	*EGR 309: Machine Design 1	3		
*EGR 220: EGR Measure & Data	1	*EGR 310: Machine Design 1 Lab	1		
*EGR 226: Microcontroller Program	3	*EGR 312: Dynamics	3		
*EGR 227: Microcontroller Program Lab	1	*EGR 214: Circuit Analysis 1	3		
*EGR 209: Mechanics and Machines	4	*EGR 215: Circuit Analysis 1 Lab	1		
*EGR 289: EGR Professionalism	1				
Total	17	Total	15	Total	3
3 rd Year ~ Admission Required					
Fall		Winter		Spring/Summer	
EGR 250: Materials Science & EGR	3	EGR 390: Engineering Co-op 2	3	EGR 329: Intro to FEA	3
EGR 251: Materials Science & EGR Lab	1			EGR 365: Fluid Mechanics	4
EGR 346: Mechatronics & Control	4			EGR 409: Machine Design 2	4
EGR 360: Thermodynamics	4			ECO 210 OR 211 Economics	3
HNR 201: Live. Learn. Lead.	3				
Total	15	Total	3	Total	14
4 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
		EGR 468: Heat Transfer	4	Mechanical Engineering Elective	3-4
		Mechanical Engineering Elective	3-4	Mechanical Engineering Elective	3-4
		Supplemental Writing Skills	3		
		HNR 350: Integrative Seminar	3		
Total	3	Total	14-15	Total	8-10

- 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

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

Mechanical Engineering Foundation Requirements

MTH 201	MTH 202	MTH 203	MTH 302
WRT 150 or WRT 130	CHM 125 + 126	PHY 230	PHY 231
EGR 100	EGR 111	EGR 112 (or EGR 104+ EGR 108)	EGR 113
EGR 185	EGR 289	EGR 220 + STA 220	EGR 214 + 215
EGR 226 + 227	EGR 209	EGR 309 + 310	EGR 312

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.