SEYMOUR AND ESTHER PADNOS COLLEGE OF ENGINEERING
GRAND VALLEY STATE UNIVERSITY

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

Mechanical Engineering

MTH 201 Start, 5 Year Honors Program Plan

Secondary Admission Required

2025 – 2026 Catalog Year

1st Year					
Fall		**Winter**		**Spring/Summer**	
*MTH 201: Calculus 1	4	*MTH 202: Calculus 2	4		
*EGR 100: Intro to EGR	1	*EGR 113: Intro to CAD/CAM	1		
*EGR 111: Intro to EGR Graphics	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**	**13**		
2nd Year					
Fall		**Winter**		**Spring/Summer**	
*MTH 203: Calculus 3	4	*MTH 302: Linear Algebra/Differential EQ	4		
*PHY 230: Physics 1	5	*CHM 125 + 126: Chemistry 1	4		
*STA 220: Statistical Modeling for EGR	2	*EGR 209: Mechanics and Machines	4		
*EGR 220: EGR Measure & Data	1				
HNR 201: Live. Learn. Lead.	3				
Total	**15**	**Total**	**12**		
3rd Year					
Fall		**Winter**		**Spring/Summer**	
*PHY 231: Physics 2	5	*EGR 226: Microcontroller Program	3	EGR 290: Engineering Co-op 1	3
*EGR 214: Circuit Analysis 1	3	*EGR 227: Microcontroller Program Lab	1		
*EGR 215: Circuit Analysis 1 Lab	1	*EGR 312: Dynamics	3		
*EGR 309: Machine Design 1	3	Supplemental Writing Skills	3		
*EGR 310: Machine Design 1 Lab	1	HNR 350: Integrative Seminar	3		
*EGR 289: EGR Professionalism	1				
Total	**14**	**Total**	**13**	**Total**	**3**
4th 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
Total	**12**	**Total**	**3**	**Total**	**14**
5th 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
Total	**3**	**Total**	**8-9**	**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.