Computer Engineering

MTH 122 Start, 5 Year Plan

Secondary Admission Required

1st Year

Fall			Winter			Spring/Summer
MTH 122: College Algebra	3		MTH 123: Trigonometry	3		
*WRT 150: Strategies in Writing **or** WRT 120 and WRT 130	4		*CHM 115: Chemistry 1	4		
General Education	3		*EGR 100: Intro to EGR	1		
General Education	3		*EGR 111: Intro to EGR Graphics	1		
			*EGR 104: Appl Program for EGR 1	2		
			General Education	3		
Total	**13**		**Total**	**14**		

2nd Year

Fall			Winter			Spring/Summer
*MTH 201: Calculus 1	4		*MTH 202: Calculus 2	4		
*EGR 108: Appl Program for EGR 2	2		*PHY 230: Physics 1	5		
*EGR 113: Intro to CAD/CAM	1		*EGR 185: First-Year EGR Design	2		
General Education (Select 2)	6		*STA 220: Stat Modeling for EGR	2		
			*EGR 220: EGR Measure & Data	1		
Total	**13**		**Total**	**14**		

3rd Year

Fall			Winter			Spring/Summer	
*MTH 203: Calculus 3	4		*MTH 302: Linear Algebra/Diff Eq	4		EGR 290: Engineering Co-op 1	3
*PHYS 234 or PHYS 231: Physics 2	4-5		*EGR 223: Prob. & Signal Analysis	3			
*EGR 224: Intro to Digital Systems	3		*CIS 163: Computer Science 2	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 289: EGR Professionalism	1						
*CIS 159: Obj. Oriented Prog. for EGR	1						
Total	**17-18**		**Total**	**15**		**Total**	**3**

4th Year ~ Admission Required

Fall			Winter			Spring/Summer	
EGR 314: Circuit Analysis 2	4		EGR 390: Engineering Co-op 2	3		^CIS 241: Sys-level Progr. & Util	3
EGR 315: Electronic Circuits 1	4					CIS 350: Intro to Software Egr	3
EGR 326: Embedded Sys. Design	4					^CIS 263: Data Struct & Algorith.	3
						ECO 210 or ECO 211: Econ.	3
Total	**12**		**Total**	**3**		**Total**	**12**

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
			CIS 452: Operating Sys Concepts	4		CE Elective	3-4
			CE Elective (Select 2)	6-8		General Education (Select 2)	6
			General Education	3			
Total	**3**		**Total**	**14-16**		**Total**	**11-12**

- 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 CIS 241 is completed in the 1st 6 weeks of Summer – and CIS 263 is completed in the 2nd 6 weeks of Summer. A Registration Override Request via Banner will be required to register for both courses simultaneously.
- 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

CE Foundation Course Requirements

WRT 150 (or WRT 130)	MTH 201	MTH 202	MTH 203
MTH 302	PHY 230	PHY 231 or PHY 234	CHM 115
STA 220+EGR 220	EGR 100	EGR 111	EGR 112 (or EGR 104+108)
EGR 113	EGR 185	EGR 224	EGR 226+227
EGR 289	EGR 223	EGR 214+215	CIS 159 (or CIS 162)
CIS 163			

General Education Requirements

WRT 150: Strategies in Writing (grade of "C" or higher required) **or** WRT 120 and WRT 130 (grade of "C" or higher required in both)	Life Sciences (consider BIO 105)
Physical Sciences (CHM 115)	Philosophy and Literature
Arts	Mathematical Sciences (MTH 201)
Social Behavioral Sciences (ECO 210 or 211)	Social Behavioral Sciences
Historical Analysis (consider HSC 202)	U.S. Diversity
Global Perspectives	2 Supplemental Writing Skills Courses (prerequisite: WRT 130 or WRT 150
2 Issues Courses (prerequisite: must have 55+ credits)	

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 Notes:

1) CIS 241 is completed in the 1st 6 weeks of Summer and CIS 263 is completed in the 2nd 6 weeks of Summer. A Registration Override Request via Banner will be required to register for both courses simultaneously.
2) It is recommended that anyone on a 5 year EGR plan complete the EGR 104+108 stretch option in place of EGR 112. Please speak with an advisor if you have questions about which option is best for you.
3) Consider taking a course that fulfills the U.S. Diversity category and one non-ECO Social and Behavioral Science course.
4) Consider taking a course that fulfills the Global Perspectives category and one Issues course.
5) An ethics course is required in the engineering program. It is recommended to take **ONE** of the following:
   a. EGR 302 (Engineering Decision-Making in Society), BIO 328, BIO 338, COM 438, MGT 340, MGT 438, MKT 375, PHI 325 or PLS 338 in the Issues category
   b. PHI 102 in the Philosophy and Literature category
   c. For Honors College students, the ethics requirement is fulfilled by completion of the Honors Curriculum
6) ECO 210 or 211 is required for the engineering major AND fulfills one Social and Behavioral Science course.
7) 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.