Study Plan for B.S.E., *INTERDISCIPLINARY ENGINEERING* & Renewable Energy emphasis

Student Name: _____

(2018-19 Catalog) ***(MTH 110 Placement - 5 Year Program)*** **Minor:** _____

Student ID#: G

	1st Semester: Fall____	Credits	Grade	Semester Completed	2nd Semester: Winter ____	Credits	Grade	Semester Completed	Semester: S/S ____	Credits	Grade	Semester Completed
1st Year	MTH 110 Algebra	4			MTH 124 Functions & Models	5						
	* WRT 150 Writ Strategies	4			* CHM 115 Chemistry I	4						
	! EGR 100 Intro to Engrg	1			^ BIO 105 Environmental Sci	3						
	GE - Arts _____	3			@ GE P & L PHI 102	3						
	# GE - HP _____	3										
2nd Year	**3rd Semester: Fall____**	**Credits**	**Grade**	**Semester Completed**	**4th Semester: Winter ____**	**Credits**	**Grade**	**Semester Completed**	**Semester: S/S ____**	**Credits**	**Grade**	**Semester Completed**
	* MTH 201 Calculus I	4			* MTH 202 Calculus II	4						
	* EGR 106 Intro to Egr Design I	3			* EGR 107 Intro to Egr Design II	3						
	% ECO 210/211 Economics	3			* PHY 230 Physics I	5						
	* STA 220 Statistical Modeling	2										
	* EGR 220 Measure/Data Analysis	1										
3rd Year	**5th Semester: Fall____**	**Credits**	**Grade**	**Semester Completed**	**6th Semester: Winter ____**	**Credits**	**Grade**	**Semester Completed**	**Semester: S/S ____**	**Credits**	**Grade**	**Semester Completed**
	* MTH 203 Calculus III	4			* MTH 302 Differential Equations	4			EGR 290 Engrg Co-op I	3		
+	* PHY 234/1 Physics II	4/5			* EGR 309 or 223 Mach Dsgn or Prob/Sgnls	3/4			~ EGR 224 or 312 Dig Sys or Dynamics	3		
	* EGR 214 Circuits	4			* EGR 250 or 257 Materials	4						
	* EGR 209 Mech & Mach	4			* EGR 226 MicroCtrl Pgm Appl	4						
	* EGR 289 Engrg Co-op Prep	1										
4th Year	**7th Semester: Fall____**	**Credits**	**Grade**	**Semester Completed**	**Semester: Winter ____**	**Credits**	**Grade**	**Semester Completed**	**8th Semester: S/S ____**	**Credits**	**Grade**	**Semester Completed**
	& EGR 360, 314 or IE Elective	4			EGR 390 Engrg Co-op II (SWS)	3			& EGR 362 or IE Elective	4		
	$ EGR 346 Mechatronic Sys	4							~ EGR 323 or 365 Signals or Fluids	3/4		
	IE Elec _____	3/4							# GE GP _____	3		
									• GE SBS/US	3		
5th Year	**Semester: Fall____**	**Credits**	**Grade**	**Semester Completed**	**9th Semester: Winter ____**	**Credits**	**Grade**	**Semester Completed**	**10th Semester: S/S ____**	**Credits**	**Grade**	**Semester Completed**
	EGR 490 Engrg Co-op III	3			EGR 485 Sr Project I	1			EGR 486 Sr Project II	2		
	EGR 463 Alternative Energy	3			^ EGR 406 Renewable Energy	3			IE Elec. _____	3/4		
					EGR 413 Matls Energy Storage	3						
					IE Elec. _____	3/4						
					^ GEO 360 Earth Resources	3						

* Engineering Foundation course

\+ Students may enroll in PHY 231 instead of PHY 234

• Consider taking a course that doubles as SBS and US (See Gen Ed guide for selections)

\# Consider taking a course that doubles as GP and Historical Perspectives (See Gen Ed guide for selections)

@ An ethics course is required in the engineering program (PHI 102 or another ethics course in General Education).

% ECO 210 or 211 is required in the engineering curriculum. Also fulfills one SBS GenEd requirement.

& IE required course Energy (must take EGR 360 or EGR 362)

^ Emphasis required general education course. Check course offering ASAP for planning purposes.

$ IE required course Systems and Control (must take EGR 326, EGR 345 or EGR 346)

! Not required, but highly recommended for success. Students should take EGR 100 or EGR 180

~ IE Prerequiste course for upper-level electives (EGR 224 is for Solar Track ONLY!)

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 315	4	Electronic Circuits I	Fall		Solar
EGR 326	4	Embedded System Design	Fall		Solar
EGR 352	4	Kinematics and Dynamics	Fall	EGR 312	Windmill, Alternative Cars
EGR 345	4	Dynamic Sys Model & Control	Fall	Only if not taken for required course, no double dipping	
EGR 346	4	Mechatronic Sys Dyn & Control	Fall		
EGR 405	3	Materials Failure Analysis	Summer	EGR 250	Windmill, Alternative Cars
EGR 430	4	Electromechanics	Winter	EGR 330	All
EGR 450	4	Manufacturing Control Systems	Winter	EGR 345 or 346	Windmill
EGR 455	4	Automatic Control	Summer	EGR 323	All
EGR 465	4	Computational Fluid Dynamics	Winter	EGR 365	Windmill

Secondary Admission Criteria:

- GPA of 2.7 or above in the Engineering Foundation courses
- Completion of each course in the Engineering Foundation with a grade of C (2.0) or above, with no more than one repeat per Foundations course
- Completion of preparation for placement in the cooperative engineering eudcation course, EGR 289

Recommendation:

It is strongly encouraged that students do not beging or break a curriculum thread by taking courses at other institutions; e.g., take the MTH 201 equivalent elsewhere, return to GV and continue in the math thread with MTH 202

PCEC Student Services
616-331-6025