

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

(Windmill/Alternative Cars Track)

Student Name: _____

(2019-20 Catalog)

(MTH 122 Placement - 5 Year Program)

Minor: _____

Student ID#: G

	Credits	Grade	Semester Completed	Credits	Grade	Semester Completed	Credits	Grade	Semester Completed		
1st Year	1st Semester: Fall _____			2nd Semester: Winter _____			Semester: S/S _____				
	MTH 122	College Algebra	3	* MTH 201	Calculus I	4	_____	_____	_____		
	MTH 123	Trigonometry	3	* CHM 115	Chemistry I	4	_____	_____	_____		
	* WRT 150	Writ Strategies	4	* EGR 106	Intro to Egr Design I	3	_____	_____	_____		
	! EGR 100	Intro to Engrg	1	^ BIO 105	Environmental Sci.	3	_____	_____	_____		
	GE - Arts	3									
2nd Year	3rd Semester: Fall _____			4th Semester: Winter _____			Semester: S/S _____				
	* MTH 202	Calculus II	4	* MTH 203	Calculus III	4	_____	_____	_____		
	* EGR 107	Intro to Egr Design II	3	* PHY 230	Physics I	5	_____	_____	_____		
	@ GE P & L	(PHI 102 - Ethics)	3	* EGR 226	MicroCtrl Pgm Appl	4	_____	_____	_____		
	* STA 220	Statistical Modeling	2	• GE - US/SBS	_____	3	_____	_____	_____		
	* EGR 220	Measure/Data Analysis	1								
3rd Year	5th Semester: Fall _____			6th Semester: Winter _____			Semester: S/S _____				
	+ * PHY 234/1	Physics II	4/5	* MTH 302	Lin Alg & DEQ	4	_____	_____	_____		
	* EGR 214	Circuit Analysis I	4	* EGR 309	Machine Design I	4	_____	_____	_____		
	* EGR 209	Mech & Mach	4	* EGR 250	Materials	4	_____	_____	_____		
	* EGR 289	Engrg Co-op Prep	1	~ EGR 312	Dynamics	3	_____	_____	_____		
							EGR 290	Engrg Co-op I	3	_____	_____
4th Year	7th Semester: Fall _____			Semester: Winter _____			8th Semester: S/S _____				
	& EGR 360	or IE Elective	4	EGR 390	Engrg Co-op II (sws)	3	_____	_____	_____		
	\$ EGR 345	or 346 Dyn Sys/Mechatro	4	# IE Elec	(EGR 450)	4	_____	_____	_____		
	# IE Elec	(EGR 352)	4				_____	_____	_____		
	% ECO 210/211	Economics	3				_____	_____	_____		
5th Year	Semester: Fall _____			9th Semester: Winter _____			10th Semester: S/S _____				
	EGR 490	Engrg Co-op III	3	EGR 485	Sr Project I	1	_____	_____	_____		
	EGR 463	Alternative Energy	3	^ EGR 406	Renewable Energy	3	_____	_____	_____		
				EGR 413	Matls Energy Storage	3	_____	_____	_____		
			# IE Elec	(EGR 465)	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)
- @ 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. Please check semester availability ASAP!
- \$ IE required course Systems and Control (must take EGR 345 or EGR 346)
- ! Not required, but highly recommended for success.
- ~ IE Prerequisite course for upper-level electives
- # A total of four electives is required. Please see a faculty advisor ASAP to select electives.

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 education course, EGR 289

Electives	Credits	Title	Semester	Course Prerequisites	Energy Focus
EGR 352	4	Kinematics and Dynamics	Fall	EGR 312	Windmill, Alternative Cars
EGR 405	3	Materials Failure Analysis	Summer	EGR 250	Windmill, Alternative Cars
EGR 450	4	Manufacturing Control Systems	Winter	EGR 345 or 346	Windmill
EGR 465	4	Computational Fluid Dynamics	Winter	EGR 365	Windmill
EGR 435	3	Math Model of Phys Sys	Winter	MTH 302	All

Recommendation:

It is strongly encouraged that students do not begin 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