

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

(Windmill/Alternative Cars Track)

Student Name: \_\_\_\_\_

(2019-20 Catalog)

(MTH 110 Placement - 5 Year Program)

Minor: \_\_\_\_\_

Student ID#: G

1st Year	1st Semester: Fall _____			2nd Semester: Winter _____			Semester: S/S _____		
	Credits	Grade	Semester Completed	Credits	Grade	Semester Completed	Credits	Grade	Semester Completed
	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 _____			4th Semester: Winter _____			Semester: S/S _____		
	Credits	Grade	Semester Completed	Credits	Grade	Semester Completed	Credits	Grade	Semester Completed
	* MTH 201 Calculus I	4	_____	* MTH 202 Calculus II	4	_____	* EGR 226 MicroCtrl Pgm Appl	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	_____			
	* GE SBS/US _____	3	_____	* STA 220 Statistical Modeling	2	_____			
				* EGR 220 Measure/Data Analysis	1	_____			
3rd Year	5th Semester: Fall _____			6th Semester: Winter _____			Semester: S/S _____		
	Credits	Grade	Semester Completed	Credits	Grade	Semester Completed	Credits	Grade	Semester Completed
	* MTH 203 Calculus III	4	_____	* MTH 302 Lin Alg & DEQ	4	_____	EGR 290 Engrg Co-op I	3	_____
	+ * PHY 234/1 Physics II	4/5	_____	* EGR 309 Machine Design I	4	_____			
	* EGR 214 Circuit Analysis I	4	_____	* EGR 250 Materials	4	_____			
	* EGR 209 Mech & Mach	4	_____	~ EGR 312 Dynamics	3	_____			
	* EGR 289 Engrg Co-op Prep	1	_____						
4th Year	7th Semester: Fall _____			Semester: Winter _____			8th Semester: S/S _____		
	Credits	Grade	Semester Completed	Credits	Grade	Semester Completed	Credits	Grade	Semester Completed
	& EGR 360 or IE Elective	4	_____	EGR 390 Engrg Co-op II (sws)	3	_____	& EGR 362 or IE Elective	4	_____
	§ EGR 345 or 346 Dyn Sys/Mechatrs	4	_____	# IE Elec (EGR 450)	4	_____	~ EGR 365 Fluids	4	_____
	# IE Elec (EGR 352)	4	_____				GE GP _____	3	_____
5th Year	Semester: Fall _____			9th Semester: Winter _____			10th Semester: S/S _____		
	Credits	Grade	Semester Completed	Credits	Grade	Semester Completed	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. (EGR 405)	3	_____
				EGR 413 Mats 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

**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

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