

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

(Windmill/Alternative Cars Track)

Student Name: _____

(2019-20 Catalog) (MTH 123 Placement - 5 Year Program)

Minor: _____

Student ID#: G

1st Year	1st Semester: Fall _____ MTH 123 Trigonometry 3 _____ * WRT 150 Writ Strategies 4 _____ † EGR 100 Intro to Engr 1 _____ GE - HP _____ 3 _____ GE - Arts _____ 3 _____	2nd Semester: Winter _____ * MTH 201 Calculus I 4 _____ * CHM 115 Chemistry I 4 _____ * EGR 106 Intro to Egr Design I 3 _____ @ GE P & L PHI 102 - Ethics 3 _____	Semester: S/S _____ _____ _____ _____
	3rd Semester: Fall _____ * MTH 202 Calculus II 4 _____ * EGR 107 Intro to Egr Design II 3 _____ ^ BIO 105 Environmental Sci. 3 _____ * STA 220 Statistical Modeling 2 _____ * EGR 220 Measure/Data Analysis 1 _____	4th Semester: Winter _____ * MTH 203 Calculus III 4 _____ * PHY 230 Physics I 5 _____ * EGR 226 MicroCtrl Pgm Appl 4 _____ • GE SBS/US _____ 3 _____	Semester: S/S _____ _____ _____ _____
3rd Year	5th Semester: Fall _____ + * PHY 234/1 Physics II 4/5 _____ * EGR 214 Circuit Analysis I 4 _____ * EGR 209 Mech & Mach 4 _____ * EGR 289 Engrg Co-op Prep 1 _____	6th Semester: Winter _____ * MTH 302 Lin Alg & DEQ 4 _____ * EGR 309 Machine Design I 4 _____ * EGR 250 Materials 4 _____ ~ EGR 312 Dynamics 3 _____	Semester: S/S _____ EGR 290 Engrg Co-op I 3 _____ _____ _____
	7th Semester: Fall _____ & EGR 360 or IE Elective 4 _____ § EGR 345 or 346 Dyn Sys/Mechatrs 4 _____ # IE Elec (EGR 352) 4 _____	Semester: Winter _____ EGR 390 Engrg Co-op II (sws) 3 _____ # IE Elec (EGR 450) 4 _____	8th Semester: S/S _____ & EGR 362 or IE Elective 4 _____ ~ EGR 365 Fluids 4 _____ % ECO 210/211 Economics 3 _____ GE GP 3 _____
5th Year	Semester: Fall _____ EGR 490 Engrg Co-op III 3 _____ EGR 463 Alternative Energy 3 _____	9th Semester: Winter _____ EGR 485 Sr Project I 1 _____ ^ EGR 406 Renewable Energy 3 _____ EGR 413 Matls Energy Storage 3 _____ # IE Elec (EGR 465) 4 _____ ^ GEO 360 Earth Resources 3 _____	10th Semester: S/S _____ EGR 486 Sr Project II 2 _____ # IE Elec. (EGR 405) 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