

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

(2018-19 Catalog) (MTH 123 Placement - 5 Year Program)

Minor: _____

Student Name: _____

Student ID#: G

1st Year	1st Semester: Fall _____ MTH 123 Trigonometry 3 _____ * WRT 150 Writ Strategies 4 _____ ! EGR 100 Intro to Engrg 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 _____	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 Differential Equations 4 _____ * EGR 309 or 223 Mach Dsgn or Prob/Signa 3/4 _____ * EGR 250 or 257 Materials 4 _____ ~ EGR 224 or 312 Intro Dig Sys or Dynamics 3 _____	Semester: S/S _____ EGR 290 Engrg Co-op I 3 _____
	7th Semester: Fall _____ & EGR 360, 314 or IE Elective 4 _____ \$ EGR 346 Mechatronic Sys 4 _____ IE Elec _____ 3/4 _____	Semester: Winter _____ EGR 390 Engrg Co-op II (sws) 3 _____	8th Semester: S/S _____ & EGR 362 or IE Elective 4 _____ ~ EGR 323 or 365 Signals or Fluids 3/4 _____ # GE GP _____ 3 _____ • GE SBS/US (SOC 105) 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. _____ 3/4 _____ ^ GEO 360 Earth Resources 3 _____	10th Semester: S/S _____ EGR 486 Sr Project II 2 _____ IE Elec. _____ 3/4 _____ % ECO 210/211 Micro/Macroecon 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.
- ~ IE Prerequisite course for upper-level electives (EGR 224 is for Solar Track ONLY!)

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 Foundation course.
- Completion of preparation for placement in the cooperative engineering education course, EGR 285

Electives	Credits	Title	Semester	Course Prerequisites	Energy Focus
		Circuit Analysis II		Only if not taken for required course, no double dipping	Solar
EGR 314	4		Fall		
EGR 315	4	Electronic Circuits I	Fall		Solar
EGR 326	4	Embedded System Design	Fall		Solar
EGR 345	4	Dynamic Sys Model & Control	Fall		
EGR 346	4	Mechatronic Sys Dyn & Control	Fall	Only if not taken for required course, no double dipping	
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 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

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

