

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

Student Name: _____

(2019-20 Catalog) (MTH 124 Placement - 5 Year Program)

Minor: _____

Student ID#: G

Year	Semester	Credits	Grade	Semester Completed	Semester	Credits	Grade	Semester Completed	Semester	Credits	Grade	Semester Completed
1st Year	1st Semester: Fall				2nd Semester: Winter				Semester: S/S			
	* MTH 124 Functions & Models	5			* MTH 201 Calculus I	4						
	* WRT 150 Writ Strategies	4			* CHM 115 Chemistry I	4						
	! EGR 100 Intro to Engrg	1			* EGR 106 Intro to Egr Design I	3						
	! EGR 180 Intro Egr Prob Solv	3			# GE - HP	3						
^ BIO 105 Environmental Sci	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			% ECO 210/211 Micro/Macroeconomics	3						
	* STA 220 Statistical Modeling	2			* EGR 226 MicroCtrl Pgm Appl	4						
* 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 Differential Equations	4			EGR 290	Engrg Co-op I	3	
	* EGR 214 Circuit Analysis I	4			* EGR 309 or 223 Mach Dsgn or Prob/Signa	3/4						
	* EGR 209 Mech & Mach	4			* EGR 250 or 257 Materials	4						
	* EGR 289 Engrg Co-op Prep	1			~ EGR 224 or 312 Intro Dig Sys or Dynamic	3						
4th Year	7th Semester: Fall				Semester: Winter				8th Semester: S/S			
	& 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 Arts	3			
								• GE SBS/US	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 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 Prerequisite 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 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 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
EGR 435	3	Math Modeling of Phys Sys	Winter	MTH 302	All

Secondary Admissions Criteria:

- A 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, 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.