

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

(2019-20 Catalog) (MTH 110 Placement - 5 Year Program) Minor: _____

Student Name: _____

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 110 Algebra	4			MTH 124 Functions & Models	5						
	* WRT 150 Write 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			
	* MTH 201 Calculus I	4			* MTH 202 Calculus II	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						
	* STA 220 Statistical Modeling	2										
* EGR 220 Measure/Data Analysis	1											
3rd Year	5th Semester: Fall				6th Semester: Winter				Semester: S/S			
	* MTH 203 Calculus III	4			* MTH 302 Differential Equations	4			EGR 290 Engrg Co-op I	3		
	+ * PHY 234/1 Physics II	4/5			* EGR 309 or 223 Mach Dsgn or Prob/Sgnls	3/4			~ EGR 224 or 312 Dig Sys or Dynamics	3		
	* EGR 214 Circuits	4			* EGR 250 or 257 Materials	4						
	* EGR 209 Mech & Mach	4			* EGR 226 MicroCtrl Pgm Appl	4						
* EGR 289 Engrg Co-op Prep	1											
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 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
		Circuit Analysis II		Only if not taken for required course, no double dipping	
EGR 314	4		Fall		Solar
EGR 315	4	Electronic Circuits I	Fall		Solar
EGR 326	4	Embedded System Design	Fall		Solar
EGR 352	4	Kinematics and Dynamics	Fall	EGR 312	Windmill, Alternative Cars
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 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 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

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