

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

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

(2019-20 Catalog) (MTH 201 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	<b>1st Semester: Fall</b>				<b>2nd Semester: Winter</b>				<b>Semester: S/S</b>			
	* MTH 201 Calculus I	4	_____	_____	* MTH 202 Calculus II	4	_____	_____	_____	_____	_____	_____
	* WRT 150 Writ Strategies	4	_____	_____	* CHM 115 Chemistry I	4	_____	_____	_____	_____	_____	_____
	* EGR 106 Intro to Egr Design I	3	_____	_____	* EGR 107 Intro to Egr Design II	3	_____	_____	_____	_____	_____	_____
	# GE - HP _____	3	_____	_____	GE - Arts _____	3	_____	_____	_____	_____	_____	_____
2nd Year	<b>3rd Semester: Fall</b>				<b>4th Semester: Winter</b>				<b>Semester: S/S</b>			
	* MTH 203 Calculus III	4	_____	_____	* MTH 302 Lin Alg & DEQ	4	_____	_____	_____	_____	_____	_____
	* STA 220 Statistical Modeling	2	_____	_____	* PHY 230 Physics I	5	_____	_____	_____	_____	_____	_____
	* EGR 220 Measure/Data Analysis	1	_____	_____	* EGR 226 MicroCtrl Pgm Appl	4	_____	_____	_____	_____	_____	_____
	^ BIO 105 Environmental Sci.	3	_____	_____	• GE SBS/US _____	3	_____	_____	_____	_____	_____	_____
% ECO 210/211 Micro/Macroecon.	3	_____	_____									
3rd Year	<b>5th Semester: Fall</b>				<b>6th Semester: Winter</b>				<b>Semester: S/S</b>			
	+ * PHY 234/1 Physics II	4/5	_____	_____	* EGR 309 or 223 Mach Dsgn or Prob/Signal	3/4	_____	_____	<b>EGR 290</b>	<b>Engrg Co-op I</b>	3	_____
	* EGR 214 Circuit Analysis I	4	_____	_____	* EGR 250 or 257 Materials	4	_____	_____	_____	_____	_____	_____
	* EGR 209 Mech & Mach	4	_____	_____	~ EGR 224 or 312 Intro Dig Sys or Dynamics	3	_____	_____	_____	_____	_____	_____
	* EGR 289 Engrg Co-op Prep	1	_____	_____					_____	_____	_____	_____
4th Year	<b>7th Semester: Fall</b>				<b>Semester: Winter</b>				<b>8th Semester: S/S</b>			
	& EGR 360, 314 or IE Elective	4	_____	_____	<b>EGR 390</b>	<b>Engrg Co-op II (sws)</b>	3	_____	_____	_____	_____	_____
	\$ EGR 346 Mechatronic Sys	4	_____	_____					& EGR 362 or IE Elective	4	_____	_____
	IE Elec _____	3/4	_____	_____					~ EGR 323 or 365 Signals or Fluids	3/4	_____	_____
								@ PHI 102 Ethics	3	_____	_____	
								# GE GP _____	3	_____	_____	
5th Year	<b>Semester: Fall</b>				<b>9th Semester: Winter</b>				<b>10th Semester: S/S</b>			
	<b>EGR 490</b>	<b>Engrg Co-op III</b>	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	_____	_____					
				^ GEO 360 Earth Resources	3	_____	_____					
				IE Elec _____	3/4	_____	_____					

\* 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)

~ 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 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
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.