

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

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

(2019-20 Catalog)

(MTH 201 Placement - 4 Year Program)

Minor: \_\_\_\_\_

Student ID#: **G** \_\_\_\_\_

	1st Semester: Fall _____			Credits	Grade	Semester Completed	2nd Semester: Winter _____			Credits	Grade	Semester Completed	Semester: S/S _____			Credits	Grade	Semester Completed			
1st Year	*	MTH	201	Calculus I	4	_____	_____	*	MTH	202	Calculus II	4	_____	_____							
	*	WRT	150	Writ Strategies	4	_____	_____	*	PHY	230	Physics I	5	_____	_____							
	*	EGR	106	Intro to Egr Design I	3	_____	_____	*	EGR	107	Intro to Egr Design II	3	_____	_____							
	*	CHM	115	Chemistry I	4	_____	_____	*	STA	220	Statistical Modeling	2	_____	_____							
								*	EGR	220	Measure/Data Analysis	1	_____	_____							
2nd Year	3rd Semester: Fall _____			Credits	Grade	Semester Completed	4th Semester: Winter _____			Credits	Grade	Semester Completed	Semester: S/S _____			Credits	Grade	Semester Completed			
	*	MTH	203	Calculus III	4	_____	_____	*	MTH	302	Lin Alg & DEQ	4	_____	_____							
	*	PHY	234/1	Physics II	4/5	_____	_____	*	EGR	309 or 214	Mach Dsgn or Circuits	4	_____	_____	*	EGR	290	Engrg Co-op I	3	_____	_____
	*	EGR	226	MicroCtrl Pgm Appl	4	_____	_____	*	EGR	250 or 257	Materials	4	_____	_____	*	EGR	223	Probability & Signals	3	_____	_____
	*	EGR	209	Mech & Mach	4	_____	_____	~	EGR	224 or 312	Intro Dig Sys or Dynamics	3	_____	_____				(Solar Track ONLY!)			
	*	EGR	289	Engrg Co-op Prep	1	_____	_____														
3rd Year	5th Semester: Fall _____			Credits	Grade	Semester Completed	Semester: Winter _____			Credits	Grade	Semester Completed	6th Semester: S/S _____			Credits	Grade	Semester Completed			
	&	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	_____	_____	^	GEO	360	Earth Resources	3	_____	_____	~	EGR	323 or 365	Signals or Fluids	3/4	_____	_____
	IE	Elec	_____	3/4	_____	_____							@	PHI	102	Ethics	3	_____	_____		
													•	GE	Arts	_____	3	_____	_____		
														•	GE	SBS/US (SOC 105)	3	_____	_____		
4th Year	Semester: Fall _____			Credits	Grade	Semester Completed	7th Semester: Winter _____			Credits	Grade	Semester Completed	8th Semester: S/S _____			Credits	Grade	Semester Completed			
	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	_____	_____	^	BIO	105	Environmental Science	3	_____	_____			
						IE	Elec	_____	3/4	_____	_____	#	GE	GP	_____	3	_____	_____			
						%	ECO	210/211	Micro/Macroecon.	3	_____	_____	GE	HP	_____	3	_____	_____			

PCEC Student Services: (616)331-6025

- \* 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!)

**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

Electives	Credits	Title	Semester	Prerequisites (in addition to admission to upper division)	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