Study Plan for B.S.E., *INTERDISCIPLINARY ENGINEERING* & Renewable Energy emphasis (Windmill/Alternative Cars Track) **Student Name:** _____

(2019-20 Catalog) ***(MTH 124 Placement - 5 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 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____	Credits	Grade	Semester Completed	4th Semester: Winter ____	Credits	Grade	Semester Completed	Semester: S/S ____	Credits	Grade	Semester Completed
	*	MTH 202 Calculus II	4			* MTH 203 Calculus III	4						
	*	EGR 107 Intro to Egr Design II	3			* EGR 226 MicroCtrl Pgm Appl	4						
	@	GE - P & L (PHI 102 Ethics)	3			* PHY 230 Physics I	5						
	*	STA 220 Statistical Modeling	2			• GE - US/SBS _____	3						
	*	EGR 220 Measure/Data Analysis	1										
3rd Year		5th Semester: Fall____	Credits	Grade	Semester Completed	6th Semester: Winter ____	Credits	Grade	Semester Completed	Semester: S/S ____	Credits	Grade	Semester Completed
	+ *	PHY 234/1 Physics II	4/5			* MTH 302 Lin Alg & DEQ	4			EGR 290 Engrg Co-op I	3		
	*	EGR 214 Circuit Analysis I	4			* EGR 309 Machine Design I	4						
	*	EGR 209 Mech & Mach	4			* EGR 250 Materials	4						
	*	EGR 289 Engrg Co-op Prep	1			~ EGR 312 Dynamics	3						
4th Year		7th Semester: Fall____	Credits	Grade	Semester Completed	Semester: Winter ____	Credits	Grade	Semester Completed	8th Semester: S/S ____	Credits	Grade	Semester Completed
	&	EGR 360 or IE Elective	4			EGR 390 Engrg Co-op II (SWS)	3			& EGR 362 or IE Elective	4		
	$	EGR 345 or 346 Dyn Sys/Mechatr	4			# IE Elec (EGR 450)	4			~ EGR 365 Fluids	4		
	#	IE Elec (EGR 352)	4							GE GP _____	3		
	%	ECO 210/211 Economics	3							GE Arts _____	3		
5th Year		Semester: Fall____	Credits	Grade	Semester Completed	9th Semester: Winter ____	Credits	Grade	Semester Completed	10th 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. (EGR 405)	3		
						EGR 413 Matls Energy Storage	3						
						# IE Elec (EGR 465)	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)

@ 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. Please check semester availability ASAP!

$ IE required course Systems and Control (must take EGR 345 or EGR 346)

! Not required, but highly recommended for success. Students should take EGR 100 or EGR 180

~ IE Prerequiste course for upper-level electives

\# A total of four electives is required. Please see a faculty advisor ASAP to select electives.

Electives	Credits	Title	Semester	Course Prerequisites	Energy Focus
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 450	4	Manufacturing Control Systems	Winter	EGR 345 or 346	Windmill
EGR 465	4	Computational Fluid Dynamics	Winter	EGR 365	Windmill
EGR 435	3	Math Model 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.