

Study Plan for B.S.E., **INTERDISCIPLINARY ENGINEERING** Major--Mechatronics Emphasis

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

(2018-19 Catalog) (MTH 110 Placement - 5 Year Program)

Student ID#: \_\_\_\_\_

Year	1st Semester: Fall _____			Credits	Grade	Semester Completed	2nd Semester: Winter _____			Credits	Grade	Semester Completed	Semester: S/S _____			Credits	Grade	Semester Completed			
1st Year	MTH	110	Algebra	4	_____	_____	MTH	124	Functions and Models	5	_____	_____	_____	_____	_____	_____	_____				
	*	WRT	150	Writ Strategies	4	_____	_____	*	CHM	115	Chemistry I	4	_____	_____	_____	_____	_____				
		GE	HP	_____	3	_____	_____	@	GE	P & L	PHI 102 - Ethics	3	_____	_____	_____	_____	_____				
	!	EGR	100	Intro to Engrg	1	_____	_____	GE	Arts	_____	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	201	Calculus I	4	_____	_____	*	MTH	202	Calculus II	4	_____	_____	_____	_____	_____				
	*	EGR	106	Intro to Egr Design I	3	_____	_____	*	PHY	230	Physics I	5	_____	_____	_____	_____	_____				
	•	GE	SBS/US	3	_____	_____	*	EGR	107	Intro to Egr Design II	3	_____	_____	_____	_____	_____					
	%	ECO	210 or 211	Micro or Macroeconomics	3	_____	_____	*	STA	220	Statistical Modeling	2	_____	_____	_____	_____					
							*	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			
	*	MTH	203	Calculus III	4	_____	_____	*	MTH	302	Lin Alg & DEQ	4	_____	_____	EGR	290	Engrg Co-op I	3	_____	_____	
	+	PHY	234/1	Engrg Physics	4/5	_____	_____	*	IE	Track	EGR 309 or 223	3/4	_____	_____	*	IE	Track	EGR 312 or 226	3/4	_____	_____
	*	EGR	214	Circuit Analysis I	4	_____	_____	*	EGR	250	Materials Science	4	_____	_____	(Sensor track takes foundation course EGR 226)						
*	EGR	209	Mech & Mach	4	_____	_____	*	IE	Track	EGR 226 or 224	3/4	_____	_____								
	*	EGR	289	Engrg Co-op Prep	1	_____	_____	(Mechanical track takes foundation course EGR 226)													
4th Year	7th Semester: Fall _____			Credits	Grade	Semester Completed	Semester: Winter _____			Credits	Grade	Semester Completed	8th Semester: S/S _____			Credits	Grade	Semester Completed			
	EGR	314	Circuit Analysis II	4	_____	_____	EGR	390	Engrg Co-op II	3	_____	_____	EGR	445	Robotics Systems	4	_____	_____			
IE	Track	EGR 346 or 326	4	_____	_____	EGR	312	Dynamics (Sensor Track ONLY)	3	_____	_____	IE	Track	EGR 409 or 309	4	_____	_____				
EGR	315	Electronic Circuits I	4	_____	_____							EGR	455	Automatic Control	4	_____	_____				
												GE	Issue	_____	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	352	Dynamics and Kinematics (Mechanical Track ONLY)	3	_____	_____	IE	Track	EGR 450 or 436	4	_____	_____	IE	Track	Elective	_____	4	_____	_____			
						GE	Issue	_____	3	_____	_____										
	#	GE	GP	_____	3	_____	GE	GP	_____	3	_____										
		GE	LS	_____	3	_____	GE	LS	_____	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 Issue (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.
- ! Not required, strongly recommended for success

**Mechanical Track:**

- EGR 226 6th semester winter
- EGR 309 6th semester winter
- EGR 312 Spring/Summer Co-op
- EGR 346 7th semester fall
- EGR 409 8th semester spring/summer
- EGR 352 Fall co-op
- EGR 450 9th semester winter

**Mechanical Track Electives:**

- EGR 224 Intro to Digital Systems (4 credits)
- EGR 436 Embedded Systems Interface (4 credits)
- EGR 424 Design of Microcontroller Applications (4 credits)
- EGR 350 Vibrations (4 credits)

**Sensor-Controls Track:**

- EGR 224 6th semester winter
- EGR 223 6th semester winter
- EGR 226 Spring/Summer Co-op
- EGR 326 7th semester fall
- EGR 312 Winter Co-op
- EGR 309 8th semester spring/summer
- EGR 436 9th semester winter

**Sensor-Controls Track Electives:**

- EGR 409 Machine Design II (4 credits)
- EGR 450 Manufacturing Controls (4 credits)
- EGR 352 Dynamics and Kinematics of Machinery (4 credits)
- EGR 424 Design of Microcontroller Applications (4 credits)

**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
- 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.