

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

(2019-20 Catalog) (MTH 122 Placement - 5 Year Program)

Student Name: _____

Student ID#: _____

1st Year	1st Semester: Fall _____			Credits	Grade	Semester Completed	2nd Semester: Winter _____			Credits	Grade	Semester Completed	Semester: S/S _____			Credits	Grade	Semester Completed		
	MTH	122	College Algebra	3	_____	_____	* MTH	201	Calculus I	4	_____	_____	_____			_____	_____	_____		
	MTH	123	Trigonometry	3	_____	_____	* CHM	115	Chemistry I	4	_____	_____	_____			_____	_____	_____		
	* WRT	150	Writ Strategies	4	_____	_____	* EGR	106	Intro to Egr Design I	3	_____	_____	_____			_____	_____	_____		
	GE	HP	_____	3	_____	_____	GE	Arts	_____	3	_____	_____	_____			_____	_____	_____		
! EGR	100	Intro to Engrg	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	202	Calculus II	4	_____	_____	* MTH	203	Calculus III	4	_____	_____	_____			_____	_____	_____		
	* STA	220	Statistical Modeling	2	_____	_____	* PHY	230	Physics I	5	_____	_____	_____			_____	_____	_____		
	* EGR	220	Measure/Data Analysis	1	_____	_____	@ GE	P & L	PHI 102 - Ethics	3	_____	_____	_____			_____	_____	_____		
	* EGR	107	Intro to Egr Design II	3	_____	_____	• GE	SBS/US		3	_____	_____	_____			_____	_____	_____		
% ECO	210 or 211	Micro or Macroeconomics	3	_____	_____															
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/I	Engrg Physics	4/5	_____	_____	* MTH	302	Lin Alg & DEQ	4	_____	_____	EGR 290 Engrg Co-op I			3	_____	_____		
	* EGR	214	Circuit Analysis I	4	_____	_____	* IE	Track	EGR 309 or 223	3/4	_____	_____	* IE Track EGR 312 or 226			3/4	_____	_____		
	* EGR	209	Mech & Mach	4	_____	_____	* EGR	250	Materials Science	4	_____	_____	(Sensor track takes foundation course EGR 226)							
	* EGR	289	Engrg Co-op Prep	1	_____	_____	* IE	Track	EGR 226 or 224	3/4	_____	_____								
(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	3	_____	_____	IE	Track	EGR 409 or 309	4	_____	_____		
	EGR	315	Electronic Circuits I	4	_____	_____	Track ONLY)						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	3	_____	_____	IE	Track	EGR 450 or 436	4	_____	_____	IE	Track	Elective _____	4	_____	_____		
	(Mechanical Track ONLY)						GE	Issue	_____	3	_____	_____								
							# GE	GP	_____	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.