Study Plan for B.S.E., *PRODUCT DESIGN & MANUFACTURING ENGINEERING* Major & Robotics and Control Emphasis **Student Name:** _____

(2019-20 Catalog) ***(MTH 124 Placement - 5 Year Program)*** **Minor:** _____ **Student ID#:** G

		Credits	Grade	Semester Completed
1st Year	**1st Semester: Fall____**			
	MTH 124 Functions & Models	5	_____	_____
*	WRT 150 Writ Strategies	4	_____	_____
^	EGR 100 Intro to Engrg	1	_____	_____
	GE - HP _____	3	_____	_____
^	EGR 180 Intro Engrg Prob Solv	3	_____	_____
	2nd Semester: Winter ____			
*	MTH 201 Calculus I	4	_____	_____
*	CHM 115 Chemistry I	4	_____	_____
*	EGR 106 Intro to Egr Design I	3	_____	_____
	GE - Arts _____	3	_____	_____
	Semester: S/S ____			
	_____	__	_____	_____
	_____	__	_____	_____
	_____	__	_____	_____
2nd Year	**3rd Semester: Fall____**			
*	MTH 202 Calculus II	4	_____	_____
*	EGR 107 Intro to Egr Design II	3	_____	_____
@	GE - P & L (PHI 102 Ethics)	3	_____	_____
•	GE-SBS _____	3	_____	_____
	4th Semester: Winter ____			
*	MTH 203 Calculus III	4	_____	_____
*	STA 220 Statistical Modeling	2	_____	_____
*	EGR 220 Measure/Data Analysis	1	_____	_____
*	PHY 230 Physics I	5	_____	_____
#	GE - GP _____	3	_____	_____
	Semester: S/S ____			
	_____	__	_____	_____
	_____	__	_____	_____
				_____
3rd Year	**5th Semester: Fall____**			
+ *	PHY 234/1 Physics II	4/5	_____	_____
*	EGR 209 Mech & Mach	4	_____	_____
*	EGR 226 MicroCtrl Pgm Appl	4	_____	_____
*	EGR 289 Engrg Co-op Prep	1	_____	_____
	6th Semester: Winter ____			
*	MTH 302 Lin Alg & DEQ	4	_____	_____
*	EGR 309 Mach Design I	4	_____	_____
*	EGR 250 Mat Sci & Engrg	4	_____	_____
*	EGR 214 Circuit Analysis I	4	_____	_____
	Semester: S/S ____			
	EGR 290 Engrg Co-op I	3	_____	_____
4th Year	**7th Semester: Fall____**			
	EGR 301 Fund Prod Des	4	_____	_____
	EGR 345 Dyn Sys Mod	4	_____	_____
	EGR 367 Mfg Processes	4	_____	_____
	GE - Issue _____	3	_____	_____
	Semester: Winter ____			
	EGR 390 Engrg Co-op II	3	_____	_____
	GE - LS _____	3	_____	_____
	8th Semester: S/S ____			
	EGR 362 Thermo-Fluid Sys	4	_____	_____
	EGR 440 Prod'n Models	3	_____	_____
	EGR 445 Robotics Sys	4	_____	_____
%	ECO 210/211 Economics	3	_____	_____
5th Year	**Semester: Fall____**			
	EGR 490 Engrg Co-op III	3	_____	_____
	GE - Issue _____	3	_____	_____
	9th Semester: Winter ____			
	EGR 450 Mfg Controls	4	_____	_____
	EGR 485 Sr Project I	1	_____	_____
$	PDM Elec _____	3/4	_____	_____
$	PDM Elec _____	3/4	_____	_____
	GE - US _____	3	_____	_____
	10th Semester: S/S ____			
	EGR 486 Sr Project II	2	_____	_____
	EGR 409 Mach Design II	4	_____	_____

PCEC Student Services: (616)331-6025

* Engineering Foundation course

\+ Students may enroll in PHY 231 instead of PHY 234

^ Not required, but strongly recommended for success. Students are advised to take ***either*** EGR 100 ***or*** EGR 180.

• 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). Consider taking PHI 102 as an SWS

% ECO 210 or 211 is required in the engineering curriculum. Also fulfills one SBS Gen Ed requirement.

$ **Electives (2 required)**
EGR 312 Dynamics
EGR 352 Kinematics and Dynamics of Machinery
EGR 405 Materials Failure Analysis
EGR 441 Engineering Economics, Quality Control and Manufacturing Operations

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.