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

(2019-20 Catalog) ***(MTH 123 Placement - 5 Year Program)*** **Minor:** _____ **Student ID#:** *G*

	1st Semester: Fall____	Credits	Grade	Semester Completed
1st Year	MTH 123 Trigonometry	3		
	* WRT 150 Writ Strategies	4		
	^ EGR 100 Intro to Engrg	1		
	GE - HP _____	3		
	GE - Arts _____	3		

	2nd Semester: Winter ____	Credits	Grade	Semester Completed
	* MTH 201 Calculus I	4		
	* CHM 115 Chemistry I	4		
	* EGR 106 Intro to Egr Design I	3		
	• GE-SBS _____	3		

	Semester: S/S ____	Credits	Grade	Semester Completed
	_____	__		
	_____	__		
	_____	__		

	3rd Semester: Fall____	Credits	Grade	Semester Completed
2nd Year	* MTH 202 Calculus II	4		
	* EGR 107 Intro to Egr Design II	3		
	@ GE - P & L (PHI 102 Ethics)	3		
	GE - US _____	3		

	4th Semester: Winter ____	Credits	Grade	Semester Completed
	* 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 ____	Credits	Grade	Semester Completed
	_____	__		
	_____	__		

	5th Semester: Fall____	Credits	Grade	Semester Completed
3rd Year	+ * 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 ____	Credits	Grade	Semester Completed
	* 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 ____	Credits	Grade	Semester Completed
	EGR 290 Engrg Co-op I	3		

	7th Semester: Fall____	Credits	Grade	Semester Completed
4th Year	EGR 301 Fund Prod Des	4		
	EGR 345 Dyn Sys Mod	4		
	EGR 367 Mfg Processes	4		
	GE - Issue _____	3		

	Semester: Winter ____	Credits	Grade	Semester Completed
	EGR 390 Engrg Co-op II (SWS)	3		

	8th Semester: S/S ____	Credits	Grade	Semester Completed
	EGR 362 Thermo-Fluid Sys	4		
	EGR 329 Intro to FEA	3		
	EGR 405 Mat Analysis	3		
	% ECO 210/211 Economics	3		

	Semester: Fall____	Credits	Grade	Semester Completed
5th Year	EGR 490 Engrg Co-op III	3		
	GE - Issue _____	3		

	9th Semester: Winter ____	Credits	Grade	Semester Completed
	EGR 401 Adv Prod Design	4		
	EGR 485 Sr Project I	1		
	$ PDM Elec _____	3/4		
	$ PDM Elec _____	3/4		

	10th Semester: S/S ____	Credits	Grade	Semester Completed
	EGR 486 Sr Project II	2		
	EGR 440 Prod'n Models	3		
	GE - LS _____	3		

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.

• Consider taking a course that doubles as SBS and US (See Gen Ed guide for selections)

\# Consider taking a course that doubles as WP 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 (Choose 2)**

EGR 311 Intermediate CAD/CAM
EGR 326 Embedded System Design
EGR 403 Medical Device Design
EGR 404 Polymer Science and Processing
EGR 409 Machine Design II
EGR 441 Engineering Economics, Quality Control, and Manufacturing Operations
EGR 453 Biomedical Materials
STA 315 Design of Experiments

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.