MARIAN UNIVERSITY
Indianapolis ®

Name_____
Student ID_____
Date_____

2020-21 DDEP Math/Mechanical Engineering Checklist

GENERAL EDUCATION

I. Foundational Intellectual Skills (12-13 hours)
____FYS110 First Year Seminar
____ENG112 Writing and Community
____COM101 Public Speaking
____Mathematics (MAT230)

II. Knowledge Acquisition (19-20 hours)
____Science with lab (CHE151)
____HUM210 Meaning Through Culture
____PHL130 Human Nature & Person
____Foreign Language

One course from each group A and B:
Group A
____ EGR327 Engineering Economics
____ ECN200 Introductory Economics
Group B
____PSY101 General Psychology
____PSY220 Human Growth and Development
____GST200 Introduction to Gender Studies
____SOC101 Introduction to Sociology
____SOC175 Introduction to Anthropology

III. Faith, Ethics, and Foundation (6 hours)
____THL105 Introduction to Theology
____Second Approved THL

IV. Greater Depth Cluster
Fulfilled by major requirements

Required Supporting Courses
____ TCM360 Communication in Engineering Practice
____ PHY201 Mechanics I
____PHY202 Heat, Electricity, and Optics

Total Earned General Education Hours_____

MATHEMATICS MAJOR REQUIREMENTS

____MAT 230 Calculus I	4
____MAT 231 Calculus II	4
____MAT 250 Introduction to Proofs	3
____MAT 305 Calculus III	4
____MAT 310 Linear Algebra	3
____MAT 315 Differential Equations	3
____MAT 322 Statistical Inference & Data Analysis I	3
____MAT 323 Statistical Inference & Data Analysis II	3
____MAT 350 Numerical Methods	3
____MAT 425 Mathematical Modeling	3
____MAT 450 Real Analysis	3
____MAT 490 Mathematics Seminar	3
____CST 171 Procedural Programming	4
____CST 200 Object Oriented Programming	4

MECHANICAL ENGINEERING MAJOR REQUIREMENTS

____EGR195 Intro to the Engineering Profession	1
____EGR196 Intro to Engineering	3
____ECE204 Intro to Electrical & Electronic Circuits	4
____ME200 Thermodynamics	3
____ME225 ME Lab I	1
____ME250 ME Lab II	1
____ME262 Engr. Design, Ethics & Entrepreneurship	2
____ME270 Basic Mechanics I	3
____ME272 Mechanics of Materials	3
____ME274 Base Mechanics II	3
____ME310 Fluid Mechanics	3
____ME314 Heat and Mass Transfer	3
____ME325 ME Lab III	1
____ME330 Modeling & Analysis of Dynamic Systems	3
____ME340 Dynamic Systems & Measurements	3
____ME344 Intro to Engineering Materials	3
____ME350 ME Lab IV	1
____ME372 Design of Mechanisms	2
____ME406 Robust Design	1
____ME414 or 497 Thermal Syst or Machine Design	3
____ME425 ME Lab V	1
____ME462 Capstone Design	3
____ME482 Control Systems Analysis & Design	3
____Technical Elective	3
____Technical Elective	3
____Technical Elective	3

Total Earned Major Hours_____

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2020-21 Dual-Degree Engineering Major
B.S. Mathematics with concentration in Applied Math
& B.S. Mechanical Engineering
Sample Five-Year Plan

Year One					
Fall Semester			**Spring Semester**		
Requirement Category	**Course**	**Credit Hours**	**Requirement Category**	**Course**	**Credit Hours**
First Year Seminar	FYS 110	3	Major	MAT 231	4
Major	MAT 230	4	Major	CST171	3
Major	CHE151	4	Major	PHY201	4
Major	EGR196	3	General Education	ENG 112	3
Major	EGR195	1	General Education	THL105	3
General Education	COM101	3			
Semester Hours	**18**		**Semester Hours**	**17**	
Cumulative Hours	**18**		**Cumulative Hours**	**35**	
Year Two					
Fall Semester			**Spring Semester**		
Requirement Category	**Course**	**Credit Hours**	**Requirement Category**	**Course**	**Credit Hours**
Major	MAT 305	4	Major	MAT250	3
Major	PHY202	4	Major	MAT315	3
Major	ME200	3	Major	ECE204	4
Major	ME270	3	Major	ME274	3
Major	CST270	3	General Education	EGR327	3
Major	MAT210	1			
Semester Hours	**18**		**Semester Hours**	**16**	
Cumulative Hours	**53**		**Cumulative Hours**	**69**	
Year Three					
Fall Semester			**Spring Semester**		
Requirement Category	**Course**	**Credit Hours**	**Requirement Category**	**Course**	**Credit Hours**
Major	*ME330*	2	Major	MAT323	3
Major	*ME225/262*	3	*Major*	*ME340*	3
Major	*ME310/325*	4	*Major*	*ME272*	3
Major	MAT310	4	Major	MAT350	3
Major	MAT322	3	General Education	Second THL	3
Major	*ME 250*	*1*	*Major*	*ME 350*	*1*
Semester Hours	**18**		**Semester Hours**	**16**	
Cumulative Hours	**86**		**Cumulative Hours**	**102**	
Year Four					
Fall Semester			**Spring Semester**		
Requirement Category	**Course**	**Credit Hours**	**Requirement Category**	**Course**	**Credit Hours**
Major	*ME314*	3	*Major*	*ME414/497*	3
Major	*ME344*	3	*General Education*	*TCM360*	2
Major	*ME372*	3	General Education	GST/PSY/SOC	3
Major	*ME425*	1	Major	MAT450	3
Major	MAT425	3	*Major*	*Technical Elective*	*3*
Semester Hours	**13**		**Semester Hours**	**14**	

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Cumulative Hours	**115**		**Cumulative Hours**	**129**	
Year Five					
Fall Semester			**Spring Semester**		
Requirement Category	**Course**	**Credit Hours**	**Requirement Category**	**Course**	**Credit Hours**
Major	MAT490	3	*Major*	*Technical Elective*	3
General Education	Foreign Language	4	*Major*	*ME406*	*1*
Major	*ME482*	*3*	*Major*	*ME462*	*3*
General Education	HUM210	3	*Major*	*Technical Elective*	*3*
			General Education	PHL130	3
Semester Hours	**13**		**Semester Hours**	**13**	
Cumulative Hours	**142**		**Cumulative Hours**	**155**	

*A minimum 2.0 cumulative GPA and a minimum 2.0 major GPA are required for graduation, so monitor your GPA closely. To meet degree requirements, some disciplines require higher grades in each course or a higher cumulative GPA

This plan is only a sample and will vary by student and course availability.

Courses listed in italics indicate courses taken at IUPUI.