Departments of Mechanical Engineering and Physics ~ North Dakota State University

Mechanical Engineering and Physics Dual Major Curriculum

Name: _____ ID: _____ Advisor: _____

NO GRADES LESS THAN A "C" WILL BE ACCEPTED TO FULFILL A COURSE REQUIREMENT

	FALL				SPRING				Gen. Ed. Electives [category]		
	Course	Course Title	Cr.	Gr.	Course	Course Title	Cr.	Gr.	Humanities/Fine Arts [A]		
BASIC	MATH 165	Calculus I*	4		MATH 166	Calculus II	4		*		
	ENGL 110 [C]	College Composition I*	3		ENGL 120	College Composition II*	3		Social/Behavioral Sciences [B]		
	CHEM 121	General Chemistry I*	3		CHEM 122	General Chemistry II*	3		*		
	ME 111[1]	Intro to Mechanical Engr	2		ME 212	Fund. Visual Communications	3		*		
	PHYS 171	Introductory Projects in Physics	1		ME 221	Engineering Mechanics I	3		*Global Perspective [G]		
	Hum. Elect. [A]	*	3		Wellness [W]	*	2		*Cultural Diversity [D]		
			16				18		Ethics Requirement		
	MATH 129	Basic Linear Algebra	3		MATH 266	Intro/Differential Equations	3		Extra Courses	Cr.	Gr.
	MATH 265	Calculus III	4		COMM 110	Fundamentals of Public Speaking*	3				
	IME 330	Manufacturing Processes	3		PHYS 252	University Physics II*	4				
	ME 222	Engineering Mechanics II	3		PHYS 252L	University Physics Lab II*	1				
	ME 223	Mechanics of Materials	3		ME 213	Modeling of Engineering Systems	3				
					ME 351	Thermodynamics I	3				
			16		☐ Dual Degree Declaration Submitted		17				
PROFESSIONAL	ENGL 321	Writing in the Technical Professions*	3		ECE 301	Electrical Engineering I	3				
	ME 331	Materials Science & Engineering	4		ME 361	Product Design & Development	3				
	ME 352	Fluid Dynamics	3		ME 442	Machine Design I	3				
	TE: PHYS 355	Classical Mechanics	3		ME 454	Heat & Mass Transfer	3				
	PHYS 411	Optics for Scientists and Engineers	3		TE: PHYS 350	Modern Physics	3				
	PHYS 411L	Optics for Scientists and Eng. Lab	1		TE: PHYS 361	Electromagnetic Theory	3				
			17				18				
	ECE 306	Electrical Engineering Lab	1		ME 412	Engineering Measurements	3				
	ME 443	Machine Design II	3		ME 462	Design Project II	3				
	ME 457	Thermal Systems Laboratory	3		ME 421	Theory of Vibrations	3		Required Credits for Graduation		128
	ME 461	Design Project I	3		ENGR 327 [A/D]	Ethics, Engr and Technology	3		Total Major Credits Earned**		136
	PHYS 485	Quantum Mechanics I	3		Soc. Sci. Elect. [B]	*	3				
	Soc. Sci. Elect. [B]	*	3		Physics Elective	^	3				
			16				18		GPA		
									ENGR GPA		

Key:

"T" indicates requirement satisfied with transfer course.

"IP" indicates a course currently in progress.

* Course fulfills a general education requirement.

[ ] General education category - see academic bulletin for details.

GPA:

Cumulative GPA for basic program entry: 2.7

Engr GPA for professional program entry: 2.7

Cumulative GPA for graduation: 2.5

BS: _____

AUDIT: _____

**A minimum of 2 credits for Math 129 is acceptable to satisfy degree requirements.

[C] Students w/ACT sub-test score of 18+ (or SAT 430+) are advised to enroll in ENGL 120. A passing grade will be awarded for 110 by completing 120 with a "C" or better.

[1]Students who have earned ≥ 30 transfer credits are not required to take ME 111