2019-2020
B.S in MECHANICAL ENGINEERING

GRACE CORE (39 credits; 2 APLs)

The Grace Core is designed around four essential relationships. Though all courses engage most relationships, courses are organized according to the relationship that is their primary focus.

Relationship to God			
BIB 1050	Exploring the Bible	3	
@ BIB 2010	Scripture and Interpretation	3	
@ BIB 3300	Essential Doctrinal Themes	3	
Relationship to Self			
FYE 1000	Freshman Foundations	3	
ECN 3000	Consumer Economics	3	
@ PHI 3010	Christianity and Critical Thinking	3	
Relationship to Others			
COM 1100	Public Speaking	3	
ENG 1100	Effective Writing	3	
PSY 1200	Essentials in Behavioral Science	3	
Relationship to the World and Environment			
HIS 1380	Contemporary America and the World	3	
HUM 2000	Global Perspectives	3	
HUM 2010-30	Cross-cultural Field Experience (2 APL)	0	
HUM 2100	Creative Arts and Culture	3	
SCI 2030	Faith, Science, and Reason	3	

ADDITIONAL GENERAL EDUCATION--B.S. DEGREE (7 credits)

Satisfies B.S. Degree		
MAT 3130	Linear Algebra	3
CHM 1610	General Chemistry I	4
CHM 1620	General Chemistry I Lab (1 APL)	0

THE MAJOR (91 credits; 12 APLs)

MATH AND SCIENCE REQUIREMENTS (25 Credits)

MAT 1230	Calculus I	4
MAT 1240	Calculus I Lab (1 APL)	0
@ MAT 1250	Calculus II	4
@ MAT 1260	Calculus II Lab (1 APL)	0
@ MAT 2250	Calculus III	3
@ MAT 2280	Differential Equations	3
PHY 2240	University Physics I	4
PHY 2250	University Physics I Lab (1 APL)	0
@ PHY 2260	University Physics II	4
@ PHY 2270	University Physics II Lab (1 APL)	0
MAT 3200	Probability and Statistics	3

ENGINEERING SCIENCE REQUIREMENTS (24 Credits)

MEG 2100	Statics & Mechanic of Materials	4
MEG 2200	Dynamics	3
MEG 2300	Engineering Materials	3
MEG 2400	Electrical Science (Circuits)	4
MEG 2500	Thermodynamics	4
MEG 2600	Heat Transfer	3
MEG 2700	Fluid Mechanics	3

ENGINEERING FUNDAMENTALS (36 Credits)

MEG 1200	Intro to Mechanical Engineering	4
MEG 1900	Engineering Modeling & Tolerancing	3
MEG 1400	Intro to Programming MATLAB	2
MEG 3400	Intro to Finite Element Analysis	3
MEG 2900	Machine Component Design	3
MEG 2800	Kinematic & Linkage Design	3
MEG 3300	Advanced Manufacturing Processes	2
MEG 3200	Control Systems	3
MEG 3100	Experimental Methods (2 APL)	3
MEG 1950	Industrial Machining & Measurements	3
MEG 4100	Senior Engineering Project (6 APL)	6
MEG 2000	Engineering Internship	1
MEG 1000	Engineering Service	0

Technical Electives (6 Credits)

Choose six additional credits of MEG courses		6

GRADUATION REQUIREMENTS

To receive a degree, each student must satisfy checksheet requirements, earn 136 credit hours, fulfill 12 credits of Applied Learning, have earned a grade of C- or better in major courses while maintaining a 2.2 GPA in major courses, and a GPA of 2.0 overall. It is the student's responsibility to work with his/her advisor and monitor progress toward these goals.

It is strongly encouraged that a minimum of 6 Applied Learning credits be earned in experiential education taking place outside the traditional classroom setting.

IS A MINOR REQUIRED WITH THIS MAJOR? NO

CHECKSHEET TOTAL CREDITS: 136
CHECKSHEET TOTAL APL: 14
TOTAL CREDITS NEEDED TO GRADUATE: 136 (14 APLs)

† Indicates a course taught by a partner college/university.

@ Indicates a course with prerequisites. Please review catalog for prerequisites