Engineering (B.S.) – Mechanical Engineering – Study Abroad

2022-2023 Academic Catalog, Bachelor of Science – Engineering, Mechanical Engineering Track, Global Emphasis: Study Abroad

Academic Core for B.S. — 44 Hours

CHRISTIAN STUDIES		6
CSBS 1311	Engaging the Old Testament	3
CSBS 1312	Engaging the New Testament	3

ENGLISH		9
ENGL 1321	Rhetoric & Composition I	3
ENGL 1322	Rhetoric & Composition II	3
ENGL	Literature	3

A grade of a "C" or higher is required in ENGL 1321 and ENGL 1322.

EXERCISE & SPORT SCIENCE		2
EXAC	Activity Course	1
EXAC	Activity Course	1

FINE ARTS – SELECT ONE		3
ARTS 1350	Art Appreciation	3
COMM 2335	Film Appreciation	3
FINA 2330	Exploring the Fine Arts	3
MUSI 1340	Music Appreciation	3
THEA 2350	Introduction to the Theatre	3

WORLD CULTURES – SELECT ONE		3
ARTS 2354	World Art	3
EXSS 2353	Lifespan Nutrition	3
HIST 1311	History of World Civilizations to 1500	3
HIST 1312	History of World Civilizations since 1500	3
MUSI 2358	World Music	3
PHIL 2315	Introduction to Philosophy	3

LAB SCIENCE		8
PHYS 2421	Physics and Calculus I	4
PHYS 2422	Physics and Calculus II	4

PUBLIC SPEAKING		3
COMM 1320	Public Speaking	3

MATHEMATICS		3
MATH 1330	Calculus I	3

SOCIAL SCIENCE – SELECT ONE		3
BECO 2310	Principles of Economics	3
PSYC 1301	General Psychology	3
PSYC 2399	Child and Adolescent Development	3
SOCI 1311	Introduction to Sociology	3
SOCW 2311	Introduction to Social Work	3

US HISTORY OR US GOVERNMENT – SELECT ONE		3
HIST 2311	American History to 1877	3
HIST 2312	American History since 1877	3
POLS 2310	State and Federal Government I	3
POLS 2311	State and Federal Government II	3

RESEARCH METHODS OR INTERNSHIP		0
ENGR 4090		0

FRESHMAN SEMINAR		1
UMHB 1101	Freshman Seminar	1

GLOBAL EMPHASIS – STUDY ABROAD		3
	Study Abroad	3

CHAPEL – 1 to 4 credits		
UMHB 1002	Chapel	

Fine Arts Experience – 2 to 8 credits		
UMHB 1005	Fine Arts Experience	

Engineering

B.S. ENGINEERING MAJOR REQUIRED COURSES		28
ENGR 2311	Numerical Algorithms	3
ENGR 2320	Engineering Mechanics: Statics	3
ENGR 2321	Engineering Mechanics: Dynamics	3
ENGR 2130	Electric Circuits Laboratory	1
ENGR 2330	Electrical Circuit Theory	3
ENGR 2345	Engineering Thermodynamics	3
ENGR 3160	Engineering Design: Bio-Inspired Design	1
ENGR 3260	Engineering Design: Engineering for Humanity	2
ENGR 4370	Computer Science & Engineering Ethics Seminar	3
ENGR 4380	Capstone Design I	3
ENGR 4381	Capstone Design II	3

MECHANICAL ENGINEERING TRACK		20
ENGR 3130	Electronics Laboratory	1
ENGR 3315	Mechanical Design	3
ENGR 3320	Mechanics of Materials	3
ENGR 3346	Advanced Thermodynamics	3
ENGR 4150	Fluid Mechanics Laboratory	1
ENGR 4340	Principles of Heat Transfer	3
ENGR 4350	Fluid Mechanics	3
ENGR 3381	Introduction to Material Science	3

ENGINEERING UPPER-LEVEL ELECTIVES – SELECT TWO		6
CISC 3321	Object Oriented Development	3
ENGR 3365	Introduction to Optics	3
ENGR 4310	Vibrations	3
ENGR 4320	System Dynamics and Control	3
ENGR 4325	Radio Frequency Circuit	3
ENGR 4365	Mechatronics	3
ENGR 4391	Special Topics	3

REQUIRED SUPPORT COURSES		25
CISC 2330	Introduction to Object-Oriented Programming	3
ENGR 1310	Introduction to Engineering	3
ENGR 1320	Introduction to Engineering Fundamentals	3
ENGR 2010	AutoCAD Proficiency	0
ENGR 4090	Practical Experience	0
MATH 2320	Linear Algebra	3
MATH 2330	Calculus II	3
MATH 3325	Ordinary Differential Equations	3
MATH 3330	Calculus III	3
CHEM 1410	General Chemistry I	4

Total Hours

Academic Core for B.S.	44
Global Emphasis – Study Abroad	3
B.S. Engineering Major Required Courses	28
Mechanical Engineering Track	20
Engineering Upper Level Electives	6
Required Support Courses	25
Total hours required for graduation	**126**

Additional Graduation Requirements

Minimum Upper Level hours	36
Minimum hours taken at UMHB	30
Minimum Upper Level hours taken at UMHB	24
Minimum cumulative GPA	2.0