

Engineering (B.S.) – Electrical Engineering

2022-2023 Academic Catalog, Bachelor of Science – Engineering, Electrical Engineering Track

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
<i>A grade of a "C" or higher is required in ENGL 1321 and ENGL 1322.</i>		
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
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
ELECTRICAL ENGINEERING TRACK		20
ENGR 3130	Electronics Laboratory	1
ENGR 3137	Digital Logic Design Laboratory	1
ENGR 3330	Electronics	3
ENGR 3337	Digital Logic Design	3
ENGR 4312	Digital Signal Processing	3
ENGR 4315	Power Systems	3
ENGR 4330	Engineering Electromagnetics	3
ENGR 4360	Signals and Systems	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
B.S. Engineering Major Required Courses		28
Electrical Engineering Track		20
Engineering Upper Level Electives		6
Required Support Courses		25
Total hours required for graduation		123
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