

# Engineering (B.S.) – Electrical Engineering – Foreign Language

2022-2023 Academic Catalog, Bachelor of Science – Engineering, Electrical Engineering Track, Global Emphasis: Foreign Language

## 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
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### **MATHEMATICS** **3**

MATH 1330	Calculus I	3
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### **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
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### **FRESHMAN SEMINAR** **1**

UMHB 1101	Freshman Seminar	1
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### **GLOBAL EMPHASIS – FOREIGN LANGUAGE** **8**

8 credit hours (2 semesters or the equivalent) in one language 8

### **CHAPEL – 1 to 4 credits**

UMHB 1002	Chapel	
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### **Fine Arts Experience – 2 to 8 credits**

UMHB 1005	Fine Arts Experience	
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## 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
Global Emphasis – Foreign Language	8
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 131**

### **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