

# Engineering (B.S.) – Mechanical Engineering

2023-2024 Academic Catalog, Bachelor of Science – Engineering, Mechanical Engineering Track

<b>Academic Core for B.S.</b>		<b>45 Hours</b>	<b>Engineering</b>	<b>81 Hours</b>	
<b>CHRISTIAN STUDIES</b>		<b>6</b>	<b>B.S. ENGINEERING MAJOR REQUIRED COURSES</b>	<b>28</b>	
CSBS 1311	Engaging the Old Testament	3	ENGR 2311	Numerical Algorithms	3
CSBS 1312	Engaging the New Testament	3	ENGR 2320	Engineering Mechanics: Statics	3
<b>ENGLISH</b>		<b>9</b>	ENGR 2321	Engineering Mechanics: Dynamics	3
ENGL 1321	Rhetoric & Composition I	3	ENGR 2130	Electric Circuits Laboratory	1
ENGL 1322	Rhetoric & Composition II	3	ENGR 2330	Electrical Circuit Theory	3
ENGL	Literature	3	ENGR 2345	Engineering Thermodynamics	3
<i>A grade of a "C" or higher is required in ENGL 1321 and ENGL 1322.</i>			ENGR 3360	Engineering Design: Engineering for Humanity	3
<b>EXERCISE &amp; SPORT SCIENCE – SELECT TWO DIFFERENT COURSES</b>		<b>2</b>	ENGR 4370	Computer Science & Engineering Ethics Seminar	3
EXAC	Activity Course	1	ENGR 4380	Capstone Design I	3
EXAC	Activity Course	1	ENGR 4381	Capstone Design II	3
<b>FINE ARTS – SELECT ONE</b>		<b>3</b>	<b>MECHANICAL ENGINEERING TRACK</b>		<b>20</b>
ARTS 1350	Art Appreciation	3	ENGR 3130	Electronics Laboratory	1
COMM 2335	Film Appreciation	3	ENGR 3315	Mechanical Design	3
FINA 2330	Exploring the Fine Arts	3	ENGR 3320	Mechanics of Materials	3
MUSI 1340	Music Appreciation	3	ENGR 3346	Advanced Thermodynamics	3
THEA 2350	Introduction to the Theatre	3	ENGR 4150	Fluid Mechanics Laboratory	1
<b>WORLD CULTURES – SELECT ONE</b>		<b>3</b>	ENGR 4340	Principles of Heat Transfer	3
ARTS 2354	World Art	3	ENGR 4350	Fluid Mechanics	3
EXSS 2353	Lifespan Nutrition	3	ENGR 3381	Introduction to Material Science	3
GLBL 2310	Cultural Immersion	3	<b>ENGINEERING UPPER-LEVEL ELECTIVES – SELECT TWO</b>		<b>6</b>
HIST 1311	History of World Civilizations to 1500	3	CISC 3321	Object Oriented Development	3
HIST 1312	History of World Civilizations since 1500	3	ENGR 3365	Introduction to Optics	3
MUSI 2358	World Music	3	ENGR 4310	Vibrations	3
PHIL 2315	Introduction to Philosophy	3	ENGR 4320	System Dynamics and Control	3
<b>LAB SCIENCE</b>		<b>8</b>	ENGR 4325	Radio Frequency Circuit	3
PHYS 2421	Physics and Calculus I	4	ENGR 4335	Introduction to Aerospace Engineering	3
PHYS 2422	Physics and Calculus II	4	ENGR 4365	Mechatronics	3
<b>PUBLIC SPEAKING</b>		<b>3</b>	ENGR 4391	Special Topics	3
COMM 1320	Public Speaking	3	<b>REQUIRED SUPPORT COURSES</b>		<b>27</b>
<b>MATHEMATICS</b>		<b>4</b>	CISC 2330	Introduction to Object-Oriented Programming	3
MATH 1430	Calculus I	4	ENGR 1310	Introduction to Engineering	3
<b>SOCIAL SCIENCE – SELECT ONE</b>		<b>3</b>	ENGR 1320	Introduction to Engineering Fundamentals	3
BECO 2310	Principles of Economics	3	ENGR 2010	AutoCAD Proficiency	0
PSYC 1301	General Psychology	3	ENGR 4090	Practical Experience	0
PSYC 2399	Child and Adolescent Development	3	MATH 2320	Linear Algebra	3
SOCI 1311	Introduction to Sociology	3	MATH 2430	Calculus II	4
SOCW 2311	Introduction to Social Work	3	MATH 3325	Ordinary Differential Equations	3
<b>US HISTORY OR US GOVERNMENT – SELECT ONE</b>		<b>3</b>	MATH 3430	Calculus III	4
HIST 2311	American History to 1877	3	CHEM 1410	General Chemistry I	4
HIST 2312	American History since 1877	3	<b>Total Hours</b>		
POLS 2305	United States Government	3	Academic Core for B.S.	45	
POLS 2306	Texas State and Local Government	3	B.S. Engineering Major Required Courses	28	
<b>RESEARCH METHODS OR INTERNSHIP</b>		<b>0</b>	Mechanical Engineering Track	20	
ENGR 4090		0	Engineering Upper Level Electives	6	
<b>FRESHMAN SEMINAR</b>		<b>1</b>	Required Support Courses	27	
UMHB 1101	Freshman Seminar	1	<b>Total hours required for graduation</b>	<b>126</b>	
<b>CHAPEL – 1 to 4 credits</b>			<b>Additional Graduation Requirements</b>		
UMHB 1002	Chapel		Minimum Upper Level hours	36	
<b>Fine Arts Experience – 2 to 8 credits</b>			Minimum hours taken at UMHB	30	
UMHB 1005	Fine Arts Experience		Minimum Upper Level hours taken at UMHB	24	
			Minimum cumulative GPA	2.0	