Computer Science (B.S.) – Data Analysis and Visualization – Study Abroad

2024-2025 Academic Catalog, Bachelor of Science – Computer Science, Data Analysis and Visualization Specialization, Global Emphasis: Study Abroad

Academic Core for B.S.   48 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 – SELECT TWO DIFFERENT COURSES — 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	Theatre Appreciation	3

WORLD CULTURES – SELECT ONE — 3

ARTS 2354	World Art	3
EXSS 2353	Lifespan Nutrition	3
GLBL 2310	Cultural Immersion	3
HIST 1311	History of World Civilizations to 1500	3
HIST 1312	History of World Civilizations since 1500	3
HUMA 2355	Foundations of the Humanities	3
MUSI 2358	World Music	3
PHIL 2315	Introduction to Philosophy	3

LAB SCIENCE — 8

	Laboratory Science Courses	8

PUBLIC SPEAKING — 3

COMM 1320	Public Speaking	3

MATHEMATICS — 4

MATH 1430	Calculus I	4

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 2305	United States Government	3
POLS 2306	Texas State and Local Government	3

RESEARCH METHODS OR INTERNSHIP

Practical Experience – 300 Hrs. of Practical Work		-

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	

Computer Science   48 Hours

B.S. COMPUTER SCIENCE MAJOR REQUIRED COURSES — 27

CISC 2315	Discrete Structures of Computer & Eng. Sciences	3
CISC 2330	Introduction to Object-Oriented Programming	3
CISC 3321	Object Oriented Development	3
CISC 3322	Web Development	3
CISC 3323	Algorithms & Data Structures	3
CISC 3325	Telecommunications & Networks	3
CISC 3341	Operating Systems	3
CISC 3360	Computer Organization & Architecture	3
CISC 4327	Database Theory and Application	3
Practical Experience – 300 Hrs. of Practical Work		-

REQUIRED SUPPORT COURSES — 12

CISC 1305	Introduction to Computing	3
CISC 4370	Computer Science & Engineering Ethics Seminar	3
MATH 2320	Linear Algebra	3
WRIT 3344	Scientific Writing	3

DATA ANALYSIS AND VIS. SPECIALIZATION – SELECT THREE — 9

CISC 4324	Network Security	3
CISC 4325	Network Security II: Cryptography	3
CISC 4328	Computer Security	3
CISC 4310	Artificial Intelligence	3
CISC 4335	Big Data	3
CISC 4340	Data Analysis and Visualization	3
CISC 4347	Graphics Programming	3

Electives   24 Hours

ELECTIVES — 24

You need 24 additional hours to reach your minimum 120 required hrs.

Total Hours

Academic Core for B.S.	45
Global Emphasis – Study Abroad	3
B.S. Computer Science Major Required Courses	27
Required Support Courses	12
Data Analysis and Visualization Specialization	9
Electives	24
Total hours required for graduation	**120**

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