

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

2022-2023 Academic Catalog, Bachelor of Science – Computer Science, Data Analysis and Visualization Specialization, 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**

Laboratory Science Courses	8
----------------------------	---

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

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

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 **25 Hours**

Total Hours

Academic Core for B.S.	44
Global Emphasis – Study Abroad	3
B.S. Computer Science Major Required Courses	27
Required Support Courses	12
Data Analysis and Visualization Specialization	9
Electives	25
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