CATALOG YEAR 2023-2024

ACADEMIC MAP

Cyber Security and Infrastructure
Computer Science, Bachelor of Science

TEXAS A&M UNIVERSITY CORPUS CHRISTI

FINISH IN 4

First Year

Fall		Hours
UNIV 1101	University Seminar I	1
ENGL 1301	Writing and Rhetoric I	3
COSC 1435	Introduction to Problem Solving with Computers I	4
COSC 3100	Skills for Computing Professionals I	1
MATH 2413	Calculus I	4
Social and Behavioral Sciences Core Requirement		3
	Hours	**16**

Spring		
UNIV 1102	University Seminar II	1
ENGL 1302 or COMM 1311	Writing and Rhetoric II or Foundation of Communication	3
COSC 1436	Introduction to Problem Solving with Computers II	4
COSC 2348	Introduction to Scripting	3
MATH 2305	Discrete Mathematics I	3
	Hours	**14**

Second Year

Fall		
COSC 2334	Computer Architecture	3
COSC 2437	Data Structures	4
COSC 2465	Linux Systems	4
POLS 2305	U.S. Government and Politics	3
Creative Arts Core Requirement		3
	Hours	**17**

Spring		
COSC 2466	Network Systems	4
COSC 3336	Introduction to Database Systems	3
POLS 2306	State and Local Government	3
American History Core Requirement		3
Component Area Option Core Requirement		3
	Hours	**16**

Third Year

Fall		
COSC 3351	Internet Programming	3
ENGL 3310	Technical and Professional Writing for Computer Science	3
COSC 4365	Windows Security	3
MATH 3342 or MATH 3345	Applied Probability and Statistics or Statistical Modeling and Data Analysis	3
COSC 3346	Operating Systems	3
	Hours	**15**

Spring		
COSC 3370	Software Engineering	3
COSC 3372	Network Security	3
COSC 4310	Digital Forensics	3
Component Area Option Core Requirement		3
Approved Upper-Division COSC Course		3
	Hours	**15**

Fourth Year

Fall		
COSC 4367	Firewall and Intrusion Detection Systems	3
COSC 3474	Cyber Defense I	4
COSC 4100	Skills for Computing Professionals II	1
American History Core Requirement		3
Life & Physical Science Core Requirement		3
	Hours	**14**

Spring		
COSC 4354	Senior Capstone Project	3
COSC 4368	Penetration Testing	3
Approved Upper-Division COSC Course		3
Life & Physical Science Core Requirement		3
Language, Philosophy & Culture Core Requirement		3
	Hours	**15**
	Total Hours	**122**

This is not an official degree plan. It is a guideline for planning your courses. To access a copy of this academic map please visit tamucc.edu/academics/planning/academic-advising/

CAREER MAP

COMPUTER SCIENCE

Bachelor of Science

TEXAS A&M UNIVERSITY CORPUS CHRISTI

FINISH IN 4

The mission of the computer science program is to educate undergraduate and graduate students in the principles of computer science and to extend the understanding and use of those principles by conducting research and service in support of the people and economy of south Texas, the state of Texas as a whole, and the nation, consistent with the program's function within a Hispanic-serving institution. Degree options include:
Systems Programming Option (SYPO)
Cyber Security and Infrastructure Option (CSIF)
Game Programming Option (GMPR)
Information Systems Option (ISYS)
Within this program, students analyze a complex computing problem and apply principles of computing and other relevant disciplines to identify solutions. Students also design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline. As a part of this degree, students will be able to communicate effectively, make informed judgments and function as a member or leader within computer science team using theory and software development fundamentals to produce solutions.
The requirements for a Bachelor of Science degree in Computer Science include a total of 120-122 semester hours. The total is divided among the following groups: University Core Curriculum, Major Curriculum, and Electives. In order to prepare students to attain the program educational objectives, the CS degree program has been structured to ensure that all students, by the time of their graduation, will have been enabled to meet the following outcomes:
Analyze a complex computing problem, and to apply principles of computing and other relevant disciplines to identify solutions.
Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline.
Communicate effectively in a variety of professional contexts.
Recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles.
Function effectively as a member or leader of a team engaged in activities appropriate to the program's discipline.
Apply computer science theory and software development fundamentals to produce computing-based solutions.

CONTACT INFORMATION

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SKILLS/ATTRIBUTES

- Critical Thinking/Problem Solving
- Teamwork/Collaboration
- Professionalism/Work Ethic
- Oral/Written Communications
- Leadership
- Digital Technology
- Global/Multicultural Fluency

ADDITIONAL SOURCES OF INFORMATION

1. Association for Computing Machinery
2. Association of Information Technology Professionals
3. International Webmasters Association
4. Software and Information Industry Association

CAREER OPTIONS

- Software Developer
- Computer Programmer
- Web Developer
- Information Analyst
- Computer Support Specialist
- Software Engineer
- Data Scientist
- Database Administrator

STUDENT ORGANIZATIONS

- Islander Women in Computer Science
- SACNAS Chapter at Texas A&M University - Corpus Christi
- Advancement of Women in Science
- Computing Alliance of Hispanic Serving Institutions at Texas A&M University - CC
- Cyber Defense Team

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https://www.tamucc.edu/institutional-advancement/career-center/