

ACADEMIC MAP

Computer Game Programming Computer Science, Bachelor of Science



First Year		
Fall		
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	Writing and Rhetoric II	3
or COMM 1311	or Foundation of Communication	
COSC 1436	Introduction to Problem Solving with Computers II	4
COSC 2325	Game Design	3
COSC 3301	Cyber Security	3
MATH 2305	Discrete Mathematics I	3
Hours		17
Second Year		
Fall		
COSC 2334	Computer Architecture	3
COSC 2437	Data Structures	4
PHYS 2425	University Physics I	4
MATH 2414	Calculus II	4
Hours		15
Spring		
PHYS 2426	University Physics II	4
MATH 3311	Linear Algebra	3
COSC 3325	Game Programming	3
COSC 3336	Introduction to Database Systems	3
Language, Philosophy & Culture Core Requirement		3
Hours		16

Third Year		
Fall		
COSC 3324	Object-oriented Programming	3
COSC 3346	Operating Systems	3
COSC 3385	Numerical Methods	3
COSC 4328	Computer Graphics	3
POLS 2305	U.S. Government and Politics	3
Hours		15
Spring		
MATH 3342	Applied Probability and Statistics	3
or MATH 3345	or Statistical Modeling and Data Analysis	
COSC 3370	Software Engineering	3
COSC 4342	Computer Networks	3
COSC 4325	Advanced Game Programming	3
ENGL 3310	Technical and Professional Writing for Computer Science	3
Hours		15
Fourth Year		
Fall		
COSC 4330	Introduction to Artificial Intelligence	3
COSC 4343	Algorithms	3
COSC 4100	Skills for Computing Professionals II	1
Theory Group		3
Approved Upper-Division COSC Course		3
American History Core Requirement		3
Hours		16
Spring		
COSC 4354	Senior Capstone Project	3
POLS 2306	State and Local Government	3
American History Core Requirement		3
Creative Arts Core Requirement		3
Hours		12
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



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

Career Counselor:

Career and Professional Development Center

UC 304 | 361.825.2628

career.center@tamucc.edu

Internship Coordinator:

Dr. Mamta Yadav

RFEB 316N | 361.825.2688

mamta.yadav@tamucc.edu

Department Contact:

Department of Computer Science

RFEB 316N | 361.825.2688

mamta.yadav@tamucc.edu

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