

ACADEMIC MAP

Systems Programming Computer Science, Bachelor of Science



First Year			Third Year		
Fall			Fall		
UNIV 1101	University Seminar I	1	MATH 3342	Applied Probability and Statistics	3
ENGL 1301	Writing and Rhetoric I	3	or MATH 3345	or Statistical Modeling and Data Analysis	
COSC 1435	Introduction to Problem Solving with Computers I	4	COSC 3336	Introduction to Database Systems	3
COSC 3100	Skills for Computing Professionals I	1	COSC 3370	Software Engineering	3
MATH 2413	Calculus I	4	COSC 3385	Numerical Methods	3
Social and Behavioral Sciences Core Requirement		3	Science Sequence		4
Hours		16	Hours		16
Spring			Spring		
UNIV 1102	University Seminar II	1	COSC 3346	Operating Systems	3
ENGL 1302	Writing and Rhetoric II	3	COSC 3373	Software Project Management	3
or COMM 1311	or Foundation of Communication		Approved Upper-Division COSC Course		3
COSC 1436	Introduction to Problem Solving with Computers II	4	American History Core Requirement		3
COSC 3301	Cyber Security	3	Science Sequence		4
MATH 2305	Discrete Mathematics I	3	Hours		16
Hours		14	Fourth Year		
Second Year			Fall		
Fall			COSC 4100	Skills for Computing Professionals II	1
COSC 2334	Computer Architecture	3	COSC 4342	Computer Networks	3
COSC 2437	Data Structures	4	COSC 4343	Algorithms	3
MATH 2414	Calculus II	4	COSC 4353	Compiler Construction	3
POLS 2305	U.S. Government and Politics	3	or COSC 4360	or Theory of Programming Languages	
Creative Arts Core Requirement		3	or COSC 4370	or Models of Computation	
Hours		17	Approved Upper-Division COSC Course		3
Spring			American History Core Requirement		3
ENGL 3310	Technical and Professional Writing for Computer Science	3	Hours		16
COSC 3324	Object-oriented Programming	3	Spring		
COSC 3353	Survey of Programming Languages	3	COSC 4354	Senior Capstone Project	3
POLS 2306	State and Local Government	3	COSC 4348	Systems Programming	3
Approved Upper-Division COSC Course		3	Approved Upper-Division COSC Course		3
Hours		15	Language, Philosophy & Culture 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

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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