

ACADEMIC MAP

COMPUTER SCIENCE
Bachelor of Science



START HERE

1 SEMESTER 1 - FALL			CREDITS	COMPLETED
UNIV 1101 UNIVERSITY SEMINAR I	1	✓		
COSC 3100 SKILLS FOR COMPUTING PROFESSIONALS I	1			
COSC 1435 INTRODUCTION TO PROBLEM SOLVING WITH COMPUTERS I	4			
MATH 2413 CALCULUS I	4			
COMMUNICATION CORE REQUIREMENT	3			
SOCIAL AND BEHAVIORAL SCIENCES CORE REQUIREMENT	3			

TOTAL CREDITS: 16

2 SEMESTER 2 - SPRING			CREDITS	COMPLETED
UNIV 1102 UNIVERSITY SEMINAR II	1			
COSC 1436 INTRODUCTION TO PROBLEM SOLVING WITH COMPUTERS II	4			
MATH 2305 DISCRETE MATHEMATICS I	3			
CREATIVE ARTS CORE REQUIREMENT	3			
COMMUNICATION CORE REQUIREMENT	3			

TOTAL CREDITS: 14

YEAR 1

3 SEMESTER 3 - FALL			CREDITS	COMPLETED
COSC 2334 COMPUTER ARCHITECTURE	3			
COSC 2437 DATA STRUCTURES	4			
COSC 2470 COBOL PROGRAMMING	4			
MINOR COURSE	3			
POLS 2305 U.S. GOVERNMENT AND POLITICS	3			

TOTAL CREDITS: 17

4 SEMESTER 4 - SPRING			CREDITS	COMPLETED
COSC 3336 INTRODUCTION TO DATABASE SYSTEMS	3			
APPROVED UPPER-DIVISION COSC COURSE	3			
MINOR COURSE	3			
AMERICAN HISTORY CORE REQUIREMENT	3			
POLS 2306 STATE AND LOCAL GOVERNMENT	3			

TOTAL CREDITS: 15

YEAR 2

5 SEMESTER 5 - FALL			CREDITS	COMPLETED
MATH 3342 OR MATH 3345 APPLIED PROBABILITY AND STATISTICS OR STATISTICAL MODELING AND DATA ANALYSIS	3			
COSC 3346 OPERATING SYSTEMS	3			
COSC 3324 OBJECT-ORIENTED PROGRAMMING	3			
MINOR COURSE	3			
AMERICAN HISTORY CORE REQUIREMENT	3			

TOTAL CREDITS: 15

6 SEMESTER 6 - SPRING			CREDITS	COMPLETED
COSC 3370 SOFTWARE ENGINEERING	3			
ENGL 3310 TECHNICAL AND PROFESSIONAL WRITING FOR COMPUTER SCIENCE	3			
APPROVED UPPER-DIVISION COSC COURSE	3			
LIFE & PHYSICAL SCIENCE CORE REQUIREMENT	3			
COMPONENT AREA OPTION CORE REQUIREMENT	3			

TOTAL CREDITS: 15

YEAR 3

7 SEMESTER 7 - FALL			CREDITS	COMPLETED
COSC 4100 SKILLS FOR COMPUTING PROFESSIONALS II	1			
COSC 4342 COMPUTER NETWORKS	3			
APPROVED UPPER-DIVISION COSC COURSE	3			
MINOR COURSE	3			
MINOR COURSE	3			

TOTAL CREDITS: 16

8 SEMESTER 8 - SPRING			CREDITS	COMPLETED
COSC 4354 SENIOR CAPSTONE PROJECT	3			
APPROVED UPPER-DIVISION COSC COURSE	3			
MINOR COURSE	3			
LANGUAGE, PHILOSOPHY & CULTURE CORE REQUIREMENT	3			
COMPONENT AREA OPTION CORE REQUIREMENT	3			

TOTAL CREDITS: 15

YEAR 4



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