

ACADEMIC MAP

Computer Game Programming, Bachelor of Science



| 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 |
| MATH 2413 | Calculus I | 4 |
| Social and Behavioral Sciences Core Requirement | | 3 |
| Hours | | 15 |
| Spring | | Hours |
| 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 | | Hours |
| COSC 2334 | Computer Architecture | 3 |
| COSC 2437 | Data Structures | 4 |
| PHYS 2425 | University Physics I | 4 |
| MATH 2414 | Calculus II | 4 |
| Hours | | 15 |
| Spring | | Hours |
| PHYS 2426 | University Physics II | 4 |
| MATH 3311 | Linear Algebra | 3 |
| ENGL 3310 | Technical and Professional Writing for Computer Science | 3 |
| COSC 3325 | Game Programming | 3 |
| COSC 3336 | Introduction to Database Systems | 3 |
| Language, Philosophy & Culture Core Requirement | | 3 |
| Hours | | 19 |

| Third Year | | |
|-------------------------------------|---|------------|
| Fall | | Hours |
| COSC 3324 | Object-oriented Programming | 3 |
| COSC 3300 | Computing Ethics and Professional Skills | 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 | | 18 |
| Spring | | Hours |
| 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 |
| Hours | | 12 |
| Fourth Year | | |
| Fall | | Hours |
| COSC 4330 | Introduction to Artificial Intelligence | 3 |
| COSC 4343 | Algorithms | 3 |
| Theory Group | | 3 |
| Approved Upper-Division COSC Course | | 3 |
| American History Core Requirement | | 3 |
| Hours | | 15 |
| Spring | | Hours |
| 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 | | 123 |

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, GAME PROGRAMMING

Bachelor of Science



The game programming option is for those who intend to pursue careers as game programmers. The degree program has an emphasis on the skills necessary for creating and programming computer games. The computer science degree program is applied in nature and is designed to prepare students to begin or advance computing careers in business, industry, government, or education, or to pursue further study in computer science. The curriculum is oriented towards technical competencies required of a computer professional with emphasis on the development, evaluation, and integration of software systems. In order to prepare students to attain the program educational objectives, the BS 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:

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SKILLS/ATTRIBUTES

- Critical Thinking/Problem Solving
- Digital Technology
- Teamwork/Collaboration
- Professionalism/Work Ethic
- Oral/Written Communication
- Leadership

STUDENT ORGANIZATIONS

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

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

- Game Programmer
- Game Developer
- Graphics Programmer
- AI Programmer
- Game Designer
- Quality Assurance Tester
- Software Engineer
- Forensic Analyst
- Virtual Reality (VR) Developer
- Augmented Reality (AR) Developer