COMPUTER SCIENCE - COMPUTER GAMES MAJOR (B.SC.) (65 CREDITS)

Offered by: Computer Science (Faculty of Science)
Degree: Bachelor of Science
Program credit weight: 65

Program Description

This program is a specialization within Computer Science. It fulfils all the basic requirements of the Major Computer Science. The program focuses on topics that are important to understanding the technology behind computer games and to gaining experience in software development and design needed for computer game development.

Students may complete this program with a minimum of 62 credits or a maximum of 65 credits depending on whether they are exempt from taking COMP 202 Foundations of Programming..

Degree Requirements — B.Sc.

This program is offered as part of a Bachelor of Science (B.Sc.) degree.

To graduate, students must satisfy both their program requirements and their degree requirements.

- The program requirements (i.e., the specific courses that make up this program) are listed under the Course Tab (above).
- The degree requirements—including the mandatory Foundation program, appropriate degree structure, and any additional components—are outlined on the Degree Requirements page.

Students are responsible for ensuring that this program fits within the overall structure of their degree and that all degree requirements are met. Consult the Degree Planning Guide on the SOUSA website for additional guidance.

Note: For information about Fall 2025 and Winter 2026 course offerings, please check back on May 8, 2025. Until then, the "Terms offered" field will appear blank for most courses while the class schedule is being finalized.

Required Courses (46-49 credits)

Expand allContract all

Course	Title	Credits
COMP 202	Foundations of Programming.[1]	3
COMP 206	Introduction to Software Systems.	3
COMP 250	Introduction to Computer Science.	3
COMP 251	Algorithms and Data Structures.	3
COMP 273	Introduction to Computer Systems.	3
COMP 302	Programming Languages and Paradigms.	3
COMP 303	Software Design.	3
COMP 310	Operating Systems.	3
COMP 322	Introduction to C++.	1
COMP 330	Theory of Computation.	3
COMP 361D1	Software Engineering Project.	3
COMP 361D2	Software Engineering Project.	3
COMP 557	Fundamentals of Computer Graphics.	4
MATH 222	Calculus 3.	3
MATH 223	Linear Algebra.	3
MATH 240	Discrete Structures.	3
MATH 323	Probability.	3

[1] Students who have sufficient knowledge in a programming language do not need to take COMP 202 Foundations of Programming..

Complementary Courses (16 credits)

3 credits selected from:

Expand allContract all

Course	Title	Credits
COMP 350	Numerical Computing.	3
COMP 360	Algorithm Design.	3

At least 7 credits selected from:

Expand allContract all

Course	Title	Credits
COMP 308	Computer Systems Lab.	1
COMP 424	Artificial Intelligence.	3
COMP 521	Modern Computer Games.	4
COMP 529	Software Architecture.	4
COMP 533	Model-Driven Software Development.	3
COMP 551	Applied Machine Learning.	4
COMP 559	Fundamentals of Computer Animation.	4

At least 6 credits selected from:

Expand allContract all

Course	Title	Credits
COMP 409	Concurrent Programming.	3
COMP 421	Database Systems.	3
COMP 535	Computer Networks 1.	4