

COMPUTER SCIENCE MAJOR (B.SC.) (63 CREDITS)

Offered by: Computer Science (Faculty of Science)

Degree: Bachelor of Science

Program credit weight: 63

Program Description

This program is the standard Major program offered by the School of Computer Science. It provides a broad introduction to the principles of computer science and offers ample opportunity to acquire in-depth knowledge of several sub-disciplines. At the same time, its credit requirements allow students to take an additional minor.

Students may complete this program with a minimum of 60 credits or a maximum of 63 credits depending if 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 (33 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
MATH 222	Calculus 3.	3

MATH 223	Linear Algebra.	3
MATH 240	Discrete Structures.	3

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

Complementary Courses (30 credits)

Students should talk to an academic adviser before choosing their complementary courses.

At least 6 credits selected from:

Expand allContract all

Course	Title	Credits
COMP 330	Theory of Computation.	3
COMP 350	Numerical Computing.	3
COMP 360	Algorithm Design.	3

3-9 credits selected from:

Expand allContract all

Course	Title	Credits
MATH 318	Mathematical Logic.	3
MATH 323	Probability. ¹	3
MATH 324	Statistics.	3
MATH 340	Discrete Mathematics.	3

¹ Must include at least one of MATH 323 Probability. and MATH 340 Discrete Mathematics..

At least 6 credits at the 400-level or above.

The remaining credits selected from computer science courses at the 300 level or above (except COMP 364 Computer Tools for Life Sciences. and COMP 396 Undergraduate Research Project.) and ECSE 539 Advanced Software Language Engineering..

Note: Students have to make sure that they have the appropriate prerequisites when choosing upper-level courses.