

COMPUTER SCIENCE MAJOR CONCENTRATION (B.A.) (36 CREDITS)

Offered by: Computer Science (Faculty of Science)

Degree: Bachelor of Arts; Bachelor of Arts and Science

Program credit weight: 36

Program Description

This Major concentration represents an in-depth introduction to computer science and its sub-areas. Students that are interested in further study in Computer Science can combine the Major Concentration Computer Science with the Supplementary Minor in Computer Science to constitute a program very close to the Major Computer Science offered by the Faculty of Science. For further information, please consult the Program Adviser.

Students with two programs in the same department/unit must have a third program in a different department/unit to be eligible to graduate. Please refer to the Faculty of Arts regulations for "Faculty Degree Requirements," "About Program Requirements," and "Departmental Programs" for the Multi-track System options.

Degree Requirements — B.A. students

To be eligible for a B.A. degree, a student must fulfil all Faculty and program requirements as indicated in Degree Requirements for the Faculty of Arts.

We recommend that students consult an Arts OASIS advisor for degree planning.

Degree Requirements — B.A. & Sc. students

This program is offered as part of a Bachelor of Arts & Science (B.A. & 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.

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Required Courses (18 credits)

MATH 133 Linear Algebra and Geometry., MATH 140 Calculus 1., and MATH 141 Calculus 2. (or their equivalents) should be completed prior to taking courses in this program.

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
MATH 240	Discrete Structures.	3

¹ Students who have sufficient knowledge in programming do not need to take COMP 202 Foundations of Programming. and should replace it with an additional computer science complementary course.

Complementary Courses (18 credits)

18 credits selected as follows:

3 credits from each of the groups A, B, C, and D:

Group A

Expand allContract all

Course	Title	Credits
MATH 222	Calculus 3.	3
MATH 323	Probability.	3
MATH 324	Statistics.	3

Group B

Expand allContract all

Course	Title	Credits
MATH 223	Linear Algebra.	3
MATH 318	Mathematical Logic.	3
MATH 340	Discrete Mathematics.	3

Group C

Expand allContract all

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

Group D

Expand allContract all

Course	Title	Credits
COMP 302	Programming Languages and Paradigms.	3
COMP 303	Software Design.	3

An additional 3 credits may be selected from Group A or B.

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The remaining complementary credits must be selected from
COMP 230 Logic and Computability, and COMP courses at the 300
level or above (except COMP 364 Computer Tools for Life Sciences.,
COMP 396 Undergraduate Research Project.).