BACHELOR OF ARTS IN COMPUTER SCIENCE

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Computers and computing have become increasingly integrated into our society and continually shape our lives. One does not have to look far to find examples of computing's significant impact, from smartphone applications to credit checking systems to self-driving cars. Society needs graduates with not only strong technical skills but also significant knowledge in these application domain areas. The Bachelor of Arts in Computer Science program offers a balanced curriculum that supports students as they combine study in computer science with other disciplines across the university. The program promotes this interdisciplinary work by providing a technical core with breadth requirements, a flexible elective structure, and required directed study outside the major. The curriculum is designed to prepare students to contribute to both established and emerging application domains.

The BA in Computer Science program requires a minimum of 120 credits for degree completion.

Note: A minimum grade of C- is required for all computer science course prerequisites unless otherwise stated.

Within the policies of the School of Computing & Engineering, the Computer Science program enforces credit limits during the academic terms. Exceeding 18 credits in the Fall or Spring semesters, 4 credits in the January term, or 10 credits in each Summer term requires the approval of the dean's office.

Please see footnotes for additional information.

Code	Title	Credits
University Curriculum (http://catalog.qu.edu/academics/university-curriculum/)		**46**
Computer Science Core Requirements		
CSC 110 & 110L	Programming and Problem Solving and Programming and Problem Solving Lab	4
CSC 111 & 111L	Data Structures and Abstraction and Data Structures and Abstraction Lab	4
SER 120 & 120L	Object-Oriented Design and Programming and Object-Oriented Design and Programming Lab	4
CSC 210	Digital Logic and Design	3
CSC 215	Algorithm Design and Analysis	3
SER 225	Introduction to Software Development	3
CSC 493	Senior Thesis I	1
CSC 494	Senior Thesis II	3
CSC Electives (Take 9 credits of CSC elective courses) [1]		**9**
Directed Study		
Complete minimum 18 credits of approved directed study outside Computer Science [2]		18
ENR 395	Professional Development Seminar	1
MA 205	Introduction to Discrete Mathematics (CSC 205) (credits count toward the University Curriculum)	
MA 141 or MA 229	Calculus of a Single Variable Linear Algebra	3
MA elective [3]		3
Open Electives		**15**
Total Credits		**120**

1. Can be a software engineering elective (SER 210 or any 300-level or above SER course).
2. A minor or second major will satisfy this requirement.
3. Must be MA 140 or higher.

Course plans are subject to change. Course availability, potential transfer credits, and course prerequisite completion may influence the final course schedule for each program.

Course	Title	Credits
First Year		
Fall Semester		
CSC 110 & 110L	Programming and Problem Solving and Programming and Problem Solving Lab	4
MA 140	Pre-Calculus (UC Personal Inquiry 2)	3
FYS 101	First-Year Seminar (UC Foundations Inquiry)	3
EN 101	Introduction to Academic Reading and Writing (UC Writing)	3
Directed Study or Open Elective		3
	Credits	**16**
Spring Semester		
CSC 111 & 111L	Data Structures and Abstraction and Data Structures and Abstraction Lab	4
SER 120 & 120L	Object-Oriented Design and Programming and Object-Oriented Design and Programming Lab	4
MA 205	Introduction to Discrete Mathematics (CSC 205) (UC Math)	3
EN 102	Academic Writing and Research (UC Writing 2)	3
	Credits	**14**
Second Year		
Fall Semester		
SER 225	Introduction to Software Development	3
CSC 215	Algorithm Design and Analysis	3
Directed Study or Open Elective		3
University Curriculum course		3
University Curriculum Science and Lab		4
	Credits	**16**
Spring Semester		
MA 141 or MA 229	Calculus of a Single Variable or Linear Algebra	3
CSC 210	Digital Logic and Design	3
Directed Study or Open Elective		3
Directed Study or Open Elective		3

University Curriculum course		3
	Credits	**15**
Third Year		
Fall Semester		
CSC Elective		3
Directed Study or Open Elective		3
Directed Study or Open Elective		3
University Curriculum course		3
University Curriculum course		3
ENR 395	Professional Development Seminar	1
	Credits	**16**
Spring Semester		
CSC Elective		3
Directed Study or Open Elective		3
Directed Study or Open Elective		3
University Curriculum course		3
University Curriculum course		3
	Credits	**15**
Fourth Year		
Fall Semester		
CSC 493	Senior Thesis I	1
CSC Elective		3
Directed Study or Open Elective		3
University Curriculum course		3
University Curriculum course		3
	Credits	**13**
Spring Semester		
CSC 494	Senior Thesis II	3
Directed Study or Open Elective		3
Directed Study or Open Elective		3
ENR 410	School of Computing and Engineering Integrative Capstone (UC Integrative Capstone)	3
Open Elective		3
	Credits	**15**
	Total Credits	**120**

Student Outcomes

Graduates of the program will have an ability to:

1. Analyze a complex computing problem and apply principles of computing and other relevant disciplines to identify solutions.
2. Design, implement and evaluate a computing-based solution to meet a given set of computing requirements at the confluence of computer science and another discipline.
3. Communicate effectively in a variety of professional contexts.
4. Recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles.
5. Function effectively as a member or leader of a team engaged in activities appropriate to the program's discipline.
6. Apply computer science theory and software development fundamentals to produce computing-based solutions.

Program Educational Objectives

Within four to seven years of graduation, graduates of the Computer Science BA program are expected to:

1. Apply advanced computer science knowledge and skills.
2. Communicate complex ideas and problems to a professional audience.
3. Demonstrate ethical behavior and capacity for finding computing solutions that consider both the technical and social consequences of their work.
4. Demonstrate leadership and mentorship, and contribute to their profession and community.
5. Pursue intellectual, personal, and professional development.

Admission Requirements: School of Computing & Engineering

The requirements for admission into the undergraduate School of Computing & Engineering programs are the same as those for admission to Quinnipiac University.

Admission to the university is competitive, and applicants are expected to present a strong college prep program in high school. Prospective first-year students are strongly encouraged to file an application as early in the senior year as possible, and arrange to have first quarter grades sent from their high school counselor as soon as they are available.

For detailed admission requirements, including required documents, please visit the **Admissions** page of this catalog.

Seamless Transfer Agreement with Gateway Community College (GCC), Housatonic Community College (HCC) and Norwalk Community College (NCC)

Under this Transfer Agreement, GCC, HCC and NCC graduates will be guaranteed admission into a bachelor's degree program with third year (junior) status at Quinnipiac University on the condition that they:

- Graduate with an associate in arts, an associate in science in business, College of Technology engineering science and computer science, nursing or an allied health degree with a minimum cumulative GPA of 3.00 (this may be higher in specific programs).
- Satisfy all other Quinnipiac University transfer admission requirements and requirements for intended major.

Quinnipiac University agrees to accept the general education embedded in these associate degree programs in accordance with Quinnipiac preferred choices for general education as meeting all the requirements of its undergraduate general education except for the Integrative Capstone Experience and where courses are encumbered by the major (e.g., General Chemistry for the Disciplinary Inquiry Natural Science requirement for a Biochemistry major).

Suggested Transfer Curriculum for BA in Computer Science

A minimum of 60 credits is required for transfer into the BA in Computer Science program. Below is a sample plan of study for the first two years.

Course	Title	Credits
First Year		
Fall Semester		
English I		3
CSC 1201	(Introduction to Programming)	4
MATH 2600	(Calculus I)	4
Gen Ed Elective		3
Gen Ed Elective		3
	Credits	**17**
Spring Semester		
English II		3
CSC 2213	(Object-Oriented Programming)	4
MATH 2611	(Discrete Mathematics)	4
Gen Ed Elective		3
Gen Ed Elective		3
	Credits	**17**
Second Year		
Fall Semester		
CSC 2216	(Data Structures and Algorithms)	4
CSC 2217	(Digital Design)	4
Math Elective		3
Gen Ed Elective		3
Gen Ed Elective		3
	Credits	**17**
Spring Semester		
CSC 2218	(Software Engineering Methods)	4
CSC Elective	(2000-level)	3
Gen Ed Elective		3
Gen Ed Elective		3
Gen Ed Elective		3
	Credits	**16**
	Total Credits	**67**