

*While this map assumes a student has declared their major immediately upon enrolling, an Advisor will work to modify the schedule for students who declare their major at a later date.*

**ACADEMIC PROGRAM**

Year One - First Semester →	
Course Number & Title	Credits
ENG 111 (EC)	3
MTH 123-College Algebra and Trigonometry OR MTH 125-College Algebra and Trigonometry with Intermediate Algebra Review OR MTH 130-Pre-Calculus Mathematics (MQ)	4
CSC 126-Intro to Computer Science (SW)(M)	4
World Cultures and Global Issues (WG)	3
US Experience in its Diversity (US)	3
<b>Total Credits:</b>	<b>17</b>

Year One - Second Semester →	
Course Number & Title	Credits
ENG 151 (EC) (RLA)	3
MTH 230 Calculus I with Pre-Calculus <b>OR</b> MTH 231- Analytic Geometry and Calculus I (M) (RLA)	3
MTH 229-Calculus Computer Laboratory (M)	1
CSC 220-Computer Organization (M)	3
CSC 211-Intermediate Programming (M)	4
<b>Total Credits:</b>	<b>14</b>

Year Two - First Semester →	
Course Number & Title	Credits
Individual and Society (IS)	3
Life & Physical Sciences (LP) (M)	3
Life & Physical Sciences Lab (CO)(M)(RLA)	1
CSC 326-Data Structures (M)(RNL)	4
MTH 232-Calculus II (M)	3
CSC 221-Networking & Security (M)	3
<b>Total Credits:</b>	<b>17</b>

Year Two - Second Semester →	
Course Number & Title	Credits
CSC/MTH 228-Discrete Mathematical Structures for Computer Science (M)	4
Scientific World (SW) (M)	3
Scientific World Lab (CO) (M) (RLA)	1
CSC 330-Object-Oriented Software Design (M)	3
CSC Elective I	3
<b>Total Credits:</b>	<b>14</b>

**CAREER READINESS**

← Year One – First Semester	
Recommended Career Milestones	Done
Create a Handshake Account with Career Services	
Create a Draft Resume	
Review Major Required Courses	
Join a Student Club	

← Year One - Second Semester	
Recommended Career Milestones	Done
Create a LinkedIn Account	
Explore Career Options for Computer Science Majors	
Attend a Hackathon	
Create a GitHub Account	
Attend Professional Development Workshops	

← Year Two – First Semester	
Recommended Career Milestones	Done
Develop a Network of Contact Through LinkedIn	
Update Your Resume	
Identify a Mentor with Whom You Can Check-in Periodically	
Post to Your GitHub Account	
Attend Professional Development Workshops	

← Year Two - Second Semester	
Recommended Career Milestones	Done
Contribute to open source projects	
Launch a side project (web app or mobile)	
Participate in local hackathons or coding events to collaborate on code and meet other students.	
Join student professional organizations. Attend career fairs, local meetings, conferences and seminars.	

## ACADEMIC PROGRAM

Year Three - First Semester →	
Course Number & Title	Credits
MTH 233-Calculus III (M) (Recommended)	4
CSC 315-Intro to Database Systems (M)	4
CSC 332-Operating Systems I (M)	3
CSC 305-Operating Systems Programming Laboratory (M) (RNL)	1
CSC 346-Digital Systems Design (M)	3
CSC 347-Digital Systems Laboratory (M)	1
<b>Total Credits:</b>	<b>16</b>

Year Three - Second Semester →	
Course Number & Title	Credits
CSC 382-Analysis of Algorithms (M)	4
CSC 430-Software Engineering (M)	4
Creative Expression (CE)	3
General Elective	3
CSC Elective II (M)	3
<b>Total Credits:</b>	<b>17</b>

Year Four - First Semester →	
Course Number & Title	Credits
CSC 446-Computer Architecture (M)	4
MTH 338-Linear Algebra <b>OR</b> MTH course having MTH 232 or higher as a prerequisite (except MTH 306)	4
CSC 400-level elective III (M)	4
General Elective (RLA)	3
<b>Total Credits:</b>	<b>15</b>

Year Four - Second Semester →	
Course Number & Title	Credits
200-level Social Science or TALA (CW) (PD) (CO) (RLA)	4
CSC 490-Seminar in Computer Science (M)	4
CSC 400-level elective IV (M)	4
General Elective (RLA)	3
<b>Total Credits:</b>	<b>15</b>

## CAREER READINESS

← Year Three - First Semester	
Recommended Career Milestones	Done
Create an effective resume.	
Utilize LinkedIn to build your professional network: Start marketing yourself and building relationships on LinkedIn.	
Apply for internships (CUNY Tech Prep, TTP Residency...)	
Continue to post to GitHub.	

← Year Three - Second Semester	
Recommended Career Milestones	Done
Acquire technical internship interview readiness (Practice, practice, practice).	
Acquire confidence developing in one industry tech stack beyond what's taught in the classroom.	
Work in at least one software internship position by summer of Junior year.	
Consider self-guided learning outside the classroom.	
Participate in a virtual work experience program.	

← Year Four - First Semester	
Recommended Career Milestones	Done
Take advantage of events offered by Career & Professional Development to perfect your job search, interviewing and employability skills.	
Schedule an appointment with the career advisor to go over your final resume, portfolio, cover letter, etc.	
Alert contacts in your network to remind them you are in the process of searching for a job.	
Apply, apply and apply for more jobs. Record your progress and remember to follow-up on your applications.	

← Year Four - Second Semester	
Recommended Career Milestones	Done
Apply, apply and apply for more jobs. Record your progress and remember to follow-up on your applications.	
Arrange for references. These can be professors, connections, internship positions or others who know your interests, abilities, skills and work habits.	
If appropriate, complete the process of applying to graduate school.	
Take the mandatory Senior Exit Survey.	

## Recent Computer Science Electives

NOT ALL ELECTIVES OFFERED EVERY SEMESTER

CSC 223	Computer Hacking Revealed (RNL)	3-credits
CSC 225	Introduction to Web Development and the Internet (RNL)	3-credits
CSC 226	Web Database Applications (RNL)	3-credits
CSC 227	Introductory Computer Game Programming (RNL)	3-credits
CSC 229	Introduction to High Performance Computing (RNL)	3-credits
CSC 235	Robotic Explorations (RLA)	3-credits
CSC 245	Introduction to Data Science (RLA)	3-credits
CSC 250	Serious Game Development (RLA)	3-credits
CSC 412	Machine Learning and Knowledge Discovery (RNL)	4-credits
CSC 420	Concepts of Programming Languages (RNL)	4-credits
CSC 424	Advanced Database Management Systems (RNL)	4-credits
CSC 421	Internet Data Communications (RNL)	4-credits
CSC 425	Shared Memory Parallel Computing (RNL)	4-credits
CSC 426	Applied Cryptography (RNL)	4-credits
CSC 427	Advanced Computer Game Programming (RNL)	4-credits
CSC 429	Advanced High Performance Computing (RNL)	4-credits
CSC 435	Advanced Data Communications (RNL)	4-credits
CSC 436	Modern Web Development (RNL)	4-credits
CSC 438	Mobile Application Development (RNL)	4-credits
CSC 470	Introductory Computer Graphics (RNL)	4-credits
CSC 462	Microcontrollers (RNL)	4-credits
CSC 475	Image Processing in Computer Science (RNL)	4-credits
CSC 480	Artificial Intelligence (RNL)	4-credits
CSC 515	Data Science (RNL)	4-credits

## 5-Year BS-MS Program

Undergraduate students majoring in Computer Science or Computer Science / Mathematics and satisfying the following criteria may be granted permission to take up to three graduate courses at undergraduate tuition to be counted towards their Bachelor's degree. These courses may be used only to substitute for 400-level Computer Science elective courses (CSC designation). These graduate courses will be double-counted toward their Master's degree. This allows students to earn both the Bachelor's and the Master's degrees in five years.

### Criteria:

- Enrollment in Bachelor's degree in Computer Science or Computer Science/Mathematics at CSI and successful completion of three years of study with 90 or more earned credits.
- Cumulative GPA 3.3 or above.
- Two letters of recommendation, at least one from a full-time CSI Computer Science faculty under whom the applicant has studied.
- Permissions from the course instructor, the coordinator of the graduate program, and the department chairperson.
- Application for admission and conditional acceptance to the Computer Science graduate program.



Our program had been continuously ABET-accredited since 1989. ABET accreditation signifies that a college program has met standards essential to prepare graduates to enter critical STEM fields in the global workforce. Graduates from an ABET-accredited program have a solid educational foundation and are capable of leading the way in innovation, emerging technologies, and in anticipating the welfare and safety needs of the public.

**COLLEGE OF STATEN ISLAND - CUNY**  
**DEPARTMENT OF COMPUTER SCIENCE**  
2800 Victory Blvd  
1N-215  
Staten Island, NY 10314  
(718) 982-2850  
<http://www.cs.csi.cuny.edu/>

**Professor and Chair: Shuqun Zhang, PhD**  
**Academic/Career Advisor: Kristi Brescia**