B.S. in Computer Science-Mathematics
Degree Requirements (120 credits)   (Revised Fall '14)

For Students matriculating on or after Fall 2013

General Education Requirements (42 credits)   Credits

Required Common Core	12
Flexible Common Core	18
College Options	12

See Attachment for Recommended and suggested courses in this category.

Pre- Computer Science Sequence (4 credits)

CSC 126	Introduction to Computer Science	4

Note: A grade of C or above in CSC 126 is required to be admitted to Computer Science- Mathematics Baccalaureate program. Students will be allowed to repeat the course if necessary.

Pre-Major Requirements (26-29 credits) [1] (should be completed prior to their junior year.)

MTH 229	Calculus Computer Laboratory	1
MTH 231	Analytic Geometry and Calculus I	3
MTH 232	Analytic Geometry and Calculus II	3
MTH 233	Analytic Geometry and Calculus III	3
		Total 10 credits

OR

MTH 229	Calculus Computer Laboratory	1
MTH 230	Calculus I with Pre-Calculus	6
MTH 232	Analytic Geometry and Calculus II	3
MTH 233	Analytic Geometry and Calculus III	3
		Total 13 credits

AND

CSC 220	Computers & Programming	4
CSC 211	Intermediate Programming	4
		Total 8 credits

AND

Two courses with laboratories chosen from one of the following sequences: credits	Total 8
BIO 170-171, 180-181 General Biology I and II with laboratories	
CHM 141-121,142-127 General Chemistry I and II with laboratories	
PHY 120-121, 160-161 General Physics I and II with laboratories	
GEO 100-101, 102-103 Physical and Historical Geology with laboratories	
AST 120-160 Space Science I and II with laboratories	

Major Requirements (52 credits)   Credits

CSC 228	Discrete mathematical Structures	4

Computer Science: (24 credits)

CSC 326	Information Structures	4
CSC 330	Systems programming; Concepts of Software Design	4
CSC 346	Switching and Automata Theory	4
CSC 382	Analysis of Algorithms	4

Any two 400 level CS advanced electives   **8 (NOTE: 430 and 446 are not included)**

Total   24 credits

Mathematics: (24 credits)

MTH 301	Introduction to Mathematical Proof	4	
MTH 311	Probability Theory and an Introduction to Mathematical Statistics	4	
MTH 335	Numerical Analysis		4
MTH 338	Linear Algebra	4	

Any two of the following Mathematics Courses   :   **8**

Total   24 credits

MTH 330	Applied Mathematical Analysis I	4	
MTH 337	Applied Combinatorics & Graph Theory		4
MTH 341	Advanced Calculus	4	
MTH 347	Number Theory		4
MTH 349	Cryptology	4	
MTH 350	Mathematical Logic	4	
MTH 370	Operations Research	4	
MTH 410	Mathematical Statistics I	4	
MTH 339	Abstract Algebra I	4	

Electives (0-10 credits)   **See the 8 semester Sample Schedule**
Total (120 credits)

To graduate with Honors in the major, students must have at least a 3.5 GPA in the courses under the major requirement category and must complete an Honors thesis or project.

Note: 1. GPA Requirement - In order to graduate, you will need an overall GPA of 2.0 as well as a GPA of 2.0 in the courses under major requirement category.

2. Residency Requirement – To obtain a B.S. degree from CSI, students must earn at least 30 credits at CSI and must also earn at least half (50%) of the credits in the major requirement category at CSI.   For details refer to the catalog .

3. Liberal Arts and Sciences Requirement - For a B.S. degree NY state requires that one half of credits must be in Liberal Arts and Sciences. For details refer to the catalog .

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[1]
Courses used to fulfill premajor requirement can be used to fulfill gen-ed requirement.