

**Undergraduate Academic Program Degree Map Attachment**

**Degree Program: Bachelor of Science, Computer Science - AY 2018-2019**

**Note:**

- Course categories:
- Major required**
- Major elective**
- General Education
- Support (math&sci)**
- Free Elective

**First Year**

Semester I - Fall	Course Number	Pre-req	Course category	Credits
	<b>CSC 105 Survey of Computer Science</b>		<b>major</b>	<b>4</b>
	<b>CSC 110 Software Design &amp; Programming I</b>		<b>major</b>	<b>4</b>
	MAT 110 Precalculus §	basic math skills	free elective	3
	Writing I (W-I) gen ed Ω		gen ed	3
	gen ed (preferably SR) Ω ▲		gen ed	4

Semester credits: 18

Semester II - Spring	Course Number	Pre-req	Course category	Credits
	gen ed, or CSC 105 if not taken first semester Ω		gen ed	3
	<b>CSC 115 Software Design &amp; Programming II</b>	<b>CSC 110</b>	<b>major</b>	<b>4</b>
	gen ed (preferably SR) Ω ▲		gen ed	4
	MAT 220 Calculus I	MAT 150 or basic math skills	support	4

Semester credits: 15

Total First Year: 33  
Cumulative Credits: 33

**Second Year**

Semester III - Fall	Course Number	Pre-req	Course category	Credits
	<b>CSC 260 Data Structures &amp; Algorithms</b>	<b>CSC 105 &amp; CSC 110</b>	<b>major</b>	<b>4</b>
	MAT 221 Calculus II	MAT 220	support	4
	PHS 205 Digital Circuit Design	MAT 110 or MAT 220	support	4
	gen ed (SR if not taken freshman year) Ω		gen ed	3

Semester credits: 15

Semester IV - Spring	Course Number	Pre-req	Course category	Credits
	<b>CSC 295 Computer Organization &amp; Architecture</b>	<b>CSC 105 &amp; CSC 115 &amp; PHS 205</b>	<b>major</b>	<b>3</b>
	<b>CSC 300 Software Engineering I</b> <small>(note - this is a W-II course)</small>	<b>CSC 260 &amp; W-I</b>	<b>major</b>	<b>4</b>
	gen ed (SR if not taken freshman year) Ω		gen ed	3
	MAT elective (three-credit MAT course with MAT 220 or MAT 221 as a prerequisite)	MAT 220 or MAT 221	support	3
	gen ed (SR if not taken freshman year) Ω		gen ed	3

Semester credits: 16

Total Second Year: 31  
Cumulative Credits: 64

**Third Year**

Semester V - Fall	Course Number	Pre-req	Course category	Credits
	<b>CSC 381 Operating System Principles</b>	<b>CSC 260</b>	<b>major</b>	<b>3</b>
	CSC elective / option	variable	major	4
	MAT 214A Discrete Structures		support	4
	Science elective (chosen from list specified on flowsheet) ▲		support	4

Semester credits: 15

Semester VI - Spring	Course Number	Pre-req	Course category	Credits
	CSC elective / option	variable	major	4

free elective or <b>CSC elective / option</b>	variable	free elective	4	<b>Semester credits: 17</b> <b>Total Third Year: 32</b> <b>Cumulative Credits: 96</b>
gen ed <b>Ω</b>		gen ed	3	
<b>MAT 147 Statistics</b> (note - this is a QR course)	basic math skills	<b>support</b>	<b>3</b>	
gen ed <b>Ω</b>		gen ed	3	

**Fourth Year**

Semester VII- Fall	Course Number	Pre-req	Course category	Credits	<b>Semester credits: 14</b>
	<b>CSC 520 Computer Science Capstone Project Specification (specification for the capstone project implemented in CSC 521)</b>	CSC 300 & permission of CS dept chair	<b>major</b>	<b>1</b>	
	<b>CSC elective / option</b>	variable	<b>major</b>	<b>4</b>	
	gen ed or <b>CSC elective Ω</b>	variable	gen ed	3	
	gen ed <b>Ω</b>		gen ed	3	
	free elective or gen ed <b>Ω</b>		free elective	3	

Semester VIII - Spring	Course Number	Pre-req	Course category	Credits	<b>Semester credits: 10</b> <b>Total Fourth Year: 24</b> <b>Cumulative Credits: 120</b>
	<b>CSC 521 Computer Science Capstone Project</b> (note - this is a W-III course)	CSC 520 and permission of CS dept chair	<b>major</b>	<b>3</b>	
	free elective or gen ed <b>Ω</b>		free elective	3	
	<b>CSC elective / option</b>	variable	<b>major</b>	<b>4</b>	
	free elective (if necessary)		free elective		
	free elective (if necessary)		free elective		

**Additional Notes and Comments:**

Note regarding Pre-req column:

- Explicit prerequisite(s) are listed only for required courses (e.g. CSC 115, CSC 260)
- For elective CS major and MAT support courses, prerequisites will vary depending on the course chosen - consult with your academic advisor and/or degree tracker and/or the current SSU on-line catalog for the prerequisites for specific courses.

§ MAT 150 Precalculus is the appropriate entry-level Mathematics course for many Computer Science majors, but is *not* a required course. If your background permits, MAT 150 can be skipped, with MAT 220 Calculus I being taken in its place and future semester's MAT courses adjusted accordingly. If you are unsure as to whether to take MAT 150, please consult with the Chairperson of the Mathematics Department and/or with your advisor in the Computer Science Department. Taking MAT 150 will reduce the number of free elective credits by three.

Ω All SSU students must satisfy general education ("gen ed") and writing requirements in the following areas: CEA, CS, FYS, HP, OC, PGR, QR, SR(2), WC, W-I, W-II, W-III (visit [General Education Curriculum Overview](#) for details). Note that W-II can be satisfied by using the CS major required course CSC 300, W-III can be satisfied by using the CS major required course CSC 521, QR can be satisfied by using the CS major required course MAT 147, and the two required SR courses can be satisfied by using two of the CS major required Science support courses.

While gen ed courses can *in theory* be taken at any time, note that W-I must be satisfied *before* taking CSC 300, which is a spring-only offering that is typically taken during the sophomore year. Also, it is strongly recommend that the SR gen ed courses be taken earlier rather than later, as the labs associated with science courses can conflict with required CSC or mathematics courses - taking SR courses during the first two or three semesters will make achieving manageable schedules during junior and senior years less problematic

Ψ Students may take Summer semester courses as a means of either accelerating the date of graduation or of lightening the credit load during Fall/Spring semesters. Note that most General Education requirements and some Mathematics Support courses are available during the Summer semester. The availability of Computer Science courses during the Summer semester is generally limited to CSC 105 and CSC 110. with CSC 115