## DEGREE REQUIREMENTS FOR B.S. IN COMPUTER SCIENCE (as of SPRING 2021)

**Updated March 2022**

<table>
<thead>
<tr>
<th>Name ______________________</th>
<th>Class of _____</th>
<th>CPSC GPA _____</th>
<th>(from Transcript)</th>
</tr>
</thead>
</table>

### Required Math courses

<table>
<thead>
<tr>
<th>Sem</th>
<th>Grade</th>
<th>Course</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>MATH 131 Calculus I</td>
</tr>
<tr>
<td></td>
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<td>MATH 132 Calculus II</td>
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### Required Foundation courses

<table>
<thead>
<tr>
<th>Sem</th>
<th>Grade</th>
<th>Course</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>CPSC 115L Intro to Computing</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CPSC 215L Data Structures and Algorithms</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CPSC 203 Math Found. of Computing</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CPSC 275L Introduction to Computer Systems</td>
</tr>
</tbody>
</table>

### Required Theory courses - 1 needed

<table>
<thead>
<tr>
<th>Sem</th>
<th>Grade</th>
<th>Course</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>CPSC 219 Theory of Computation</td>
</tr>
<tr>
<td></td>
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<td>CPSC 320 Analysis of Algorithms</td>
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</table>

### Required Systems courses - 1 needed

<table>
<thead>
<tr>
<th>Sem</th>
<th>Grade</th>
<th>Course</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>CPSC 315 Systems Software</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CPSC 333 Computer Networks</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CPSC 375 High-Performance Computing</td>
</tr>
<tr>
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<td>CPSC 385 Computer Security</td>
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### Required Software courses - 1 needed

<table>
<thead>
<tr>
<th>Sem</th>
<th>Grade</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td>CPSC 304 Computer Graphics</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CPSC 310 Software Design</td>
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<tr>
<td></td>
<td></td>
<td>CPSC 316 Found. of Programming Languages</td>
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<tr>
<td></td>
<td></td>
<td>CPSC 340 Principles of Software Engineering</td>
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<tr>
<td></td>
<td></td>
<td>CPSC 352 Artificial Intelligence</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CPSC 372 Database Fundamentals</td>
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### Elective courses - 3 needed

<table>
<thead>
<tr>
<th>(only 1 can be CPSC 110)</th>
<th>Sem</th>
<th>Grade</th>
<th>Course</th>
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</thead>
<tbody>
<tr>
<td>CPSC 110</td>
<td></td>
<td>Computers, Information, and Society</td>
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<tr>
<td>CPSC 110</td>
<td></td>
<td>Visual Computing</td>
<td></td>
</tr>
<tr>
<td>CPSC 110</td>
<td></td>
<td>Computing with Mobile Phones</td>
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</tr>
<tr>
<td>CPSC 219</td>
<td></td>
<td>Theory of Computation</td>
<td></td>
</tr>
<tr>
<td>CPSC 225</td>
<td></td>
<td>Topics in Application Programming</td>
<td></td>
</tr>
<tr>
<td>CPSC 304</td>
<td></td>
<td>Computer Graphics</td>
<td></td>
</tr>
<tr>
<td>CPSC 310</td>
<td></td>
<td>Software Design</td>
<td></td>
</tr>
<tr>
<td>CPSC 315</td>
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<td>Systems Software</td>
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</tr>
<tr>
<td>CPSC 316</td>
<td></td>
<td>Foundations of Programming Languages</td>
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</tr>
<tr>
<td>CPSC 320</td>
<td></td>
<td>Analysis of Algorithms</td>
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</tr>
<tr>
<td>CPSC 333</td>
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<td>Computer Networks</td>
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</tr>
<tr>
<td>CPSC 340</td>
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<td>Principles of Software Engineering</td>
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</tr>
<tr>
<td>CPSC 352</td>
<td></td>
<td>Artificial Intelligence</td>
<td></td>
</tr>
<tr>
<td>CPSC 372</td>
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<td>Database Fundamentals</td>
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</tr>
<tr>
<td>CPSC 375</td>
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<td>High-Performance Computing</td>
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</tr>
<tr>
<td>CPSC 360</td>
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<td>Deep Learning</td>
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<tr>
<td>CPSC 385</td>
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<td>Computer Security</td>
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</table>

*can only do 1 (at most) of the following electives*

<table>
<thead>
<tr>
<th></th>
<th>Sem</th>
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<th>Course</th>
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</thead>
<tbody>
<tr>
<td>ENGR 221L</td>
<td></td>
<td>Digital Circuits and Systems</td>
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</tr>
<tr>
<td>ENGR 323L</td>
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<td>Microprocessor Systems</td>
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</tr>
<tr>
<td>MATH 228</td>
<td></td>
<td>Linear Algebra</td>
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</tr>
<tr>
<td>MATH 229</td>
<td></td>
<td>Applied Linear Algebra</td>
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</tr>
<tr>
<td>MATH 252</td>
<td></td>
<td>Introduction to Mathematical Modeling I</td>
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<tr>
<td>MATH 254</td>
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<td>Introduction to Mathematical Modeling II</td>
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<tr>
<td>MATH 305</td>
<td></td>
<td>Probability</td>
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<tr>
<td>MATH 309</td>
<td></td>
<td>Numerical Analysis</td>
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</tr>
<tr>
<td>MATH 314</td>
<td></td>
<td>Combinatorics and Computing</td>
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</tr>
<tr>
<td>MATH 326</td>
<td></td>
<td>Graph Theory with Applications</td>
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### Senior Exercise (Seminar + Project)

<table>
<thead>
<tr>
<th></th>
<th>Sem</th>
<th>Grade</th>
<th>Course</th>
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</thead>
<tbody>
<tr>
<td>CPSC 403</td>
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<tr>
<td>CPSC 404</td>
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<tr>
<td>CPSC 498</td>
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</tr>
<tr>
<td>CPSC 499</td>
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*Students must register for all four seperately. They also receive separate grades.*
## B.S. IN COMPUTER SCIENCE

**Recommended Course Load**

<table>
<thead>
<tr>
<th></th>
<th>FALL</th>
<th>SPRING</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st year</td>
<td>Freshman Seminar</td>
<td>CPSC 215L Data Structures and Algorithms</td>
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<tr>
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<td>CPSC 115L Intro to Computing</td>
<td>CPSC 203 Math Found. of Computing</td>
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<td>MATH 131 Calculus I</td>
<td>MATH 132 Calculus II</td>
</tr>
<tr>
<td>2nd year</td>
<td>Theory Course</td>
<td>Systems Course</td>
</tr>
<tr>
<td></td>
<td>CPSC 275L Intro. To Computer Systems</td>
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<tr>
<td>3rd year</td>
<td>Software Course</td>
<td>Elective 2</td>
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<tr>
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<tr>
<td>4th year</td>
<td>CPSC 403 Senior Seminar</td>
<td>CPSC 404 Senior Seminar</td>
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