Computer Science Major Requirements (13.25 credits) [updated Spr21]

[prerequisites are shown in brackets]

Core Courses (5.25 credits)
- CSCI 100: Scientific Computing or CSCI 102: Multimedia Computing [CS100/102]
- CSCI 110: Imperative Problem Solving
- CSCI 120: Data Structures and Algorithms & lab (1.25 credits) [CS110]
- MATH 110: Applied Differential Calculus^ [M105 or placement]
- MATH 120: Applied Integral Calculus ^ [M110]
- MATH 130: Mathematical Foundations of Computing [any CS course]

Elective Courses (5.0 credits)
- CSCI 210 [CS120] or CSCI 212 [CS120]
- CSCI 220 [CS120+M120+M130] or CSCI 222 [CS120]
- CSCI 230 (W) [CS120] or CSCI 232 [CS120]
- Two CSCI 3xx courses (prereqs: 300 & 310 [CS2xx+M120+M130], 320 & 330 [CS120])

Independent Study (3.0 credits)
- CSCI 200: Algorithm Analysis (Junior I.S.) [M120+M130] and [CS230 or CS120+W]
- CSCI 451: Senior I.S. (first semester) [CS200]
- CSCI 452: Senior I.S. (second semester) [CS451]

^ 0.5 credits, half-semester

Computer Science Minor (7.75 credits)
- CSCI 100 or 102; CSCI 110; CSCI 120; MATH 110; MATH 130;
- and three full-credit CSCI 2xx/3xx courses

Offered EVERY semester
- CSCI 100: Scientific Computing
- CSCI 110: Imperative Problem Solving
- CSCI 120: Data Structures and Algorithms
- MATH 110: Applied Differential Calculus
- MATH 120: Applied Integral Calculus

FALL only
- CSCI 102: Multimedia Computing
- CSCI 210: Principles of Comp. Organization*
- CSCI 212: Operating Systems**
- CSCI 230: Software Engineering (W)
- CSCI 300: Computer Graphics*
- CSCI 320: User Interface Design**
*Offered fall of odd years only (F21, F23)
**Offered fall of even years only (F22, F24)

SPRING only
- MATH 130: Mathematical Foundations of Computing
- CSCI 200: Algorithm Analysis
- CSCI 220: Theory of Computation**
- CSCI 222: Programming Languages*
- CSCI 232: Software Engineering—Databases
- CSCI 310: Machine Intelligence*
- CSCI 330: Computer Networking and Communication**
*Offered spring of odd years only (Spr23, Spr25)
**Offered spring of even years only (Spr22, Spr24)

• CS majors or minors may minor in SDS, but no other major/minor combinations between these two fields are allowed.
• Students may place out of required math courses via AP Calculus exam scores or Wooster’s calculus placement exam.
• Students with a score of 4 or 5 on the AP Computer Science A exam receive credit for CS 100 and placement into CS 110. If they also have a calculus placement of MATH 120 or higher, then they may also skip CS 110 and begin in CS 120.
## CS major prerequisite structure

*(first 4-5 semesters only)*

![Diagram of CS major prerequisite structure](image)

### Sample Course Timelines

<table>
<thead>
<tr>
<th></th>
<th>Typical</th>
<th>Accelerated</th>
<th>Delayed Start</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fall</strong></td>
<td>First Year</td>
<td>First Year</td>
<td>First Year</td>
</tr>
<tr>
<td>CS 100 or 102</td>
<td>CS 110</td>
<td>CS 110</td>
<td>CS 100 or 102</td>
</tr>
<tr>
<td>M 110 &amp; 120</td>
<td>M 130</td>
<td>M 110 &amp; 120</td>
<td>M 130</td>
</tr>
<tr>
<td></td>
<td><strong>Sophomore Year</strong></td>
<td><strong>Sophomore Year</strong></td>
<td><strong>Sophomore Year</strong></td>
</tr>
<tr>
<td>CS 120</td>
<td>CS 22x</td>
<td>CS 230 (W)</td>
<td>CS 110</td>
</tr>
<tr>
<td>[CS 330 or 332]</td>
<td>CS 21x</td>
<td>CS 21x</td>
<td>M 110 &amp; 120</td>
</tr>
<tr>
<td>[CS 320]</td>
<td>[CS 310 or 310]</td>
<td>[CS 310 or 310]</td>
<td>M 130</td>
</tr>
<tr>
<td></td>
<td><strong>Junior Year</strong></td>
<td><strong>Junior Year</strong></td>
<td><strong>Junior Year</strong></td>
</tr>
<tr>
<td>CS 230 (W)</td>
<td>CS 200</td>
<td>CS 300 or 300</td>
<td>CS 230 (W)</td>
</tr>
<tr>
<td>CS 21x</td>
<td>CS 310 or 310</td>
<td>CS 310 or 310 or 310</td>
<td>CS 21x</td>
</tr>
<tr>
<td>[CS 300 or 300]</td>
<td>[CS 310 or 310]</td>
<td>[CS 310 or 310]</td>
<td>[CS 320]</td>
</tr>
<tr>
<td></td>
<td><strong>Senior Year</strong></td>
<td><strong>Senior Year</strong></td>
<td><strong>Senior Year</strong></td>
</tr>
<tr>
<td>CS 451</td>
<td>CS 452</td>
<td>CS 451</td>
<td>CS 451</td>
</tr>
<tr>
<td>CS 300 or 300</td>
<td>CS 300 or 300</td>
<td>CS 300 or 300 or 300</td>
<td>CS 310 or 300 or 300</td>
</tr>
</tbody>
</table>

[Courses shown in brackets are optional substitution opportunities, replacing a related course in a different semester]

% CSCI 300 is offered in fall of odd years only (F21, F23), while CSCI 320 is offered in fall of even years only (F22, F24)

# CSCI 310 is offered in spring of odd years only (Spr23, Spr25), while CSCI 330 is offered in spring of even years only (Spr22, Spr24)

* CSCI 232 + any W course, will replace the CS 230W requirement