# Bachelor of Science in Computer Science – COMP Associate Degree for Transfer Roadmap

This is a sample pathway for students who transfer to San Francisco State University in the current Bulletin year with an AS-T in Computer Science. 28 units in the major (MATH 226, MATH 227, PHYS 220/PHYS 222, PHYS 230/PHYS 232, CSC 210, CSC 220, CSC 230, CSC 256) and all lower division GE requirements have been satisfied. Additional units in the major may have been satisfied. Check with a major advisor about the most appropriate course sequence. Degree completion guaranteed in 60 units; see the Associate Degree for Transfer (ADT) section for more information.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First Semester</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BIOL 100 or BIOL 176</td>
<td>Human Biology or Science and Politics of Stem Cell Biology</td>
<td>3</td>
</tr>
<tr>
<td>or University Elective if Science Elective met in transfer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CSC 340</td>
<td>Programming Methodology</td>
<td>3</td>
</tr>
<tr>
<td>CSC 412</td>
<td>Advanced Software Lab</td>
<td>3</td>
</tr>
<tr>
<td>MATH 324</td>
<td>Probability and Statistics with Computing</td>
<td>3</td>
</tr>
<tr>
<td>MATH 325</td>
<td>Linear Algebra</td>
<td>3</td>
</tr>
<tr>
<td>GE Area A: Written English Communication II (A4) or University Elective if A4 met in transfer</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td><strong>Units</strong></td>
<td></td>
<td>16</td>
</tr>
<tr>
<td><strong>Second Semester</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CSC 300GW</td>
<td>Ethics, Communication and Tools for Software Development - GWAR</td>
<td>3</td>
</tr>
<tr>
<td>CSC 413</td>
<td>Software Development</td>
<td>3</td>
</tr>
<tr>
<td>CSC 415</td>
<td>Operating System Principles</td>
<td>3</td>
</tr>
<tr>
<td>HIST 470 or HIST 471</td>
<td>The U.S. Constitution to 1896 or The U.S. Constitution since 1896</td>
<td>3</td>
</tr>
<tr>
<td><strong>Units</strong></td>
<td></td>
<td>14</td>
</tr>
<tr>
<td><strong>Third Semester</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CSC 510</td>
<td>Analysis of Algorithms I</td>
<td>3</td>
</tr>
<tr>
<td><strong>Units</strong></td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

**University Electives:** Five or More Units

To Do at SF State:

- **University-Wide Requirements:** 9–12 Units
  - ENG 214 or equivalent A4 course (0–3 units) if not taken before transfer
  - Upper Division GE, areas B, C, D (9 units): Recommended courses for UD-C also satisfy the US History, US Government, and California State and Local Government requirements if not taken before transfer. See notes.
  - Students entering the major with the AS-T in Computer Science are not required to fulfill SF State Studies and Complementary Studies requirements.
- **Computer Science Major:** 40–43 Units
  - Science elective: 0–3 units (BIOL 100 or BIOL 176) if not completed before transfer
  - Mathematics: 6 units
  - Core/GWAR: 10 units
  - Advanced CSC requirements: 24 units, including electives. Electives must include CSC 520 or CSC 656; are selected from nine subareas of Computer Science; and must meet specific Depth and Breadth requirements.
  - Senior Presentation: required oral presentation during senior year (0 units)

- **University Electives:** Five or More Units

Depends on course choices made at the community college, how transferred units are applied to the requirements above, and course choices at SF State. Some courses may meet more than one requirement, e.g. in both UD GE and in the major.