Bachelor of Arts in Chemistry – CHEM 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 Chemistry. Thirty-four units in the major (CHEM 115/CHM 215/CHM 216, CHEM 233/CHM 234, CHEM 335/CHM 336, MATH 226/MATH 227, required PHYS sequence) and 33 units of lower division GE have been satisfied. Check with a major advisor about the most appropriate course sequence for you. Degree completion guaranteed in 60 units; see the Associate Degree for Transfer (ADT) section for more information (http://bulletin.sfsu.edu/undergraduate-admissions/transfer-students).

Course | Title | Units |
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**First Semester**<br>CHEM 321 & CHEM 322 | Quantitative Chemical Analysis and Quantitative Chemical Analysis Laboratory | 5 |
CHEM 390GW | Contemporary Chemistry and Biochemistry Research - GWAR | 3 |
GE Area A: Written English Communication II (A4) | 3 |
or University Elective if A4 is met in transfer |<br>US History (bulletin.sfsu.edu/undergraduate-education/graduation-requirements/#USHaGR) | 3 |
or University Elective if US History met before transfer |<br>Units | 14 |
**Second Semester**<br>CHEM 300 | General Physical Chemistry I | 3 |
CHEM 349 or CHEM 340 | General Biochemistry or Biochemistry I | 3 |
GE Area D: Social Sciences (D1) or U.S. History (D2) or U.S. and California Government (D3) | 3 |
Upper Division GE: UD-B, UD-C, or UD-D | 3 |
GE Area C: Arts (C1) or Humanities (C2) or Humanities: Literature (C3) | 3 |
**Units** | 15 |
**Third Semester**<br>CHEM 325 | Inorganic Chemistry | 3 |
Upper Division GE: UD-B, UD-C, or UD-D | 3 |
University Elective – Take Two or Three | 6-9 |
**Units** | 13 |
**Fourth Semester**<br>Upper Division GE: UD-B, UD-C, or UD-D | 3 |
U.S. and California Government (bulletin.sfsu.edu/undergraduate-education/graduation-requirements/#usg) | 3 |

To Do at SF State:

Enough total units to reach 120 minimum for graduation; 40 units minimum at the upper division level, to include the following:

**University-Wide Requirements: 15-24 Units**
- ENG 214 or equivalent A4 course (0-3 units) if not taken before transfer
- American Institutions (0-6 units): US History, US Government, California State and Local Government requirements if not taken before transfer
- Lower division GE (6 units) - Area C (3 units in any subarea) and Area D (3 units in any subarea)
- Upper division GE, areas B, C and D (9 units)
- Students entering this major with the AS-T in Chemistry are not required to fulfill SF State Studies requirements.
- Complementary Studies is met in major with required PHYS and MATH courses.

**Chemistry B.A.: 20-23 Units**
Completed: CHEM 115/CHM 215/CHM 216, CHEM 233/CHM 234, CHEM 335/CHM 336, MATH 226/MATH 227, required PHYS sequence.
- Major Upper Division Requirements/GWAR (17-20 units)
- Major Advanced Laboratory Electives (3 units) - Consult with an advisor regarding selection of elective courses and check course co- and prerequisites before enrolling.

**University Electives: 13 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., UD GE and the major. Upper-division electives are recommended to meet the minimum 40-unit requirement.