

**San Francisco State University**  
**Degree Roadmap: Bulletin Year 2008 - 2009**

May 22, 2008

**BS Degree in Biochemistry (670703)**

Minimum Number of Units in Major = 71

Bulletin URL: <http://www.sfsu.edu/~bulletin/current/programs/chemist.htm#670703> Key to Course Abbreviations: <http://www.sfsu.edu/~admisrec/reg/noindex/crsabbrev.html>

| 1st Semester Requirements   |                        |                 |
|---|------------------------|-----------------|
| Requirement   | Recommended Courses    | Units           |
| Basic Information Competence  |                        |                 |
| Written English Proficiency   | ENG 114                | 3               |
| GE 1 Oral Communication   | COMM 150               | 3               |
| GE 2 Physical and Biological Sciences, Category A also satisfies Major Lower Division (See Note 1)  | PHYS 111               | 3               |
| Major Lower Division (See Note 1)   | PHYS 112               | 1               |
| Major Lower Division  | CHEM 115               | 5               |
| <b>Totals:</b>  |                        | <b>15</b>       |
| Note: Review the Bulletin for GE II requirements in the following areas:<br>LLD-Lifelong Development; AERM-American Ethnic and Racial Minorities; L/F-Laboratory or Fieldwork |                        |                 |
| 2nd Semester Requirements   |                        |                 |
| Requirement   | Recommended Courses    | Units           |
| GE 1 Critical Thinking  |                        | 3               |
| GE 2 Humanities and Creative Arts   |                        | 3               |
| Major Lower Division (See Note 1)   | PHYS 121<br>& PHYS 122 | 4               |
| Major Upper Division  | CHEM 333<br>& CHEM 334 | 5               |
| <b>Totals:</b>  |                        | <b>15</b>       |
| 3rd Semester Requirements   |                        |                 |
| Requirement   | Recommended Courses    | Units           |
| GE 1 Written Communication also satisfies University Written English Proficiency  |                        | 3               |
| GE 1 Quantitative Reasoning also satisfies Major Lower Division   | MATH 226               | 4               |
| GE 2 Physical and Biological Sciences, Category B also satisfies Major Lower Division   | BIOL 230               | 5               |
| Major Upper Division  | CHEM 335               | 3               |
| <b>Totals:</b>  |                        | <b>15</b>       |
| 4th Semester Requirements   |                        |                 |
| Requirement   | Recommended Courses    | Units           |
| GE 2 Behavioral and Social Sciences   |                        | 3               |
| GE 2 Humanities and Creative Arts   |                        | 3               |
| Major Lower Division  | CHEM 215<br>& CHEM 216 | 5               |
| Major Lower Division  | MATH 227               | 4               |
| <b>Totals:</b>  |                        | <b>15</b>       |
| 5th Semester Requirements   |                        |                 |
| Requirement   | Recommended Courses    | Units           |
| University UD Written English Proficiency   |                        | 3               |
| GE 2 Physical and Biological Sciences, Category C   |                        | 3               |
| GE 2 Behavioral and Social Sciences   |                        | 3               |
| GE 2 Humanities and Creative Arts   |                        | 3               |
| Major Upper Division  | CHEM 320               | 4               |
| Major Upper Division  | CHEM 340               | 3               |
| <b>Totals:</b>  |                        | <b>19</b>       |
| 6th Semester Requirements   |                        |                 |
| Requirement   | Recommended Courses    | Units           |
| US History  |                        | 3               |
| GE 2 Behavioral and Social Sciences   |                        | 3               |
| GE 3  |                        | 3               |
| Major Upper Division  | CHEM 341               | 3               |
| Major Upper Division  | CHEM 343               | 3               |
| <b>Totals:</b>  |                        | <b>15</b>       |
| 7th Semester Requirements   |                        |                 |
| Requirement   | Recommended Courses    | Units           |
| US Government and California  |                        | 3               |
| GE 3  |                        | 3               |
| Major Upper Division (See Notes 2 & 3)  | CHEM 300               | 3               |
| Major Upper Division Elective (on advisement, see Note 5)   |                        | 7               |
| <b>Totals:</b>  |                        | <b>16</b>       |
| 8th Semester Requirements   |                        |                 |
| Requirement   | Recommended Courses    | Units           |
| GE 3  |                        | 3               |
| Major Upper Division (See Notes 2 & 4)  | CHEM 301               | 3               |
| Major Upper Division Elective (on advisement, see Note 5)   |                        | 6               |
| University Elective   |                        | 0 to 2          |
| <b>Totals:</b>  |                        | <b>12 to 14</b> |

Note: All courses required for the major must be completed with grades of C- or better.

Note 1: PHYS 220/222 and PHYS 240/242 may be substituted for PHYS 111/112 and PHYS 121/122.

Note 2: CHEM 351 and 353 may be substituted for CHEM 300 and 301 upon advisement.

Note 3: This course typically offered fall semester only.

Note 4: This course typically offered spring semester only.

Note 5: Consult with a major advisor regarding appropriate choice of major electives and be sure to check course prerequisites before enrolling.

Department Website: <http://www.chemistry.sfsu.edu/>