This is a sample pathway for students who transfer to San Francisco State University in the current Bulletin year with an AS-T in Physics. Twenty-four units in the major (MATH 226, MATH 227, MATH 228, PHYS 220, PHYS 222, PHYS 230, PHYS 232, PHYS 240, and PHYS 242) 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 (http://bulletin.sfsu.edu/undergraduate-admissions/transfer-students/).

To Do at SF State:

Enough total units to reach 120 minimum for graduation; 30 units minimum at the upper-division level; to include the following:

**University-Wide Requirements: 9-15 Units**
- American Institutions (0-6 units): US History, US Government, California State and Local Government requirements if not taken before transfer
- Upper-division GE areas B, C, and D (9 units): Courses required for the major may double-count if approved for UD GE.
- Students entering the major with the AS-T in Physics are not required to fulfill SF State Studies or Complementary Studies requirements.

**Physics B.S. (Teaching) Major: 37-40 Units**

MATH 226, MATH 227, MATH 228, PHYS 220, PHYS 222, PHYS 230, PHYS 232, PHYS 240, and PHYS 242 met in transfer.

- Prerequisites (3 units if MATH 245 equivalent not completed before transfer; see note 1 above)
- Upper-division Requirements (25 units)
- Electives (12 units): May be lower- or upper-division. Selected in consultation with a department advisor; courses should prepare students to teach a second subject in addition to physics, or general science at the 9th-grade level.

**University Electives: 6 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., both in UD GE and the major.
**PHYS 385**  
Introduction to Theoretical Physics I (Major Upper-Division Core)  
Units  
---  
**Fourth Semester**  
<table>
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<tr>
<td>PHYS 360</td>
<td>Electricity and Magnetism I (Major Upper-Division Core)</td>
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<td>PHYS 370</td>
<td>Thermodynamics and Statistical Mechanics (Major Upper-Division Core)</td>
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Major Elective (12 Units Total) - Take Two  
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**Fifth Semester**  
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<td>PHYS 491GW</td>
<td>Advanced Laboratory Techniques I - GWAR (Major Upper-Division Core)</td>
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<td>PHYS 695</td>
<td>Culminating Experience in Physics (Major Upper-Division Core)</td>
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<td>SCI 652</td>
<td>Major Upper-Division Core</td>
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</table>

Major Elective (12 Units Total) - Take Two  
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Total Units 56  

1 Selected in consultation with a departmental advisor to prepare to teach a second subject in addition to physics, or general science at the 9th grade level. Electives may be lower-division or upper-division courses. If MATH 325 was taken, those units can be applied to this requirement.