BACHELOR OF SCIENCE IN PHYSICS – PHYS 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 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).

Course Title Units
First Semester
HIST 470 or HIST 471 3

MATH 245
or MATH 376 3

PHYS 320 & PHYS 321 5

GE Area UD–B: Upper Division Physical and/or Life Sciences 3

Second Semester
CSC 309 3

RRS 600/HIST 466 or AIS 460 3

PHYS 360 3

PHYS 370 3

GE Area A: Written English Communication II (A4) or University Elective if A4 was met before transfer 3

Third Semester
PHYS 430 Quantum Mechanics 4 3

PHYS 460 Electricity and Magnetism II 4 3

PHYS 490 Physics Project Laboratory 4 2

Major Elective – Take Two 7

Units 15

Fourth Semester
PHYS 431 Quantum Mechanics II 8 3

PHYS 457 Introduction to Analog Electronics 8 4

PHYS 491GW Advanced Laboratory II - GWAR 8 1

PHYS 695 Culminating Experience in Physics 8 1

GE Area UD–B: Upper Division Physical and/or Life Sciences or University Elective if UD-B was already satisfied 3

University Elective 4

Units 16

Total Units 60

1 HIST 470 and HIST 471 satisfy GE UD-C and US/CA Government.
2 Take PHYS 330 if MATH 245 complete.
3 A course in differential equations and linear algebra is required before taking PHYS 330 and PHYS 385. Students transferring in without an equivalent to MATH 245 must delay taking PHYS 330 and PHYS 385 until the following Fall semester, which will affect other elements of this sample advising plan. Overall time for degree completion will be extended. Students in this situation should consult with a department advisor for an alternate advising plan.
4 PHYS 320/PHYS 321, PHYS 430, PHYS 460 and PHYS 490 are offered fall semesters only.
5 PHYS 385 must be taken before PHYS 360.

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: 9-12 Units
- ENG 214 or equivalent A4 course (0-3 units) if not taken before transfer
• Upper division GE (9 units): If necessary, specific choices can be made to satisfy the US History and Government requirements and UD-C and UD-D at the same time. See notes.
• 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. Major: 44-47 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 three above)
• Upper-division Requirements (34 units)
• Upper-division Electives (10 units): May be units in astronomy, physics, mathematics, or related sciences.

University Electives: Four 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.