

**Requirements for the minor in  
ASTRONOMY AND PLANETARY SCIENCE, 2022-2023**

All courses to be applied to the minor must be completed on a letter-grade basis, with the exception of up to 5 units from the following: Physics 145L, 198, 199.

**PREPARATION**

**UNITS TO COMPLETE**

Physics 1-2-3-4-5 (or Physics 21-22-23-24-25) and Physics 3L-4L-5L  
 or 20AL-BL-CL or 13AL-BL-CL ..... 20-26 \_\_\_\_\_

Mathematics 2A or 3A, 2B or 3B, 4A-B, 6A-B ..... 24-26 \_\_\_\_\_

Recommended: Chemistry 1A-B-C, Earth Science 2. These courses are prerequisite to several of the upper-division elective choices below.

**UPPER-DIVISION**

18 UD units are required, distributed as follows:

Physics 132 .....4 \_\_\_\_\_

Physics 133 .....4 \_\_\_\_\_

Ten units chosen from Physics 131, 136, 137, 134L, 141, 145L, 198\*, 199\*;  
 Earth Science 123, 124G, 159, 198\*, 199\* .....10 \_\_\_\_\_

\* Project must be approved by the faculty advisor. In addition, no more than 5 units from Physics 198, 199 and Earth Science 198, 199 will be accepted toward the minor.

Students must consult the *General Catalog* for prerequisites to required courses.

The following conditions must also be met for official recognition of the minor:

- The sponsoring department reports completion of the minor prior to the posting of the degree.
- At least 18 upper-division quarter units are completed for the minor. (Waivers cannot reduce the requirement below this number.)
- The UC grade-point average in ALL applicable upper-division courses is 2.0 or higher.
- No more than 5 upper-division units overlap between this minor and the upper-division portion of the major(s) or other minor(s). If overlap is greater with the major(s), completion of the minor will not be formally recognized; if overlap with other minor(s) is greater, only the first minor reported will be recognized