School of Earth and Space Exploration
Arizona State University

Catalog Year: 2025-2026

The BS degree in Earth and Space Exploration with a concentration in Geological and Planetary Sciences requires the following core courses (27 credits):

SES 121 Earth, Solar Sys, & Universe (3)*
SES 123 Earth, Solar Sys, & Universe Lab (1)*
SES 122 History of Earth & Solar System (3)*
SES 124 History of Earth & Solar System Lab (1)*
SES 230 Coding for Exploration (3)
GLG 305 Dynamic Earth (3)
GLG 310 Structural Geology (3)
GLG 321 Mineralogy (3)
GLG 451 Field Geology I (3)
GLG 452 Field Geology II (3)
SES 401 SESE Colloquium (1)

PLUS at least ONE of the following Tier 1 Branch Courses (3 credits)*:

GLG 424 Petrology (3)
GLG 435 Sedimentology (3)

AND at least THREE of the following Tier 2 Branch Courses (9 credits):

GLG 362 Geomorphology (3)
GLG 404 Foundations of Planetary Geology
GLG 418 Geophysics (3)
GLG 424 Petrology (3)
GLG 430 Paleontology (3)
GLG 435 Sedimentology (3)
GLG 470 Hydrogeology (3)
GLG 481 Geochemistry (3)
SES 421 Foundations of Planetary Science

AND a minimum of THREE additional upper-division GLG or SES elective courses (9 credits):

GLG or SES elective (3)
GLG or SES elective (3)
GLG or SES elective (3)

Required courses in related math and science fields (14 credits):

CHM 114 General Chemistry I SQ (4)*
MAT 265 Calculus for Engineers I (3) or MAT 270 Calculus w/Analytic Geometry I (4)
MAT 266 Calculus for Engineers II (3) or MAT 271 Calculus w/Analytic Geometry II (4)
PHY 121 University Physics I: Mechanics (3)
PHY 122 University Physics Laboratory I (1)

***IMPORTANT NOTES:**

- For Arizona community college transfer students, the full sequence of GLG 101-104 may be substituted for SES 121-124.
- GLG 424 and GLG 435 cannot double count towards both the Tier 1 and Tier 2 Branch areas. Students who take both GLG 424 and GLG 435 can use one towards Tier 1 and the other towards Tier 2.
- SESE will accept CHM 116 in place of CHM 114. A prerequisite of CHM 113 is required for CHM 116.
- Upper-division courses consist of those at the 300 and 400 level with numbers between 300-499.
- Students must receive a grade of “C” or better in all of the above courses in order for them to count toward the major.
- Substitutions for any of the requirements above must be approved by a SESE advisor and students must notify their advisor if substitutions or other requirements show incorrectly on DARS.

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Updated 7/31/2025 by KWallace