School of Earth and Space Exploration
Arizona State University

Catalog Year: 2025-2026

BS Earth and Space Exploration (Geological and Planetary Sciences) course information*

Course prefix	Course Name	Hrs	When	Prerequisites
SES 121	Earth, Solar System and Universe	3	F	
SES 123	Earth, Solar System and Universe Lab	1	F	Pre- or coreq: SES 121 with C or better if completed
SES 122	History of Earth and Solar System	3	S	SES 121 with C or better
SES 124	History of Earth and Solar System Lab	1	S	SES 123 with C or better; Pre- or coreq: SES 122 with C or better if completed
SES 230	Coding for Exploration	3	S	AST 111 or GLG 101 or SES 121 with C or better; Pre- or coreq: MAT 265 or 270 with C or better if completed.
GLG 305	Dynamic Earth	3	S	All with C or better: CHM 101 or higher; both GLG 101 and 103, or both GLG 110 and 111, or both SES 121 and 123; MAT 170, 210, 251, 265 or 270
GLG 310	Structural Geology	3	F	GLG 101 or SES 121 with C or better; MAT 170, 171, 210, 251, 265, or 270 with C or better
GLG 321	Mineralogy	3	F	CHM 113 or 114 (or both CHM 111 and 117) with C or better; MAT 170, 210, 265 or 270 with C or better
GLG 451	Field Geology I	3	S	ENG 101, 105, or 107 with C or better; GLG 310 with C or better; Pre- or coreq: GLG 321
GLG 452	Field Geology II	3	SS	ENG 101, 105, or 107 with C or better; GLG 310 with C or better; GLG 321 with C or better; GLG 451 with C or better
GLG branch	See Page 2 for course options	12	F,S	Students need four GLG branch courses (one from Tier 1 and three from Tier 2)
GLG electives	Upper-division GLG or SES electives	9	F,S	Must be 300-499 level. Any upper-division GLG or SES course offered by SESE which is not being used in the core or branch course requirements.
SES 401	SESE Colloquium	1	F,S	Minimum 45 hours
CHM 114*	General Chemistry I	4	F,S,SS	CHM 101 with C or better or ALEKS score of 61 or higher OR Pre- or coreq: MAT 170, 171, 210, 251, 265 or 270 with C or better if completed
MAT 265/270	Calculus I	3	F,S,SS	MAT 170 or 171 with C or better or ALEKS score of 76 or higher. Credit is allowed for only MAT 265 or MAT 270
MAT 266/271	Calculus II	3	F,S,SS	MAT 265 or 270 with C or better; Credit is allowed for only MAT 266 or 271
PHY 121	University Physics I: Mechanics	3	F,S,SS	MAT 265 or 270 with C or better; Pre- or coreq: MAT 266 or 271 with C or better if completed
PHY 122	University Physics Laboratory I	1	F,S,SS	Pre- or coreq: PHY 121 with C or better if completed

Select at least 1 of the following Tier 1 Branch Course options (3 credits minimum):

Course prefix	Course Name	Hrs	When	Prerequisites
GLG 424	Petrology	3	S	GLG 321 with C or better
GLG 435	Sedimentology and Stratigraphy	3	S	GLG 102 or SES 122 with C or better

Select at least 3 of the following Tier 2 Branch Course options (9 credits minimum):

Course prefix	Course Name	Hrs	When	Prerequisites
GLG 362	Geomorphology	3	F	GLG 101, GLG 110, or SES 121 with C or better; MAT 170, 210, 265 or 270 with C or better
GLG 404	Fundamentals of Planetary Geology	3	F	GLG 101, GLG 102, SES 121, or SES 122 with C or better
GLG 418	Geophysics	3	F	MAT 272 or 267 with C or better; PHY 131 and 132 (or PHY 151) with C or better
GLG 424	Petrology	3	S	GLG 321 with C or better
GLG 430*	Paleontology	3		GLG 102 or SES 122 with C or better; GLG 104 or SES 124
GLG 435	Sedimentology and Stratigraphy	3	S	GLG 102 or SES 122 with C or better
GLG 470	Hydrogeology	3	F	
GLG 481	Geochemistry	3	F, S	BCH 341, CHM 341, CHM 346 or GLG 321 with C or better
SES 421	Foundations of Planetary Science	3	F	MAT 266 or 271 with C or better; PHY 121 and PHY 122 (or PHY 150) with C or better OR AST 301

Codes for offering: F = fall, S =spring, SS =summer session

A semicolon (;) equals “AND”

*IMPORTANT NOTES:

- This handout is intended as a helpful tool for scheduling planning only. Students and advisors should consult the course catalog for official course information as pre-requisites and course offerings are constantly evolving.
- This document reflects updated degree changes for Fall 2025 and beyond. If you are in an earlier catalog year, your requirements may be different. Make sure to check your DARS report to see the requirements for your catalog year and consult with your major advisor if you have any questions.
- 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.
- GLG 430 has not been taught since Spring 2022 and there are no current plans to offer this class again in the near future.