School of Earth and Space Exploration
Arizona State University

Catalog Year: 2025-2026

Earth and Space Exploration (Astrobiology & Biogeosciences) BS Course Prerequisites

Course	Title	Hrs	When	Prerequisites
SES 121	Earth, Solar System & Universe	3	F	
SES 123	Earth, Solar System & Universe Lab	1	F	SES 121 with C or better if completed
Term 2 intro SES classes – select either SES 122 and 124 OR SES 126 and 128				
SES 122	History of Earth & Solar System	3	S	SES 121 with C or better
SES 124	History of Earth & Solar System Lab	1	S	SES 123 with C or better; Pre- or co-requisite: SES 122 with C or better if completed
SES 126	Exploration of the Universe	3	S	SES 121 with C or better; Pre- or co-requisite: MAT 170, 171, 210, 251, 265, or 270 with C or better if completed
SES 128	Exploration of the Universe Lab	1	S	SES 123 with C or better; Pre- or co-requisite: SES 126 with C or better if completed
BIO 340	General Genetics	4	F,S,SS	BIO 181 with C or better; BIO 182 with C or better; Credit is only allowed for BIO 340 or MBB 347
BIO 345	Organic Evolution	3	F,S,SS	BIO 340, LSC 347, or MBB 347 with C or better
GLG 321	Mineralogy	3	F	CHM 113 (or CHM 114 or both CHM 111 and 117) with C or better; MAT 170, 210, 265 or 270 with C or better
GLG 481	Geochemistry	3	F,S	BCH 341, CHM 341, CHM 346, or GLG 321 with C or better; Credit is allowed for only CHM 481 or GLG 481
SES 311	Essentials of Astrobiology	3	S	BIO 181 (or 188), CHM 113 or PHY 121; MAT 265 or MAT 270
SES 350	Engineering Systems and Experimental Problem Solving	3	F	All with C or better: MAT 266 or 271; MAT 267, MAT 272, or STP 231; PHY 150 (or both PHY 121 and PHY 122)
SES 410	Senior Exploration Project I	3	F	Earth and Space Exploration BS major; ENG 101, 105 or 107 with C or better; minimum senior standing
SES 411	Senior Exploration Project II	3	S	ENG 101, ENG 105 or ENG 107; SES 410
UD electives	Various course options	6	F,S	See list on Page 2 for suggestions
BIO 181	General Biology I	4	F,S,SS	Credit is allowed for only BIO 181 or BIO 281 or BIO 282
BIO 182	General Biology II	4	F,S,SS	BIO 181 with C or better; Credit is allowed for only BIO 182 or BIO 281 or BIO 282
CHM 113	General Chemistry I	4	F,S,SS	CHM 101 with C or better or ALEKS score of 61 or higher OR Pre- or co-requisite(s): MAT 170, 171, 210, 251, 265 or 270 with C or better if completed
CHM 116	General Chemistry II	4	F,S,SS	CHM 113, 114, or 117 with C or better

MAT 265 or 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 or 271	Calculus II	3	F,S,SS	MAT 265 or 270 with C or better; Credit is allowed for only MAT 266 or MAT 271
MAT 267 or STP 231	Calculus III or Statistics for Life Science	3	F,S,SS	MAT 267: MAT 266 or 271 with C or better STP 231: MAT 114 (or MAT 142) or MAT 117 or higher with C or better or ALEKS score of 61 or higher
PHY 121	University Physics I: Mechanics	3	F,S,SS	MAT 265 or 270 with C or better; Pre- or co-requisite(s): MAT 266 or 271 with C or better if completed
PHY 122	University Physics Laboratory I	1	F,S,SS	Pre/Co-req: PHY 121 with C or better if completed
PHY 131	University Physics II: Elec.& Mag.	3	F,S,SS	MAT 266 or 271 with C or better; PHY 121 or 150 with C or better; Pre- or co-requisite(s): MAT 267 or 272 with C or better if completed
PHY 132	University Physics Laboratory II	1	S,SS	Pre/Co-req: PHY 131 with C or better if completed

Suggested upper-division major electives (or substitute other upper division SES/GLG/AST classes with advisor approval):

Course	Title	Hrs	When	Prerequisites
AST 321	Stellar and Planetary Astrophysics	3	F	All with C or better: AST 112 or both SES 126 and 128; MAT 266 or 271; PHY 121 and 122 (or PHY 150)
BIO 320	Fundamentals of Ecology	3	F,S,SS	All with C or better: BIO 181 and BIO 182 (or SES 220); CHM 116 or 118
GLG 325	Oceanography	3	F	All with C or better: BIO 100, BIO 182, BIO 282, SEA 220, SES 220, SES 225, or both GLG 101 & 103, or both SES 121 & 123; CHM 101, 113, 114, 117, or both CHM 107 & 108; Credit allowed for BIO 325 or CHM 385 or GLG 325 or SEA 325
GLG 404	Fundamentals of Planetary Geology	3	F	GLG 101, GLG 102, SES 121, or SES 122 with C or better
GLG 435	Sedimentology	3	S	GLG 102 or SES 122 with C or better
GLG 460*	Astrobiology	3	F	AST 112, BIO 182, BIO 282, GLG 102, SES 122, or SES 126 with C or better; one 300-level course in AST, BIO, CHM, GLG, MIC, PHY, or SES with C or better
GLG 485*	Meteorites and Cosmochemistry	3	S	GLG 321, CHM 341, or CHM 346 with C or better; Credit is only allowed for GLG 485 or CHM 485
GLG 489*	Field Geochemistry (L)	3	S	CHM 302, GLG 321, or GLG 481 with C or better; ENG 101, 105, or 107 with C or better; Credit is only allowed for only CHM 489 or GLG 489
GLG 490*	Special Topics: Remote Sensing	3	F	
SES 421	Foundations of Planetary Science	3	F	All with C or better: MAT 266 or MAT 271; PHY 121 and PHY 122 (or PHY 150)

*Classes may not be offered on a regular schedule. Codes for offering: F=fall, S=spring, SS=summer session semicolon (;) = AND

Special note: 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.