

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

Course prefix	Course Name	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
<b>Term 2 intro SES classes – select either SES 122 and 124 OR SES 126 and 128</b>				
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
SES 230	Coding for Exploration	3	F	AST 111 or GLG 101 or SES 121 with C or better; Pre- or co-requisite(s): MAT 265 or 270 with C or better if completed
GLG 321	Mineralogy	3	F	CHM 113 (or both CHM 111 and 117 or 114) 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 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; SES410
UD electives (2)	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 272	Calculus III	3	F,S,SS	MAT 266 or 271 with C or better; Credit is allowed for only MAT 267 or MAT 272
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 prefix	Course Name	Hrs	When	Prerequisites
AST 321	Introduction to Planetary and Stellar Astrophysics	3	F	AST 301 with C or better OR MAT 266 or 271 with C or better; PHY 121 and 122 (or PHY 150) with C or better
BIO 320	Fundamentals of Ecology	3	F,S,SS	BIO 181 with C or better; BIO 182 with C or better; CHM 116 or 118 with C or better OR CHM 116 or 118 with C or better; SES 220 with C or better
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 BIO340 or MBB 347
BIO 345	Organic Evolution	3	F,S,SS	BIO 340, LSC 347, or MBB 347 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 430	Paleontology	3	F	GLG 102 or SES 122 with C or better; GLG 104 or SES 124
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 350	Engineering Systems and Experimental Problem Solving	3	F	MAT 267, 272, or 275 with C or better; PHY 151 with C or better, or both PHY 131 and 132 with C or better OR Pre/Co-req: AST 301

\*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.