

Earth and Space Exploration concentration in Exploration Systems Design course information

Course prefix	Course Name	Hrs	When	Prerequisites
SES100	Introduction to Exploration	3	F	ALEKS score of 61 or higher, or Pre- or corequisite(s): MAT 170, 171, 210, 251, 265, or 270 with C or better if completed
SES121	Earth, Solar System & Universe	3	F	
SES123	Earth, Solar System & Universe Lab	1	F	Pre/co-req: SES 121 with C or better if completed
Term 2 intro SES classes – select either SES 122 and 124 OR SES 126 and 128				
SES122	History of Earth & Solar System	3	S	SES 121 with C or better
SES124	History of Earth & Solar System Lab	1	S	SES 123 with C or better; Pre/co-req SES 122 with C or better if completed
SES126	Exploration of the Universe	3	S	SES 121 with C or better; Pre- or corequisite(s): MAT 170, 171, 210, 251, 265, or 270 with C or better if completed
SES128	Exploration of the Universe Lab	1	S	SES 123 with C or better; Pre/co-req SES 126 with C or better if completed
EEE202	Circuits I	4	F,S,SS	Pre/co-reqs: MAT 274 or 275 with C or better if completed; PHY 131 with C or better if completed
MAE201*	Mechanics of Particles and Rigid Bodies I: Statics	3	F,S,SS	MAT 266 or 271 with C or better; PHY 121 with C or better; Credit is only allowed for MAE 201 or MAE 212
SES330	Electronics Instrumentation	4	F	EEE 202 with C or better; MAE 201 or 212 with C or better; PHY 131 and 132 (or PHY 151) with C or better
SES350	Engineering Systems and Experimental Problem Solving	3	F	MAT 267, 272, or 275 with C or better; PHY 131 and 132 (or PHY 151) with C or better
SES405	Exploration Systems Engineering	3	S	MAT 266 or 271 with C or better; PHY 121 and 122 (or PHY 150) with C or better
SES410	Senior Exploration Project I	3	F	ENG 101, ENG 105 or ENG 107 with C or better; minimum senior standing
SES411	Senior Exploration Project II	3	S	ENG 101, ENG 105 or ENG 107; SES410
CHM114**	General Chemistry for Engineers	4	F,S,SS	CHM 101 with C or better, or ALEKS score of 61 or higher, OR Pre- or corequisite(s): MAT 170, 171, 210, 251, 265, or 270 with C or better if completed

*We will accept MAE 212 if you completed the course at ASU prior to 2017, or if you have earned direct equivalency for MAE 212 from transfer coursework. Please notify your advisor if this is the case.

**Students may substitute CHM116 (must complete both CHM113 and CHM116) for CHM114

Course prefix	Course Name	Hrs	When	Prerequisites
MAT265/270	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
MAT266/271	Calculus II	3	F,S,SS	MAT 265 or 270 with C or better; Credit is allowed for only MAT 266 or 271
MAT267/272	Calculus III	3	F,S,SS	MAT 266 or 271 with C or better; Credit is allowed for only MAT 267 or 272
MAT275	Modern Differential Equations	3	F,S,SS	MAT 266 or 271 with C or better; Credit is allowed for only MAT 274 or 275
PHY121	University Physics I: Mechanics	3	F,S,SS	MAT 265 or 270 with C or better; Pre- or corequisite(s): MAT 266 or 271 with C or better if completed
PHY122	University Physics Laboratory I	1	F,S,SS	Pre- or corequisite(s): PHY 121 with C or better if completed
PHY131	University Physics II: Elec.& Mag.	3	F,S,SS	MAT 266 or 271 with C or better; PHY 121 or PHY 150 with C or better; Pre- or corequisite(s): MAT 267 or 272 with C or better if completed
PHY132	University Physics Laboratory II	1	S,SS	Pre- or corequisite(s): PHY 131 with C or better if completed

SES/AST/GLG approved electives: choose from suggested classes below or obtain advisor approval for other options.

Course prefix	Course Name	Hrs	When	Prerequisites
AST321	Intro Planetary and Stellar Astrophysics	3	F	MAT 266 or 271 with C or better; PHY 121 and 122 (or PHY 150) with C or better
AST322	Intro Galactic and Extragalactic Astro.	3	S	MAT 266 or 271 with C or better; PHY 121 and 122 (or PHY 150) with C or better
GLG321	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
GLG404	Fundamentals of Planetary Geology	3	F	GLG 101, GLG 102, SES 121, or SES 122 with C or better
GLG424	Petrology	3	S	GLG 321 with C or better
GLG471	Hydrology	3	F	CEE 341 or MEE 340 or GLG 362 with C or better
SES307	Space Works I	3	F	Pre- or corequisite(s): MAT 265 or 270 with C or better if completed
SES311	Essentials of Astrobiology	3	S	BIO 181 (188), CHM 113 or PHY 121; MAT 265 or 270
SES407	Space Works II	3	S	SES 307 with C or better

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

A semicolon (;) equals "AND"

Special note: This handout is intended as a helpful tool for scheduling planning. Students and advisors should consult the course catalog for official course information as pre-requisites and course offerings are constantly evolving.