

Earth and Space Exploration BS course information

Course prefix	Course Name	Hrs	When	Prerequisites
SES100	Introduction to Exploration	3	F	Pre / co-req MAT170 or higher or MPT score of 50% or higher
SES121	Earth, Solar System and Universe I	3	F	Pre / co-req MAT170 or higher or MPT score of 50% or higher
SES123	Earth, Solar System and Universe I-Lab	1	F	Pre / co-req MAT170 or higher or MPT score of 50% or higher AND SES121 (C or better if completed)
SES122	Earth, Solar System and Universe II	3	S	Pre-req: SES121 (C or better)
SES124	Earth, Solar System and Universe II-Lab	1	S	Pre/co-req SES122 (C or better if completed)
SES350*	Engineering Systems and Experimental Problem Solving	3	F	MAT 267, 272 or 275; PHY131/132 (or 151); C or better
GLG400	SESE Colloquium	1	F,S,SS	
SES410	Senior Exploration Project I	3	F	ENG 101, ENG 105 or ENG 107; Senior standing
SES411	Senior Exploration Project II	3	S	SES410
SES electives (2)	Various options among GLG/SES/AST classes	6		Course must be upper division (300-400) level
SES branch (4)	See list on next page	12		
CHM114	General Chemistry for Engineers	4	F,S	CHM 101 with C or better OR Mathematics Placement Test score of 50% or higher OR Pre/Co-requisites: MAT 170 (or MAT 171, 210, 251, 265 or 270) with C or better if completed
MAT265/270	Calculus for Engineers I	3	F,S,SS	MAT 170 with C or better OR Mathematics Placement Test with a score of 60% or higher and the Advanced Mathematics Placement test with a score of 38 or higher (or ALEKS score of 67% or higher). Credit allowed for MAT 265 or MAT 270
MAT266/271	Calculus for Engineers 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 for Engineers 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	MAT 266 or MAT 271 with a C or better; Credit is allowed for only MAT 274 or 275
PHY121	University Physics I: mechanics	3	F,S,SS	MAT265 or MAT270 with a C or better; Pre or Co-req: MAT 266 or MAT 271 (with C or better if completed)
PHY122	University Physics Laboratory I	1	F,S,SS	Pre- or Co-requisite: PHY 121 (with C or better if completed)
PHY131	University Physics II: elec.&mag.	3	F,S,SS	MAT 266 or MAT 271 AND PHY 121 (all C or better); Co-req: MAT 267 or MAT 272 (C or better if completed)
PHY132	University Physics Laboratory II	1	S,SS	Pre or Co-req: PHY131 (C or better if completed)

*In previous catalog years, SES210 and SES310 were required in place of SES350 and students only needed to take 3 branch courses. However, SES210 and SES310 are no longer available. Students who have not already taken SES210 and SES310 are now required to take SES350 and an additional branch course (for a total of 4 branch courses). Students who took SES210 but not SES310, cannot take SES350 but can substitute SES310 with the addition of another branch course (for a total of 4 branch courses). Students who took SES310 but not SES210 can do SES350 in place of SES210 and would only need 3 branch courses. Students who already took both SES210 and SES310 cannot take SES350 and only need 3 branch courses, per the original SES degree requirements. All students will still need the 2 Upper Division SES/AST/GLG electives.

Select 4 of the following SES branch options (unless under old catalog year where only 3 were required, and SES210 and 310 were taken):

AST321	Intro to Planetary and Stellar Astronomy	3	F	MAT266 or MAT271 with C or better AND PHY122/122 or PHY150 with C or better
AST322	Intro to Galactic and Extragalactic Astronomy	3	S	MAT266 or MAT271 with C or better AND PHY122/122 or PHY150 with C or better
SES311	Essentials of Astrobiology	3	S	MAT 265 or MAT 270 with C or better; PHY 121 or CHM 113 or BIO 188 with C or better
SES330	Electronics Instrumentation	4	F	PHY 131; PHY132; SES 394 Topic: Concepts of Electrical & Mechanical Engineering Design (with C or better) OR MAE212 AND EEE202 (C or better)
SES405	Exploration Systems Engineering	3	S	SES 330 (C or better); SES 394 topic: Concepts of Electrical & Mechanical Engineering Design (C or better) or SES350 (C or better)
GLG310	Structural Geology	3	F	GLG 101 or SES 121 with C or better; MAT 170, 210 or 251 with C or better; Credit is allowed for only GLG 305 or 310
GLG321	Mineralogy	3	S	CHM113 or CHM114 or CHM117/111 AND MAT170 or MAT210 or MAT265 or MAT270; all with C or better
GLG424	Petrology	3	F	GLG321 w/ C or better
GLG418	Geophysics	3	F	MAT 272 (or MAT 267) with C or better; PHY 131 or PHY151 with C or better
GLG481	Geochemistry	3	S	CHM 341 (or 346) or GLG 321 with C or better
GLG490	Special Topics: Remote Sensing	3	F	
GLG490	Hydrology	3	F	CEE 341, MAE 340, or GLG 321 and MAT 272; all with C or better)

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

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