

## Astronomical and Planetary Sciences BS Course Prerequisites

Course	Course Name	Hrs	When	GS	Prerequisites
AST111	Intro to Solar Systems Astronomy	3	F, C session	SQ	
AST113	Astronomy Laboratory I	1	F, C session	SQ	Co-req AST111
AST112	Intro to Stars, Galaxies & Cosmology	3	S, C session	SQ	
AST114	Astronomy Laboratory II	1	S, C session	SQ	Co-req AST112
SES106	Habitable Worlds	4	F,S,SS	SQ	
AST301	Physics of Astrophysics	3	F, C session		Prerequisite(s): MAT 170 with C or better; MAT 210 with C or better; PHY 111 with C or better; PHY 112 with C or better; PHY 113 with C or better; PHY 114 with C or better
AST321	Intro Planet. & Stellar Astro	3	F 2021, C session		MAT266 or MAT271 with C or better AND PHY122/122 or PHY150 with C or better OR AST 301
AST322	Intro Galactic & Extragalactic Astro	3	S 2022, C session		MAT266 or MAT271 with C or better AND PHY122/122 or PHY150 with C or better OR AST 301
SES350	Engineering Systems and Experimental Problem Solving	3	S 2021, C session		Prerequisite(s) with C or better: MAT 267 or 272 or 275; PHY 151 or PHY 131 and PHY 132 OR AST 301
SES376	Communicating Astronomical and Planetary Sciences I	3	F, A session		Prerequisite(s): AST 111 with C or better; AST 112 with C or better; AST 113 with C or better; AST 114 with C or better; ENG 102, 105, or 108 with C or better
SES377	Communicating Astronomical and Planetary Sciences II	3	F, B session		Prerequisite(s): AST 111 with C or better; AST 112 with C or better; AST 113 with C or better; AST 114 with C or better; ENG 102, 105, or 108 with C or better; SES 376 with C or better
MAT170*	Precalculus	3	F,S,SS	MA	Prerequisite(s): MAT 117 with C or better, or Mathematics Placement Test with a score of 50% or higher, or ALEKS score of 61 or higher; Credit is allowed for only MAT 170 or MAT 171
MAT210*	Brief Calculus	3	F,S,SS	MA	Prerequisite(s): MAT 117, 119, 170, or 171 with C or better, or Mathematics Placement Test with a score of 56% or higher, or ALEKS score of 61 or higher; Credit is allowed for only MAT 210 or MAT 251
PHY111**	General Physics	3	F,S,SS	SQ	Prerequisite(s): MAT 170 or higher with C or better, or minimum score of 56% on the Mathematics Placement Test, or ALEKS score of 61 or higher, or Corequisite(s): MAT 210 or higher
PHY113**	General Physics Laboratory	1	F,S,SS	SQ	Pre- or corequisite(s): PHY 111 with C or better if completed
PHY112**	General Physics	3	F,S	SQ	Prerequisite(s): PHY 111 with C or better
PHY114**	General Physics Laboratory	1	F,S	SQ	Pre- or corequisite(s): PHY 112 with C or better if completed
LD Electives	Choose 3 courses (see list below)	9-12			
UD Electives	Choose 2 courses (see list below)	6-7			

<b>Major Electives</b>					
BIO 181	General Biology I	4	F,S,SS	SQ	Credit is allowed for only BIO 181 or BIO 281 or BIO 282 OR Visiting University Student
BIO 182	General Biology II	4	F,S,SS	SG	Prerequisite(s): BIO 181 with C or better; Credit is allowed for only BIO 182 or BIO 281 or BIO 282
BIO 340	General Genetics	4	F,S,SS		Prerequisite(s) w/ C or btr: non-Molecular Biosci&Biotec maj; BIO 181; BIO 182 OR non-Molecular Biosci&Biotec maj; BIO 181, BIO 281, or MBB 245; MBB 247 OR non-Molecular Biosci&Biotec maj; BIO 281; BIO 282; Credit is allowed for only BIO 340 or MBB 347
BIO 345	Evolution	3	F,S,SS		Pre- or corequisite(s): BIO 340 or LSC 347 or MBB 347 with C or better
CHM 113	General Chemistry I	4	F,S,SS	SQ	Prerequisite(s): CHM 101 with C or better, or Mathematics Placement Test score of 50% or higher, 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
CHM 114	General Chemistry for Engineers	4	F,S,SS	SQ	Prerequisite(s): CHM 101 with C or better, or Mathematics Placement Test score of 50% or higher, 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
CHM 116	General Chemistry II	4	F,S,SS	SQ	Prerequisite(s): CHM 113, 114, or 117 with C or better
GLG 101	Introduction to Geology I	3	F,S,SS	SQ	
GLG 103	Introduction to Geology Lab	1	F,S,SS	SQ	
MAT 275	Modern Differential Equations	3	F,S,SS	MA	Prerequisite(s): MAT 266 or 271 with a C or better; Credit is allowed for only MAT 274 or 275
MAT 343	Applied Linear Algebra	3	F,S,SS		Prerequisite(s): MAT 266 or 271 with C or better; Credit is allowed for only MAT 342 or MAT 343
MCO 307	The Digital Audience	3	F,S,SS		Prerequisite(s): minimum 2.00 GPA
MCO 335	Social Media	3	F,SS		Prerequisite(s): minimum 2.00 GPA; Students may not earn credit for both MCO 335 and MCO 435
MCO 425	Digital Media Literacy I	3	F,SS		
PHI 314	Philosophy of Science	3	F,S,SS	HU	Credit is allowed for only HPS 314 or PHI 314
TWC 401	Fundamentals of Technical Comm	3	F,S,SS	L	Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 45 hours; Credit is allowed for only TWC 401 or TWC 501
TWC 446	Technical and Scientific Reports	3	F,S,SS	L	Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 45 hours; Credit is allowed for only TWC 446 or TWC 546
SES 141	Energy in Everyday Life	3	F,S,SS	SQ	Credit is allowed for only SES 141 or SES 194 (Energy in Everyday Life)
STP 226	Elements of Statistics	3	F,S,SS	CS	Prerequisite(s): MAT 117 or MAT 142 or other course meeting General Studies MA requirement with C or better, or Mathematics Placement Test with a score of 50% or higher, or ALEKS score of 61 or higher

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

A semicolon (;) equals "AND"

\*MAT170 not required. MAT 251, MAT 265 or MAT 270 can be substituted for MAT210

\*\*PHY121/122 and PHY131/132 may be substituted for PHY111/113 and PHY112/114

Students who wish to pursue a technical career should take the full traditional calculus sequence MAT 265/266/267 or MAT 270/271/272 and calculus based physics (PHY121/122 and PHY131/132). Students who wish to apply to graduate school in a related area are encouraged to do a concurrent physics degree.

Special notes: 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 subject to change.