The BS degree in Earth and Space Exploration with a concentration in Astrophysics requires the following core courses (33 credits):

SES 130: Coding for Exploration (3)
SES 121 Earth, Solar Sys, & Univ I (3)
SES 123 Earth, Solar Sys, & Univ Lab I (1)
SES 126 Exploration of the Universe (3)
SES 128 Exploration of the Universe Lab (1)
AST 321 Intro Planetary and Stellar Astro. (3)
AST 322 Intro Galactic & Extragalactic Astro. (3)

For Arizona community college students, the full sequence of AST 111-114 can be substituted for SES 121-124

1 For Arizona community college students, the full sequence of AST 111-114 can be substituted for SES 121-124
2 We will also accept AST 394: Astrophysics Research and Internship Opportunities.

In addition, ONE Upper-division SES/AST/GLG/PHY Elective (3 credits). Suggested courses include:

GLG 404 Fundamentals Planetary Geology (3)
PHY 302 Mathematical Methods in Physics II (3)
PHY 310 Classical Particles, Fields & Matter I (3)
PHY 311 Classical Particles, Fields & Matter II (3)
PHY 312 Mechanics and Electromagnetism (3)
PHY 314 Quantum Physics I (3)
PHY 315 Quantum Physics II (3)
PHY 361 Introductory Modern Physics (3)
PHY 441 Statistical and Thermal Physics (3)
SES 350 Eng Syst & Exp Problem Solving (3)
SES 311 Essentials of Astrobiology (3)

Required courses in other related fields include the following (30 credits):

MAT 270 Calculus with Analytic Geometry I (4)*
MAT 271 Calculus with Analytic Geometry II (4)*
MAT 272 Calculus with Analytic Geometry III (4)*
MAT 275 Modern Differential Equations (3)
PHY 150 Physics I (4)**
PHY 151 Physics II (4)**
PHY 201 Mathematical Methods in Physics (3)
PHY 252 Physics III (4)

*MAT 265/266/267 may be taken in place of MAT 270/271/272 if needed
**PHY 121/122 and PHY 131/132 may be taken in place of PHY 150 and PHY 151 if needed

IMPORTANT NOTES:

- Students must receive C’s or better in all of the above courses in order for them to count toward the major.
- The major map for the student's catalog year represents the official catalog for the degree.
- Substitutions for any of the requirements above must be approved by a SESE advisor and the student must notify the advisor if substitutions or other requirements are not showing up on the DARS correctly.