The BS degree in Earth and Space Exploration with a concentration in Exploration Systems Design requires the following core courses (34 credits):

- SES 100 Introduction to Exploration (3)
- SES 121 Earth, Solar Sys, & Univ I (3) and SES 123 Earth, Solar Sys, & Univ Lab I (1)
- Select one set:
  - SES 122 Earth, Solar Sys, & Univ II (3) and SES 124 Earth, Solar Sys, & Univ Lab II (1)
  - OR
  - SES 126 Exploration of the Universe and SES 128 Exploration of the Universe Lab
- EEE 202 Circuits (4)
- MAE 201 Mech. Particles/Rigid Bodies I: Statics (3)
- SES 330 Electronics Instrumentation (4)
- SES 350 Eng Syst & Exper Prob Solving (3)
- SES 405 Exploration Systems Engineering (3)
- SES 410 Senior Exploration Project I (3)
- SES 411 Senior Exploration Project II (3)

In addition, one Upper-division Elective course must be taken (3 credits). Select from the following or substitute with advisor approval:

- AST 321 Intro Planet & Stellar Astr (3)
- AST 322 Intro Galactic & Extragalactic Astr (3)
- AST 494 Observ Inst. and Data Analysis (3)
- GLG 321 Mineralogy (3)
- GLG 424 Petrology (3)
- GLG 471 Hydrology (3)
- GLG 424 Petrology (3)
- GLG 471 Hydrology (3)
- GLG 424 Petrology (3)
- GLG 471 Hydrology (3)
- SES 311 Essentials of Astrobiology (3)
- SES 494 Mobile Robotics: Design & Control (3)

Required courses in other related fields include the following (24 credits):

- CHM 114 General Chemistry for Engineers (4)*
- MAT 265 Calculus for Engineers I (3) or MAT 270 Calculus with Analytic Geometry I (4)
- MAT 266 Calculus for Engineers II (3) or MAT 271 Calculus with Analytic Geometry II (4)
- MAT 267 Calculus for Engineers III (3) or MAT 272 Calculus with Analytic Geometry III (4)
- MAT 275 Modern Differential Equations (3)
- PHY 121 University Physics I: Mechanics (3)
- PHY 122 University Physics Laboratory I (1)
- PHY 131 University Physics II: Electricity and Magnetism (3)
- PHY 132 University Physics Laboratory II (1)

*Students may substitute both CHM 113 and CHM 116 for CHM 114

**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.