

**SCHOOL OF EARTH AND SPACE EXPLORATION  
ARIZONA STATE UNIVERSITY**

# 3 Course sequencing/ prerequisite planning

*Required major courses for Bachelors of Science degree in Geological Sciences.*

| Prefix              | Course Name                                      | Hrs | When   | Prerequisites                               |
|---------------------|--|-----|--------|---|
| GLG101              | Intro to Geology I (Physical)                    | 3   | F,S,SS | --  |
| GLG103              | Intro to Geology I -- Lab                        | 1   | F,S,SS | --  |
| GLG102              | Intro to Geology II (Historical)                 | 3   | S, F   | GLG101                                      |
| GLG104              | Intro to Geology II -- Lab                       | 1   | S, F   | Co-req: GLG102                              |
| GLG310              | Structural Geology                               | 3   | F      | GLG101, MAT270                              |
| GLG321              | Mineralogy                                       | 3   | S      | CHM113, MAT270; Pre- or co-req CHM116       |
| GLG424              | Petrology  | 3   | F      | GLG321                                      |
| GLG400              | Geology Colloquium                               | 1   | F,S    | 2 GLG courses or Instructor approval        |
| GLG435              | Sedimentology                                    | 3   | S      | GLG102, GLG321                              |
| GLG451              | Field Geology I                                  | 3   | S      | GLG310; Pre- or co-req GLG321               |
| GLG452              | Field Geology II                                 | 3   | SS     | GLG451, GLG321                              |
| Branch1             | Geology Branch course 1                          | 3   | *      | *   |
| Branch2             | Geology Branch course 2                          | 3   | *      | *   |
| Elective1           | Geology Elective course 1                        | 3   | **     | **  |
| Elective2           | Geology Elective course 2                        | 3   | **     | **  |
|                     |  |     |        |   |
| CHM113▼             | General Chemistry I                              | 4   | F,S,SS | MAT 106 (or 3 sem. high school Algebra)     |
| CHM116              | General Chemistry II                             | 4   | F,S    | CHM113 (or 2 yrs high school Chemistry)     |
|                     |  |     |        |   |
| MAT270              | Calculus I                                       | 4   | F,S,SS | MAT170▼▼ (C or better), or placement test   |
| MAT271              | Calculus II                                      | 4   | F,S,SS | MAT 270 (w/C or better)                     |
| MAT272 or<br>MAT274 | Calculus III or Modern<br>Differential Equations | 3/4 | F,S,SS | MAT271 (w/C or better)                      |
|                     |  |     |        |   |
| PHY121              | University Physics I: mechanics                  | 3   | F,S,SS | MAT270                                      |
| PHY122              | University Physics Laboratory I                  | 1   | F,S,SS | Pre- or corequisite: PHY121                 |
| PHY131              | University Physics II: elec.&mag.                | 3   | F,S,SS | MAT271; Pre- or corequisite: PHY121, MAT272 |
| PHY132              | University Physics Laboratory II                 | 1   | S,SS   | Pre- or corequisite: PHY131                 |

\*Two of the following four "Branch" courses must be taken:

|        |              |   |   |   |
|--------|--------------|---|---|---|
| GLG430 | Paleontology | 3 | F | GLG102, MAT270 or Instructor approval         |
| GLG418 | Geophysics   | 3 | F | GLG310, MAT272, PHY131 or Instructor approval |
| GLG470 | Hydrology    | 3 | S | GLG101(or 103), MAT270, PHY121                |
| GLG481 | Geochemistry | 3 | S | GLG321 or CHM341(or 346)                      |

\*\*Six hours of GLG electives must be upper division (300 level or higher), excluding courses GLG300 (Geology of Arizona) and GLG400 (Colloquium). The two courses from the Branch courses list not taken for the Branch courses requirement can be taken for the Electives requirement. See course catalog for options.

▼It is important to initiate the Math and Chemistry sequences early in your undergraduate program – each of these are important prerequisites for upper division courses in the major.

▼▼If you haven't taken pre-calculus, remember to budget a semester for MAT170.