

## Requirements for the Certificate in Field Geology

The certificate program in field geology prepares undergraduate students with the core knowledge base and field experience to identify, describe, collect and interpret a variety of types of geological field data. A strong field-based background is required for many entry-level jobs in resource mining, geotechnical and environmental consulting companies and is a strong asset for acceptance into many graduate research programs in the earth sciences.

The certificate requires a minimum of 15 credit hours. At least 12 credit hours must be completed in upper-division course work and at least 9 credit hours must be completed at ASU. At least six upper-division hours in the certificate must be completed in courses offered by the College of Liberal Arts and Sciences. A grade of "C" (2.00 on a 4.00 scale) or higher is required for each course used to fulfill a certificate requirement.

Required Courses – 9 credit hours

[GLG 310: Structural Geology](#) (3)

[GLG 452: Field Geology II \(L\)](#) (3)

[GLG 455: Advanced Field Geology](#) (3)

Electives (choose two) – 6 credit hours

[GLG 362: Geomorphology](#) (3)

[GLG 420: Volcanology](#) (3)

[GLG 424: Petrology](#) (3)

[GLG 435: Sedimentology](#) (3)

[GLG 489: Field Geochemistry \(L\)](#) (3)

Enrollment Requirements

A student pursuing an undergraduate certificate must be enrolled as a degree-seeking student at ASU. Undergraduate certificates are not awarded prior to the award of an undergraduate degree. A student already holding an undergraduate degree may pursue an undergraduate certificate as a nondegree-seeking graduate student.

Additional enrollment requirements include completion of the following courses or their equivalencies with a "C" or better (scale is 4.00 = "A"):

GLG 101 Introduction to Geology I (3) and GLG 103 Introduction to Geology I Lab (1) or

SES 121 Earth, Solar System and Universe (3) and SES 123 Earth, Solar System and Universe Lab (1)

AND GLG 321 Mineralogy (3)\* and GLG 451 Field Geology I (3)

**The College of Liberal Arts and Sciences**

PO Box 876004 Tempe, AZ 85287-6004

p: 480-965-5081 f: 480-965-8102 web: [sese.asu.edu](http://sese.asu.edu)

Updated 1/30/20 by KWallace

## Field Geology Certificate Course Planning Sheet

Prefix	Course Title	Hours	Pre-requisites	Offered
GLG 310	Structural Geology	3	GLG 101 or SES 121 with C or better; MAT 170, 171, 210, 251, 265, or 270 with C or better	F
GLG 452	Field Geology II (L)	3	GLG 310 with C or better; GLG 321 with C or better; GLG 451 with C or better	S
GLG 455	Advanced Field Geology	3	GLG 310 with C or better; Pre- or co-requisite(s): GLG 451 with C or better if completed	F/S**
Elective courses, choose 2 from:				
GLG 362	Geomorphology	3	GLG 101 or SES 121 with C or better; MAT 266 or 271 with C or better	F**
GLG 420	Volcanology	3	Engineering, Math or Science major; Minimum Junior standing	F**
GLG 424	Petrology	3	GLG 321 with C or better	F
GLG 435	Sedimentology	3	GLG 102 or SES 122 with C or better; GLG 321 with C or better	S
GLG 489	Field Geochemistry (L)	3	CHM 302 or GLG 321 or GLG 481 with C or better; Credit is allowed for only CHM 489 or GLG 489 or GLG 490 (Field Geochemistry)	S**
Additional pre-requisite courses (students only need either GLG 101/103 or SES 121/123)				
GLG 101	Introduction to Geology I	3		F/S/SS
GLG 103	Introduction to Geology Lab I	1		F/S/SS
SES 121	Earth, Solar System and Universe	3		F
SES 123	Earth, Solar System and Universe Lab	1	Pre- or co-requisite(s): SES 121 with C or better if completed	F
GLG 321	Mineralogy*	3	CHM 113 (or both CHM 111 and 117 or 114) with C or better; MAT 170, 210, 265 or 270 with C or better	S
GLG 451	Field Geology I (L)	3	GLG 310 with C or better; Pre- or co-requisite: GLG 321	S

\*Students must also complete MAT 170: Precalculus and CHM 113: General Chemistry I, both with a grade of C or better, as pre-requisites for GLG 321

F=Fall; S=Spring; SS=Summer Session  
\*\*Not offered in a regular pattern

Sequencing suggestion for non-Engineering, Math, or Science majors:

	FALL	SPRING	SUMMER
Year 1	MAT 170 CHM 113	GLG 101/103 GLG 321	
Year 2	GLG 310	GLG 451 (L) Elective: GLG 435 or GLG 489	GLG 452 (L)
Year 3	GLG 455 Elective: GLG 362, 420, or 424		