

## Requirements for Geology Sub-plan: 2019-20 Catalog Year

### SECOND LANGUAGE REQUIREMENT

(Requirement can be met with proficiency exam):

Semester 1		4
Semester 2	(completion with a grade of C or better)	4

### TIER ONE

**Individuals and Societies (xxxx150)** (6 units):

		3
		3

**Traditions and Culture (xxxx160)** (6 units):

		3
		3

### TIER TWO

**Arts** (3 units):

		3
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**Individuals and Societies** (3 units):

		3
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**Humanities** (3 units):

		3
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**Diversity Emphasis** (3 units) (class, ethnicity, gender, non-west, religion):

(Can be fulfilled with qualified Tier One or Tier Two)

**ENGLISH** (6 units):

ENGL 101	Composition	3
ENGL 102	Composition (grade of B or higher to meet MCWA)	3

or

ENGL 106	English Composition for ESL Students	3
ENGL 107	English Composition for ESL Students	3
ENGL 108	English Composition for ESL Students (grade of B or higher to meet MCWA)	3

**MATHEMATICS** (9 units):

MATH 122A&B or MATH 125	Calculus I (P: MATH 120R, or MATH 112 plus MATH 111, with a grade of C or higher, or appropriate math placement)	3-5
MATH 129	Calculus II (P: MATH 122B or MATH 125 with grade of C or higher)	3

**Choose one of the following:**

MATH 163	Basic Statistics (P: MATH 112)	3
MATH 223	Vector Calculus (P: MATH 129)	4
MATH 263	Statistics and Biostatistics (P: MATH 112)	3
MATH 313	Intro to Linear Algebra (P: MATH 129)	3

**CHEMISTRY** (8 units):

CHEM 151	General Chemistry I (P: MATH 112 or Math Placement level, Calc 65+)	4
CHEM 152	General Chemistry II (P: CHEM 151)	4

or

\*UA BS degrees require a minimum of 120 units for graduation. This sub-plan totals a minimum of 103 units. Additional units may be required to meet the BS minimum requirement of 120 units.

### Geology Advisor Approved Emphasis Courses

ANTH 235, ANTH 304, ANTH 335, ANTH 435, ANTH 439A, ASTR 403, ASTR 442, ATMO 412A, CHEM 241A, CHEM 241B, CHEM 325, CHEM 326, CHEM 480A, CHEM 480B, ECOL 182L, ECOL 182R, ECOL 183, ECOL 335, ECOL 360, ECOL 406L, ECOL 406R, ECOL 412A, ECOL 412B, ENV 412A, GEN 402, GEN 416, GEN 427, GEN 448, GEOG 430, GEOG 438, GEOG 439A, GEOS 255, GEOS 342, GEOS 400, GEOS 403, GEOS 411, GEOS 412A, GEOS 412B, GEOS 415, GEOS 416, GEOS 417, GEOS 419, GEOS 423, GEOS 424A, GEOS 425, GEOS 427, GEOS 430, GEOS 432, GEOS 434A, GEOS 439A, GEOS 440, GEOS 442, GEOS 446, GEOS 448, GEOS 450, GEOS 453, GEOS 456, GEOS 460, GEOS 462, GEOS 466, GEOS 469, GEOS 470L, GEOS 470R, GEOS 477, GEOS 478, GEOS 482, GEOS 489, HWRS 250, HWRS 411, HWRS 431, HWRS 480, MATH 215, MATH 254, MCB 181L, MCB 181R, MCB 184, MNE 402, MNE 427, MSE 222, MSE 412, PHYS 403, PTYS 403, PTYS 411, PTYS 442, WSM 439A, Approved Transfer Course

Rev: 06/07/19 – sm

CHEM 141	Introductory Chemistry I (P: Math Placement level, Calculus 45+, or MATH 112)	3
CHEM 143	Introductory Laboratory I (CR: CHEM 141)	1
CHEM 142	Introductory Chemistry II (P: CHEM 141)	3
CHEM 144	Introductory Laboratory II (P: CHEM 143; CR: CHEM 142)	1

**PHYSICS** (7-8 units):

PHYS 102	Introductory Physics I (P: Math Placement level, Calculus 45+, or MATH 112)	3
PHYS 181	Introductory Laboratory I (CR: PHYS 102)	1
PHYS 103	Introductory Physics II (P: PHYS 102)	3
PHYS 182	Introductory Laboratory II (P: PHYS 181; CR: PHYS 103)	1

or

PHYS 141	Introductory Mechanics (P: MATH 122B; CR: MATH 129)	4
PHYS 142	Introductory Optics and Thermodynamics (P: PHYS 141, MATH 129)	3

**COMPUTER APPLICATIONS** (3 units):

Choose one class from: CSC 110, ECE 175, GEOG 330, GEOG 417, GEOG 490, GEOS 280, ISTA 130	3-4
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**GEOLOGY CORE** (Complete all 8 courses):

GEOS 251	Physical Geology (Fall and Spring)	4
GEOS 300	Earth Surface Processes (P: GEOS 251) (Spring)	3
GEOS 302	Principles Stratigraphy and Sedimentation (P: GEOS 251, CHEM 151, PHYS 102 or 141) (Fall, sometimes Spring) (Writing Proficiency course; MCWA alternative)	4
GEOS 304	Structural Geology (P: GEOS 251, PHYS 102 or 141) (Fall, sometimes Spring)	4
GEOS 306	Mineralogy (P: GEOS 251, CHEM 151) (Fall)	3
GEOS 308	Paleontology (P: GEOS 251) (Fall, sometimes Spring)	3
GEOS 322	Intro to Geophysics (P: GEOS 251; P: MATH 122B or 125) (Spring)	3
GEOS 356	Petrology (P: GEOS 306, MATH 122B, PHYS 102 or 141) (Spring)	4

**CORE CAPSTONE – FIELD EXPERIENCE** (6 units):

GEOS 414 or GEOS 405	Geology Field Camp (P: GEOS 251, 302, 304, 306, 356) or Accessible Earth (both available in Summer Session)	6
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**GEOLOGY ADVISOR APPROVED EMPHASIS COURSES** (15 units)

Majority of courses should consist of GEOS 300 or 400 level
Full list of approved classes on advisement report
No more than 3 units of Preceptor (GEOS 397A)