

## Requirements for Earth, Oceans and Climate 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)		
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**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 (6 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

**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 100 units. Additional units may be required to meet the BS minimum requirement of 120 units.

### Earth, Oceans and Climate Advisor Approved Emphasis Courses

ANTH 332, ANTH 439A, ASTR 403, ASTR 442, ATMO 490, ECOL 360, ECOL 404F, ECOL 404L, ECOL 404R, ECOL 410, ECOL 412B, ECOL 450, ENVS 330, ENVS 340, ENVS 410, ENVS 420, ENVS 422, ENVS 483, ENVS 490, GEN 330, GEN 416, GEN 448, GEOG 304, GEOG 330, GEOG 416A, GEOG 420, GEOG 430, GEOG 439A, GEOG 447, GEOG 473, GEOG 483, GEOG 490, GEOS 255, GEOS 304, GEOS 306, GEOS 322, GEOS 330, GEOS 340, GEOS 356, GEOS 397A, GEOS 400, GEOS 403, GEOS 408, GEOS 410, GEOS 411, GEOS 412B, GEOS 415, GEOS 416, GEOS 417, GEOS 418, GEOS 419, GEOS 422, GEOS 423, GEOS 424A, GEOS 430, GEOS 432, GEOS 434A, GEOS 439A, GEOS 440, GEOS 442, GEOS 447, GEOS 448, GEOS 450, GEOS 453, GEOS 462, GEOS 466, GEOS 469, GEOS 470L, GEOS 470R, GEOS 474A, GEOS 484, GEOS 489, GEOS 490, GIST 330, GIST 420, GIST 483, HWRS 250, HWRS 340, HWRS 411, HWRS 422, HWRS 431, HWRS 490, MNE 418, OPTI 490, PHYS 403, PLS 483, PLS 410, PTYS 403, PTYS 411, PTYS 442, REM 490, RNR 316, RNR 321, RNR 403, RNR 416A, RNR 417, RNR 420, RNR 427, RNR 440, RNR 458, RNR 473, RNR 480, RNR 483, RNR 490, WSM 330, WSM 439A, Approved Transfer Course

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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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**EOC 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 308	Paleontology (P: GEOS 251) (Fall)	3
GEOS 342	The History of Earth's Climate (Fall)	3
GEOS 412A	Ocean Sciences (P: One year of science) (Spring)	3
GEOS 478	Global Change (P: junior standing) (Fall)	3
GEOS 479	Climate Dynamics (P: MATH 122B) (Spring)	3

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

Research	Consult with GEOS Faculty	6
or		
GEOS 414 or GEOS 405	Geology Field Camp (P: GEOS 251, 302, 304, 306, 356) or Accessible Earth (both available in Summer Session)	6

**EOC ADVISOR APPROVED EMPHASIS COURSES (17 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)		