

HEALTH SCIENCE
Environmental/Occupational Health and Safety Option, B.S. (120 Units)
 Valid for Catalog Years: 2019/2020 to 2020/2021

Health Science Core Program Requirements	15 Units □
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- PH 92: Public Health Statistics (3) _____
- PH 109: Epidemiology of Disease (3) (*Pre-Requisite:* PH 92, MATH 11, PSYCH 42, or DS 73) _____
- PH 135: Introduction to Human Disease (3) _____
- PH 161: Environment and Human Health (3) (**GE Area IB**) _____
- PH 163: Public Health Administration (3) _____

Environmental/Occupational Health and Safety Option Requirements	12 Units □
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- PH 143: Occupational Safety (3) _____
- PH 160: Principles of Toxicology (3) _____
- PH 162: Environmental Health Concepts (3) (*Pre-Requisite:* PH 162) (**FALL ONLY**) _____
- PH 168A: Occupational Health Concepts (3) (**FALL ONLY**) _____

Environmental/Occupational Health and Safety Additional Requirements	38-42 Units □
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- BIOL 1A: Introductory Biology (4) (**GE Area B2**) _____
- BIOL 1B/1BL: Introductory Biology + Laboratory (4) _____
- OR** BIOL 33: Introductory Human Anatomy and Physiology (5) _____
- BIOL 20: Introductory Microbiology (4) _____
- OR** BIOL 120: Microbiology (4) _____
- CHEM 1A/1AL: General Chemistry 1A + Laboratory (5) (**GE Area B1**) _____
- CHEM 1B/1BL: General Chemistry 1B + Laboratory (4) _____
- CHEM 8: Elementary Organic Chemistry (3) _____
- OR** CHEM 128A: Organic Chemistry (3) _____
- MATH 70: Calculus for Life Sciences (4) _____
- OR** MATH 75: Calculus 1 (4) (**GE Area B4**) (*Pre-Requisite:* Calculus Placement Required) _____
- PHYS 2A: General Physics (4) (**GE Area B1**) (*Pre-Requisite:* MATH 6 or DS 71 or MATH 75 or MATH 70) _____
- PHYS 2B: General Physics (4) (*Pre-Requisite:* PHYS 2A) _____
- PH 175I: Environmental Internship (4) (*Pre-Requisite:* Completion of 21 units in Core and Environmental Option Courses) _____

Environmental/Occupational Health and Safety Option Elective Requirements	9 Units □
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Select a minimum of three courses (9 units)

- PH 105: Risk Assessment and Analysis (3) (**FALL ONLY**) _____
- PH 145: Occupational and Environmental Systems Management (3) _____
- PH 151: Health Law and Legislation (3) (**FALL ONLY**) _____
- PH 164: Vector Control (3) _____
- PH 166T: Topics in Environmental Health (3) _____
- PH 167: Public Health Laboratory Techniques (3) _____
- PH 168B: Occupational Health Evaluation (3) (**SPRING ONLY**) _____
- PH 170: Air Pollution and Health (3) _____

Total Units Required in Major	74-78 units
Total Units Required in General Education	49 units
Electives needed	0-9 units

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For assistance or to schedule an advising appointment, please contact the **CHHS Advising and Career Development Center:** 559-278-5027, McLane Hall 194

Student Name: _____

Student ID: _____

Catalog Year: _____

	Year 1 (Freshman)		Year 2 (Sophomore)		Year 3 (Junior)		Year 4 (Senior)	
	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring
Major	GE Area B4 MATH 70 or 75 (4 Units)	PH 92 (3 Units)	GE Area B1 CHEM 1A/1AL (5 Units)	PH 109 (3 Units)	CHEM 8 or CHEM 128A (3 Units)	BIOL 20 or BIOL 120 (3-4 Units)	PHYS 2A (4 Units)	PHYS 2B (4 Units)
	GE Area B2 BIOL 1A (4 Units)	BIOL 1B/L or BIOL 33 (4-5 Units)		CHEM 1B/1BL (5 Units)	GE Area IB PH 161 (3 Units)	PH 160 (3 Units)	PH 143 (3 Units)	PH 175 (1-4 Units)
	<i>Lower Division GE</i>	<i>Lower Division GE</i>	<i>Lower Division GE</i>					
	<i>Lower Division GE</i>	<i>Lower Division GE</i>	<i>Lower Division GE</i>		<i>Lower Division GE</i>	<i>UDWS (W Course or Exam)</i>	<i>PH Elective</i>	PH 162 (3 Units)
	<i>Lower Division GE</i>	<i>General Elective</i>	<i>Lower Division GE</i>	<i>Lower Division GE</i>	<i>Multicultural International (MI)</i>	<i>Upper Division GE</i>	PH 168A (3 Units)	<i>General Elective</i>
Milestones		PH 92 Completed			Additional Requirements Completed		Completion of Core Courses	

Elective Options:

Biology Minor Requirements

Required Courses (22 Units)

- BIOL 1A – Introductory Biology (4 units)
- BIOL 1B and 1BL – Introductory Biology/Laboratory (4 units)
- BIOL 101 – General Ecology (4 units)
- BIOL 102 – Genetics (3 units)
- BIOL 103 – Cellular Biology (3 units)
- BIOL 104 – Genetics and Cell Biology Lab (1 unit)
- BIOL 105 – Evolution (3 units)

Chemistry Minor Requirements

Required Courses (11-12 Units)

- CHEM 1A & 1AL – General Chemistry and Laboratory (5 units)
- CHEM 8 – Elementary Organic Chemistry (3 units)
- CHEM 105 – Quantitative Analysis Laboratory (4 units)

Additional Upper Division Chemistry Courses (9-10 Units)

Advising Notes

1. A minimum grade of C is required in all Health Science core courses and all core option courses.
2. CR/NC grading is not permitted in courses for the Health Science major, except in those courses which are designated CR/NC grading only.
3. Courses taken within the Public Health major may be used toward general education requirements, a minor (see departmental minors) or a supplemental credential. Consult the appropriate department advisor for further information.

2020-2021 GENERAL EDUCATION (G.E.) REQUIREMENTS

NOTES: **A minimum of 49 G.E. units are required.** All classes are three or more semester units.

Engineering and Liberal Studies majors complete a different G.E. pattern--consult department advisor.

◆ FOUNDATION

Four courses: One in A1, one in A2, one in A3, & one in B4 for a minimum of 12 units.

FOUNDATION courses must be satisfied with a minimum "C" grade.

Area A - Fundamental Skills and Knowledge

A1 Oral Communication: Communication 3, 7, 8

A2 Written Communication: (Prerequisite for English 5B is passing 5A) English 5B, 10

A3 Critical Thinking: Africana Studies 20; Anthropology 30; Chicano & Latin American Studies 30; College of Science & Math 10; Communication 5; Computer Science 1; Geography 25; Interdisciplinary 50; Natural Science 4; Philosophy 25, 45; Sociology 3, 3S; Women's Studies 12

B4 Quantitative Reasoning: (Co-requisite or prerequisite Math courses may be required. Check with advisors)

Criminology 50, Decision Sciences 71, 72; Mathematics 6, 11, 11L, 45, 45L, 70, 75, 75A

Course/Units/Grade

A1 _____

A2 _____

A3 _____

B4 _____

◆ BREADTH

Area B - Physical Universe and Its Life Forms

Two courses: One in B1 and one in B2--see above for B4

B1 Physical Sciences: (Prerequisite: Completion of B4) Chemistry 1A & 1AL, 3A, 10; Earth & Environmental Sciences 1, 1V, 4; Physical Science 21; Physics 2A, 4A & 4AL, 10

B2 Life Sciences: Biology 1A, 10, 11, 12

B3 Laboratory Component: B1 or B2 must have a lab (All B1 and B2 courses taken at Fresno State have a mandatory lab component.)

B1 _____

B2 _____

B3 _____

Area C - Arts and Humanities

Three courses: One in C1, one in C2, and a third from C1 or C2

C1 Arts: Armenian Studies 20; Art 1, 20, 40, 50; Art History 10, 11, 12; Chicano & Latin American Studies 9; Drama 22, 62; English 41, 43, 44; Media, Communications and Journalism 9; Music 9 (not for music majors), 9A, 74, 75

C2 Humanities: Arabic 1A, 1B; Armenian 1A, 1B, 2A; Chinese 1A, 1B; Communicative Sciences & Deaf Studies 90, 92; English 20, 30; French 1B, 2A, 2B; German 1B, 2A, 2B; Greek 1A, 1B; Hebrew 1A, 1B; Hmong 1A, 1B; Humanities 10, 11, 15, 20; Italian 1A, 1B, 2A, 2B; Japanese 1A, 1B; Latin 1A, 1B; Linguistics 10; Persian 1A, 1B; Philosophy 1, 2, 10, 20; Portuguese 1A, 1B; Spanish 1B, 2A, 2B, 3, 4A, 4B

C1 _____

C2 _____

C1 or
C2 _____

Area D - Social, Political & Economic Institutions & Behavior, Historical Background

One course in each sub-area (Prerequisite: GE Foundation A2 for students in English college-readiness Category III and IV)

D1 American History: History 11, 12

D2 American Government: Political Science 2

D3 Social Science: Africana Studies 10, 15, 27; Agricultural Business 1; American Indian Studies 50; Anthropology 2, 3; Armenian Studies 10; Asian American Studies 15; Child & Family Studies 31; Chicano & Latin American Studies 3, 5; Communicative Sciences & Deaf Studies 98; Criminology 10; Economics 25, 40, 50; Geography 2, 4, 81; History 20, 21; Industrial Technology 20; Jewish Studies 10; Media, Communications and Journalism 1; Middle East Studies 10; Political Science 1; Psychology 10; Sociology 1 or 1S; Women's Studies 10

D1 _____

D2 _____

D3 _____

Area E - Lifelong Understanding and Self-Development One course

E Lifelong Understanding & Self-Development: Animal Science 67; Art 13; Child & Family Studies 38, 39;

College of Science & Math 15; Dance 16, 70; Drama 32; Finance 30; Gerontology 10S, 18, 111; Kinesiology 32 & concurrent enrollment in any KAC course; Linguistics 30; Nutrition 53; Peace and Conflict Studies 110; Psychology 61;

Public Health 90, 91, 110; Recreation Administration 80; University 1; Women's Studies 18

E _____

UPPER DIVISION G.E. CONSISTS OF 9 UNITS

IB, IC, and ID courses can be taken no sooner than the term in which 60 units of coursework are completed.

◆ INTEGRATION Three upper division courses--one in each area

IB Physical Universe and Its Life Forms: (Prerequisite: Completion of FOUNDATION and Area B)

Anthropology 161; Chemistry 170; Computer Science 100; Earth & Environmental Sciences 112, 167, 168; Geography 115, 128, 129; Natural Science 115, 120, 121, 125; Physical Science 131, 168; Physics 100; Plant Science 105; Public Health 161; Sociology 158

IB _____

IC Arts and Humanities: (Prerequisite: Completion of FOUNDATION and Area C)

Africana Studies 129; Armenian 148; Art 102; Arts & Humanity 105; Chicano & Latin American Studies 130; Dance 171; Drama 163; English 101, 102, 103, 112, 113, 114, 174; French 109, 149; Humanities 104, 108, 110, 118, 129; Interdisciplinary Art Studies 108; Linguistics 115, 130, 138; Music 170A, 171, 187; Philosophy 120, 150, 151; Spanish 125, 129

IC _____

ID Social, Political and Economic Institutions and Behavior, Historical Background:

(Prerequisite: Completion of FOUNDATION and Area D)

Africana Studies 144; Agricultural Business 155; American Indian Studies 103; Anthropology 116W, 145; Chicano & Latin American Studies 114, 115; Construction Management 124; Criminology 101, 120, 120S; Economics 146, 167, 176, 183; Forensic Behavioral Sciences 153; Geography 133, 173, 184; Gerontology 100; History 101, 154; Jewish Studies 154; Kinesiology 111; Media, Communications and Journalism 175, 178; Peace and Conflict Studies 100; Social Science 110; Sociology 131, 143, 163; Women's Studies 101, 124, 149

ID _____

TOTAL UNITS _____

Graduation Requirements

PLANNING YOUR DEGREE

- ❑ **Meet with an Academic Counselor to complete a My Degree Plan (roadmap)**
- ❑ **Units per semester to graduate:**
4 years: 15 units x 8 semesters = 120 units
5 years: 12 units x 10 semesters = 120 units
- ❑ **Complete your upper-division writing skills during your junior year (60-90 units)**
- ❑ **Complete your Application for Degree & pay the fee during the first four weeks of your final semester**

- **120 unit minimum - comprised of:**
 - 49 General Education (or modified version per Major)
 - Major
 - Electives if needed to reach 120 units (minor/certificate/other)
- **2.00 GPA in:**
 - Major
 - Campus units
 - Cumulative units
- **Specific course requirements:**
 - English Composition (English 5A & 5B, 10 or equivalent)
 - US History (History 11, 12 or equivalent)
 - US and California Constitution (Political Science 2, 102 or equivalent)
 - Multicultural/International course

Multicultural/International courses

Africana Studies **150, 164**; Anthropology **105W, 120, 123, 125**; Asian American **110**; Business Administration **104**; Chicano & Latin American Studies **160, 170**; Communication **164**; Communicative Sciences & Deaf Studies **139**; Economics **181**; Geography **167**; Gerontology **161**; History **186**; Humanities **105, 140**; Interdisciplinary Capstone **177, 188S**; Linguistics **147**; Media, Communications and Journalism **176, 179**; Marketing **100S**; Nursing **141, 141LS**; Public Health **104, 128S**; Philosophy **131,132**; Political Science **120**; Recreation Administration **130**; Sociology **111, 142**; Social Science **180**; Social Work **136**; Women's Studies **110, 120/120S, 135**;

- **Writing Skills Requirement:**
 - Upper-division writing skills (exam or course with a "W")

W courses

Africana Studies **104W**; Agricultural Business **170SW**; Anthropology **105W, 116W, 126W**; Asian American Studies **151W**; Aerospace Studies **105AW*, 105BW**; Business Administration **105W**; Chemistry **161W**; Chicano & Latin American Studies **102W**; Child and Family Science **130W***; Economics **102W**; Earth and Environmental Sciences **104W, 135W**; English **106W, 115W, 117W*, 160W, 170W**; Engineering **105W***; Health & Human Services **116W**; History **100W***; Industrial Technology **198W**; Jewish Studies **100W**; LEE **180W**; Linguistics **110W*, 111W**; Media, Communications and Journalism **102W*, 114W***; Philosophy **125W, 133W**; Plant Science **110W**; Sociology **130W/WS**;

Note: a few majors require a specific "W" course; see catalog requirement for your major

*Enrollment may be restricted or have additional prerequisites. Check the course description in the catalog or my.fresnostate.edu.

- **Fresno State Residency unit minimums:**
 - 30 units
 - 24 upper-division units
 - 12 units in major
 - 9 General Education units