

HEALTH SCIENCE
Environmental/Occupational Health and Safety Option, B.S. (120 Units)
Valid for Catalog Years: 2021/2022 to Current

Health Science Core Program Requirements	15 Units □
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PH 92: Public Health Statistics (3)	_____
PH 109: Epidemiology of Disease (3) (<i>Pre-Requisite:</i> 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) (<i>Pre-Requisite:</i> 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) (<i>Pre-Requisite:</i> Calculus Placement Required)	_____
PHYS 2A: General Physics (4) (GE Area B1) (<i>Pre-Requisite:</i> MATH 6 or DS 71 or MATH 75 or MATH 70)	_____
PHYS 2B: General Physics (4) (<i>Pre-Requisite:</i> PHYS 2A)	_____
PH 175I: Environmental Internship (4) (<i>Pre-Requisite:</i> 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</i> <i>Division GE</i>	<i>Lower</i> <i>Division GE</i>	<i>Lower</i> <i>Division GE</i>		<i>Upper</i> <i>Division GE</i>	PH 163 (3 Units)	PH 135 (3 Units)	<i>PH Elective</i>
	<i>Lower</i> <i>Division GE</i>	<i>Lower</i> <i>Division GE</i>	<i>Lower</i> <i>Division GE</i>	<i>Lower</i> <i>Division GE</i>	<i>UDWS</i> (<i>W Course or</i> <i>Exam</i>)	<i>PH Elective</i>	PH 162 (3 Units)	<i>PH Elective</i>
	<i>Lower</i> <i>Division GE</i>	<i>American</i> <i>Government</i>	<i>Lower</i> <i>Division GE</i>	<i>Lower</i> <i>Division GE</i>	<i>Multicultural</i> <i>International</i> (<i>MI</i>)	<i>Upper</i> <i>Division GE</i>	PH 168A (3 Units)	<i>General</i> <i>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

- A minimum grade of C is required in all Health Science core courses and all core option courses.
- CR/NC grading is not permitted in courses for the Health Science major, except in those courses which are designated CR/NC grading only.
- 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.

2021-2022 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

Area A - English Language Communication and Critical Thinking

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

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

A1 Oral Communications: Communication 3, 7, 8

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

A3 Critical Thinking: African 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 - Scientific Inquiry and Quantitative Reasoning

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 & 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 & 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; 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 A1 for students in English college readiness Category III and IV)

D1 American History: History 11, 12

D2 Social Science: Africana Studies 10, 15, 27; Agricultural Business 1; American Indian Studies 50; Anthropology 2, 3; Armenian Studies 10; Child & Family Science 31; 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 & Journalism 1; Middle East Studies 10; Political Science 1; Psychology 10; Sociology 1 or 1S; Women's Studies 10, 11

D1 _____

D2 _____

Area E - Lifelong Understanding & Self-Development One Course

Animal Science 67; Art 13; Child & Family Science 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 _____

Area F - Ethnic Studies One Course

Africana Studies 68; American Indian Studies 5, 103; Anthropology 120, 175; Asian American Studies 10, 15, 20, 50, 120, 175, 185; Chicano & Latin American Studies 3, 5, 120, 128, 163; Media, Communications & Journalism 6

F _____

UPPER DIVISION G.E. CONSISTS OF 9 UNITS

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

♦ INTEGRATION Three upper division—one in each area

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

Anthropology 161; Chemistry 170; Computer Science 100; Earth & Environmental Sciences 102, 112, 167, 168; Geography 115, 128, 129; Natural Science 115, 120, 125; Physical Science 131, 168; Physics 100; Plant Science 105; Public Health 161; Sociology 158

IB _____

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

Africana Studies 129; Armenia 148; Art 102; Art History 140; Arts & Humanity 105; Chicano & Latin American Studies 130; Dance 171; Drama 163; Earth & Environmental Sciences 102; English 101, 102, 103, 112, 113, 114, 174; French 109, 124, 125, 149; Humanities 104, 108, 110, 118, 120, 129; Interdisciplinary Art Studies 108; Linguistics 115, 130, 138; Music 170A, 171, 187; Philosophy 120, 150, 151; Portuguese 101, 102, 103; Spanish 125, 129; Women's Studies 110

IC _____

ID Social, Political & Economic Institutions & Behavior, Historical Background: (Prerequisite: Completion of FOUNDATION and Area D)

Africana Studies 144; Agricultural Business 155; Anthropology 116W, 145; Art History 143; 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 & Journalism 175, 178, 180; Peace & Conflict Studies 100; Social Science 110; Sociology 131, 143, 163; Women's Studies 101, 111, 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 US and California Government requirement during your sophomore year
- ☐ Complete your upper-division writing skills during your junior year (60 - 90 units)
- ☐ Complete your Application for Degree and 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 (GE Area A2—English 5A & 5B, 10 or equivalent) -
- US History (GE Area D1—History 11, 12 or equivalent) -
- US and California Government -

Courses: Political Science 2

- Multicultural/International course (M/I) -

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; Italian 100; Linguistics 147; Media, Communications & 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 120, 135

♦ Writing Skills Requirement:

Completed Course: _____

- Upper-division writing skills -

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

Note: a few majors require a specific "W" course; see catalog requirements for your major
*Enrollment may be restricted or have additional prerequisites.

Completed Course: _____

♦ Fresno State Residency unit minimums:

- 30 units
- 24 upper-division units
- 12 units in major
- 9 General Education units

Note: To see a list of general education/writing skills/multicultural-international course descriptions, click the respective area heading