Bachelor of Science in Health Science

Requirements (104-112 units)

Total units required for graduation: 180-183

Environmental Health Science

The Environmental Health Science Concentration is the appropriate choice for students who want to become health inspectors (i.e., Registered Environmental Health Specialist), industrial hygienists, or hazardous waste control experts. For those who plan on becoming Registered Environmental Health Specialists, this concentration is approved by the Environmental Specialist Registration Committee of the California Department of Public Health.

Students who are certified by the Environmental Health Coordinator will have met the academic and experience requirements for admittance to the State Environmental Health Specialist Registration Examination.

Health Care Management

Health care management is concerned with the planning, organization, financing, delivery, and evaluation of public and personal health services. The health services administration concentration prepares students for careers in health services delivery organizations such as hospitals, clinics, managed care organizations, long-term care facilities, and medical offices. Graduates may also enter careers in governmental health care as local and state departments of health, the U.S. Public Health Service, or international health organizations. Management and staff opportunities for the trained baccalaureate include consulting firms, durable medical equipment, pharmaceutical companies, and healthcare information systems vendors.

The B.S. in Health Science with a concentration in Health Care Management may be combined with a minor in business.

Public Health Education

Students pursuing careers in school health education are encouraged to enroll in the B.S. in Health Science, Integrated Teaching Track.

The Public Health Education concentration prepares graduates for professional positions in county health departments and other public health agencies, community-based organizations, health care, tribal health, international organizations, and for graduate programs in physician assistant, occupational

Requirements for the B.S. in Health Science

Note: All Health Science concentrations require grades of “C” (2.0) or better in all upper-division coursework with an HSCI prefix or any course approved for upper-division Health Science substitutions required in the major. Certain required courses also apply in the university's general education program (http://bulletin.csusb.edu/undergraduate-degree-programs/general-education-program).

Lower-division requirement (5)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>HSCI 120</td>
<td>Health and Society: An Ecological Approach</td>
<td>5</td>
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Upper-division requirements (20)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>HSCI 315</td>
<td>Statistics for the Health Sciences</td>
<td>4</td>
</tr>
<tr>
<td>HSCI 352</td>
<td>Principles of Environmental Health</td>
<td>4</td>
</tr>
<tr>
<td>HSCI 367</td>
<td>Human Disease Mechanisms</td>
<td>4</td>
</tr>
<tr>
<td>HSCI 370</td>
<td>Health Behavior</td>
<td>4</td>
</tr>
<tr>
<td>HSCI 451</td>
<td>Principles of Epidemiology</td>
<td>4</td>
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</tbody>
</table>

Concentration (79-87)

One of the following concentrations is required for the major: 79-87

Total Units 104-112

Environmental Health Concentration

(Program Code: HSEH)

Fifteen units chosen from Group A or B below: 15

Group A:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>BIOL 200</td>
<td>Biology of the Cell</td>
<td></td>
</tr>
<tr>
<td>BIOL 201</td>
<td>Biology of Organisms</td>
<td></td>
</tr>
<tr>
<td>BIOL 202</td>
<td>Biology of Populations</td>
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Group B:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>BIOL 100</td>
<td>Topics in Biology</td>
<td></td>
</tr>
<tr>
<td>BIOL 223</td>
<td>Human Physiology and Anatomy I</td>
<td></td>
</tr>
<tr>
<td>BIOL 224</td>
<td>Human Physiology and Anatomy II</td>
<td></td>
</tr>
<tr>
<td>BIOL 220</td>
<td>Principles of Microbiology</td>
<td>5</td>
</tr>
<tr>
<td>or BIOL 320</td>
<td>Microorganisms</td>
<td></td>
</tr>
<tr>
<td>CHEM 215</td>
<td>General Chemistry I: Atomic Structure and Chemical Bonding</td>
<td>6</td>
</tr>
<tr>
<td>CHEM 216</td>
<td>General Chemistry II: Principles of Chemical Reactions</td>
<td>6</td>
</tr>
<tr>
<td>MATH 192</td>
<td>Methods of Calculus</td>
<td>4</td>
</tr>
<tr>
<td>or MATH 211</td>
<td>Basic Concepts of Calculus</td>
<td></td>
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</table>

Organic chemistry, a minimum of five units. Choose Group A, B, or C: 5

Group A:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 206</td>
<td>Fundamentals of Chemistry II: Organic Chemistry</td>
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</tbody>
</table>

Group B:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 221A</td>
<td>Organic Chemistry I Lecture</td>
<td></td>
</tr>
<tr>
<td>CHEM 221B</td>
<td>Organic Chemistry I Lab</td>
<td></td>
</tr>
<tr>
<td>CHEM 222A</td>
<td>Organic Chemistry II Lecture</td>
<td></td>
</tr>
<tr>
<td>CHEM 222B</td>
<td>Organic Chemistry II Lab</td>
<td></td>
</tr>
<tr>
<td>CHEM 223A</td>
<td>Organic Chemistry III Lecture</td>
<td></td>
</tr>
<tr>
<td>CHEM 223B</td>
<td>Organic Chemistry III Lab</td>
<td></td>
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</table>

Group C:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>CHEM 321</td>
<td>Principles of Organic Chemistry I</td>
<td></td>
</tr>
<tr>
<td>CHEM 322</td>
<td>Principles of Organic Chemistry II</td>
<td></td>
</tr>
<tr>
<td>CHEM 323</td>
<td>Principles of Organic Chemistry III</td>
<td></td>
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<tr>
<td>HSCI 380</td>
<td>Toxicology</td>
<td>4</td>
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<tr>
<td>HSCI 401</td>
<td>Advanced Environmental Health</td>
<td>5</td>
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<tr>
<td>HSCI 402</td>
<td>Principles of Occupational Health</td>
<td>5</td>
</tr>
<tr>
<td>HSCI 403</td>
<td>Vector-borne Disease Control</td>
<td>5</td>
</tr>
<tr>
<td>HSCI 480</td>
<td>Health Services Administration</td>
<td>4</td>
</tr>
<tr>
<td>HSCI 496</td>
<td>Internship in Environmental Health</td>
<td>4</td>
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</table>

A minimum of thirteen units, choose Group A or B below: 13

Group A:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>PHYS 121</td>
<td>Basic Concepts of Physics I</td>
<td></td>
</tr>
<tr>
<td>Course</td>
<td>Title</td>
<td>Units</td>
</tr>
<tr>
<td>--------------</td>
<td>--------------------------------------------</td>
<td>-------</td>
</tr>
<tr>
<td>PHYS 122</td>
<td>Basic Concepts of Physics II</td>
<td></td>
</tr>
<tr>
<td>PHYS 123</td>
<td>Basic Concepts of Physics III</td>
<td></td>
</tr>
<tr>
<td>Group B:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PHYS 221</td>
<td>General Physics I</td>
<td></td>
</tr>
<tr>
<td>PHYS 222</td>
<td>General Physics II</td>
<td></td>
</tr>
<tr>
<td>PHYS 223</td>
<td>General Physics III</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Six units of health science electives</td>
<td>6</td>
</tr>
<tr>
<td>HSCI 322</td>
<td>Air Pollution</td>
<td></td>
</tr>
<tr>
<td>HSCI 324</td>
<td>Radiological Health and Safety</td>
<td></td>
</tr>
<tr>
<td>HSCI 354</td>
<td>Solid Waste Management</td>
<td></td>
</tr>
<tr>
<td>HSCI 356</td>
<td>Housing and Institutions</td>
<td></td>
</tr>
<tr>
<td>HSCI 358</td>
<td>Water Quality and Pollution</td>
<td></td>
</tr>
<tr>
<td>HSCI 381</td>
<td>Occupational Safety</td>
<td></td>
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<tr>
<td>HSCI 477</td>
<td>Environmental Health Engineering</td>
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<tr>
<td>HSCI 499A-D</td>
<td>Directed Reading</td>
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<tr>
<td>HSCI 530</td>
<td>Food-Borne Illnesses and Their Prevention</td>
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<tr>
<td>HSCI 531</td>
<td>Bioterrorism</td>
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<tr>
<td>HSCI 557</td>
<td>Hazardous Material Control</td>
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<tr>
<td>HSCI 558</td>
<td>Management of Water Quality</td>
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<tr>
<td>HSCI 595A-D</td>
<td>Independent Study</td>
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**Total Units**: 87

### Health Care Management Concentration

(Program Code: HSHC)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT 211</td>
<td>Introductory Accounting I</td>
<td>4</td>
</tr>
<tr>
<td>ACCT 212</td>
<td>Introductory Accounting II</td>
<td>4</td>
</tr>
<tr>
<td>ECON 200</td>
<td>Principles of Microeconomics</td>
<td>4</td>
</tr>
<tr>
<td>HSCI 271</td>
<td>Introduction to Public Health</td>
<td>4</td>
</tr>
<tr>
<td>HSCI 273</td>
<td>Software Applications in the Health Sciences</td>
<td>4</td>
</tr>
<tr>
<td>HSCI 360</td>
<td>Medical Care Organizations</td>
<td>4</td>
</tr>
<tr>
<td>HSCI 423</td>
<td>Health and Wellness of Older Adults</td>
<td>4</td>
</tr>
<tr>
<td>HSCI 436</td>
<td>Human Resources Management in Health Care</td>
<td>4</td>
</tr>
<tr>
<td>HSCI 438</td>
<td>Financial Management in Health Care</td>
<td>4</td>
</tr>
<tr>
<td>HSCI 452</td>
<td>Special Topics in Health Science and Human Ecology</td>
<td>4</td>
</tr>
<tr>
<td>HSCI 455</td>
<td>Health Policy and Law</td>
<td>4</td>
</tr>
<tr>
<td>HSCI 460</td>
<td>Strategic Planning and Marketing in the Health Care System</td>
<td>4</td>
</tr>
<tr>
<td>HSCI 468</td>
<td>Research Methodology in Health Science</td>
<td>4</td>
</tr>
<tr>
<td>HSCI 480</td>
<td>Health Services Administration</td>
<td>4</td>
</tr>
<tr>
<td>HSCI 489</td>
<td>Pre-Field Experience</td>
<td>2</td>
</tr>
<tr>
<td>HSCI 493</td>
<td>Field Experience Seminar</td>
<td>1</td>
</tr>
<tr>
<td>HSCI 495</td>
<td>Field Experience</td>
<td>4</td>
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<tr>
<td>MGMT 302</td>
<td>Management and Organizational Behavior</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Twelve units of upper-division health science electives or other electives approved by an advisor.</td>
<td>12</td>
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</table>

**Total Units**: 79

### Public Health Education Concentration

(Program Code: HSPH)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 220</td>
<td>Principles of Microbiology</td>
<td>5</td>
</tr>
<tr>
<td>BIOL 223</td>
<td>Human Physiology and Anatomy I</td>
<td>5</td>
</tr>
<tr>
<td>BIOL 224</td>
<td>Human Physiology and Anatomy II</td>
<td>5</td>
</tr>
<tr>
<td>CHEM 205</td>
<td>Fundamentals of Chemistry I: General Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>HSCI 271</td>
<td>Introduction to Public Health</td>
<td>4</td>
</tr>
<tr>
<td>HSCI 273</td>
<td>Software Applications in the Health Sciences</td>
<td>4</td>
</tr>
<tr>
<td>HSCI 301</td>
<td>Foundations of Public Health Education</td>
<td>4</td>
</tr>
<tr>
<td>HSCI 310</td>
<td>Health and Human Sexuality</td>
<td>4</td>
</tr>
<tr>
<td>HSCI 342</td>
<td>Nutrition for Your Health</td>
<td>4</td>
</tr>
<tr>
<td>HSCI 359</td>
<td>Global Health</td>
<td>4</td>
</tr>
<tr>
<td>HSCI 364</td>
<td>Drug and Alcohol Use and Abuse</td>
<td>4</td>
</tr>
<tr>
<td>HSCI 455</td>
<td>Health Policy and Law</td>
<td>4</td>
</tr>
<tr>
<td>HSCI 468</td>
<td>Research Methodology in Health Science</td>
<td>4</td>
</tr>
<tr>
<td>HSCI 471</td>
<td>Health Program Planning and Implementation</td>
<td>4</td>
</tr>
<tr>
<td>HSCI 473</td>
<td>Strategies and Methods in Health Education</td>
<td>4</td>
</tr>
<tr>
<td>HSCI 480</td>
<td>Health Services Administration</td>
<td>4</td>
</tr>
<tr>
<td>HSCI 489</td>
<td>Pre-Field Experience</td>
<td>2</td>
</tr>
<tr>
<td>HSCI 493</td>
<td>Field Experience Seminar</td>
<td>1</td>
</tr>
<tr>
<td>HSCI 495</td>
<td>Field Experience</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Four units of upper division elective from SOC, ANTH, PA, GEOG, PSYC, HSCI as approved by advisor.</td>
<td>4</td>
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</tbody>
</table>

**Total Units**: 79