

Degree: BS MS Environmental Geoscience (Environmental Science Majors on Project Track)

| Requirement Area | Course | Course Title | Prerequisites | Units |
|--|----------|--|---|-------|
| First Semester (FALL) | | | | |
| 1A | | Written Communication | | 3 |
| Major Required and Area 5 Physical and Biological Sciences (Physical) (old B1) 5A and SUST | EESC 280 | Humans and the Environment in California Units: 3 Breadth Area: GE-5A; Sustainability | | 3 |
| Area 4/Code 1 | | Social Science and U.S. Code (US 1,2) | | 3 |
| Major Required | PHYS 125 | Principles of Physics I Units: 4 ; Breadth Area: GE-5A 5C | Satisfactory score of 78 or higher on Math Proficiency Assessment or MATH 120. | 4 |
| Major Required | EESC 297 | Introductory Field Experience Units: 1 | | 1 |
| | | | | |
| | | | Total: | 14 |
| Second Semester (SPRING) | | | | |
| 1C | | Oral Communication | | 3 |
| Area 4/Code 2 | | Social Sciences and U.S. Code (1,3) | | 3 |
| Area 2 | MATH 130 | Calculus I Units: 4 ; Breadth Area: GE-2 | One from the following: Satisfactory score of 78 or higher on Mathematics Placement Exam, MATH 120 or MATH | 3 |
| Major Required | PHYS 126 | Principles of Physics II Units: 4 ; Breadth Area: GE-5A 5C | | 4 |
| Free Elective | | | | 3 |
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| | | | Total: | 16 |
| Third Semester (FALL) | | | | |
| Area 1B | | Critical Thinking | | 3 |
| Major Required and Area 5 Physical and Biological Sciences (Biological) (old B2) 5B | EESC 240 | Environmental Biology Units: 3 ; Breadth Area: GE-5B | | 3 |
| Major Required and Area 5 Physical and Biological Sciences (Biological) (old B2) 5C | EESC 241 | Environmental Biology Laboratory Units: 1 ; Breadth Area: GE-5C | | 1 |
| Major Required and Area 5 Physical and Biological Sciences (Physical) 5A | EESC 210 | Physical and Environmental Geology and Geography Units: 4 with lab Breadth Area: GE-5A, GE-5C | | 4 |
| Major Required | CHEM 111 | General Chemistry I Units: 3 ; Breadth Area: GE-5A | | 3 |
| Major Required | CHEM 111L | Breadth Area: GE-5C | | 2 |
| | | | | |
| | | | Total: | 16 |
| Fourth Semester (SPRING) | | | | |
| Area 6 | | Ethnic Studies | | 3 |
| 3A | | Arts & Humanities | | 3 |

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|-----------------------------------|-----------|--|--|----|
| Major Required | CHEM 112 | General Chemistry II Units: 3 | CHEM 111 & CHEM 111L with a C- or higher | 3 |
| Major Required | CHEM 112L | General Chemistry II Laboratory Units: 2 | CHEM 111 & CHEM 111L with a C- or higher | 2 |
| 3B | | Arts & Humanities | | 3 |
| | | | Total: | 14 |
| Fifth Semester (FALL) | | | | |
| UD Areas 5 | | Upper-division Science or Mathematical Concepts/Quantitative Reasoning | Completion of Areas 1 & 2. | 3 |
| UWR | | University Writing Req | | 3 |
| Major Required | EESC 360 | Introduction to GIS in Earth, Environmental and Sustainability Sciences Units :3 | | 3 |
| Major Required | EESC 397 | Advanced Field Experience Units: 2 | EESC 297 | 2 |
| Major Required | STAT 303 | Statistical Methods in Biology Units: 3 | | 3 |
| Free Elective/EESC 133 (Transfer) | TBD | TBD | | 1 |
| | | | Total: | 15 |
| Sixth Semester (SPRING) | | | | |
| UD Area 3 | | UD Arts OR Humanities | Completion of Areas 1 &2. | 3 |
| Overlay -Social Justice (SJ) | | | | 3 |
| UD Area 4 | | UD Social and Behavioral Sciences | Completion of Areas 1 &2. | 3 |
| Major Required | BIOL 350 | Ecology Units: 4 | STAT 303 and EESC 241 or BIOL 140B with grade C- or better | 4 |
| Free Elective | TBD | TBD | | 3 |
| | | | Total: | 16 |
| Seventh Semester (FALL) | | | | |

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| Overlay -Diversity (Div) | | | | 3 |
| Major Required | EESC 420 | Global Climate Change Units: 3 GE SUST | | 3 |
| Major Required Elective | EESC 350 or EESC 432 | Environmental Hydrology Units: 4 or Hydrogeology Units: 4 | EESC 350 requires either CHEM 100 or CHEM 111, and either MATH 120, MATH 125, or MATH 130, and Highy | 4 |
| Major Required Elective | EESC 675, EESC 655, EESC 645 | Fire Ecology and Management, Sustainable Food Systems, Water Resources and Watersheds | EESC 460 requires EESC 360 | 3 |
| Free Elective | TBD | TBD | | 3 |
| | | | Total: | 16 |
| Eighth Semester (SPRING) | | | | |
| Major Required | EESC 499 | Capstone Seminar in Earth, Environmental and Sustainability Sciences Units: 3 | | 3 |
| Major Required | EESC 410 | Environmental Impact Analysis Units: 3 | | 3 |
| Major Required Elective | EESC 651, EESC 660, EESC 661 | Hydroinformatics, Advanced GIS in Earth, Environmental and Sustainability Sciences , Remote Sensing of the Environment in Earth, Environmental and Sustainability Sciences | | 4 |

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| Major Required Elective | EESC 634, EESC 631, EESC 633 | Biogeochemistry, Isotope Geochemistry, Science of Soils | EESC 634 requires PHYS 125, PHYS 126, and CHEM 110 or CHEM 111. and EESC 631 requires CHEM 112 and CHEM 112L | 4 |
| | | | Total: | 14 |
| Ninth Semester (FALL) | | | | |
| Grad Major | EESC 632, EESC 622, EESC 641 | Groundwater Flow and Contaminant Transport, Seismic Exploration, Earthquake Geology | | 4 |
| Grad Major | EESC 601 | Professional Ethics in Environmental Geosciences | | 1 |
| Grad Major | EESC 693 | Project | | 1 |
| UD Major or Grad Major | EESC 3xx- 6xx | Choice of Class | | 4 |
| | | | Total: | 10 |
| Ten Semester (SPRING) | | | | |
| Grad Major | EESC 6xx | Choice of Grad Class | | 4 |
| Grad Major | EESC 602 | Graduate Seminar | | 2 |
| Grad Major | EESC 693 | Project | | 1 |
| Grad Major | EESC 671 | Field Experience | | 2 |
| | | | Total: | 9 |
| Total Units: | | | | 140 |

Degree: BS MS Environmental Geoscience (Environmental Science Majors on Thesis Track)

| Requirement Area | Course | Course Title | Prerequisites | Units |
|--|----------|---|---|-------|
| First Semester (FALL) | | | | |
| 1A | | Written Communication | | 3 |
| Major Required and Area 5 Physical and Biological Sciences (Physical) (old B1) 5A and SUST | EESC 280 | Humans and the Environment in California Units: 3 Breadth Area: GE-5A; Sustainability | | 3 |
| Area 4/Code 1 | | Social Science and U.S. Code (US 1,2) | | 3 |
| Major Required | PHYS 125 | Principles of Physics I Units: 4 ; Breadth Area: GE-5A 5C | Satisfactory score of 78 or higher on Math Proficiency Assessment or MATH 120. | 4 |
| Major Required | EESC 297 | Introductory Field Experience Units: 1 | | 1 |
| | | | | |
| | | | Total: | 14 |
| Second Semester (SPRING) | | | | |
| 1C | | Oral Communication | | 3 |
| Area 4/Code 2 | | Social Sciences and U.S. Code (1,3) | | 3 |
| Area 2 | MATH 130 | Calculus I Units: 4 ; Breadth Area: GE-2 | One from the following: Satisfactory score of 78 or higher on Mathematics Placement Exam, MATH 120 or MATH | 3 |
| Major Required | PHYS 126 | Principles of Physics II Units: 4 ; Breadth Area: GE-5A 5C | | 4 |
| Free Elective | | | | 3 |
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| | | | | |
| | | | Total: | 16 |
| Third Semester (FALL) | | | | |
| Area 1B | | Critical Thinking | | 3 |
| Major Required and Area 5 Physical and Biological Sciences (Biological) (old B2) 5B | EESC 240 | Environmental Biology Units: 3 ; Breadth Area: GE-5B | | 3 |
| Major Required and Area 5 Physical and Biological Sciences (Biological) (old B2) 5C | EESC 241 | Environmental Biology Laboratory Units: 1 ; Breadth Area: GE-5C | | 1 |
| Major Required and Area 5 Physical and Biological Sciences (Physical) 5A | EESC 210 | Physical and Environmental Geology and Geography Units: 4 with lab Breadth Area: GE-5A, GE-5C | | 4 |
| Major Required | CHEM 111 | General Chemistry I Units: 3 ; Breadth Area: GE-5A | | 3 |
| Major Required | CHEM 111L | Area: GE-5C | | 2 |
| | | | | |
| | | | Total: | 16 |
| Fourth Semester (SPRING) | | | | |
| Area 6 | | Ethnic Studies | | 3 |
| 3A | | Arts & Humanities | | 3 |

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|-----------------------------------|-----------|--|--|----|
| Major Required | CHEM 112 | General Chemistry II Units: 3 | CHEM 111 & CHEM 111L with a C- or higher | 3 |
| Major Required | CHEM 112L | General Chemistry II Laboratory Units: 2 | CHEM 111 & CHEM 111L with a C- or higher | 2 |
| 3B | | Arts & Humanities | | 3 |
| | | | Total: | 14 |
| Fifth Semester (FALL) | | | | |
| UD Areas 5 | | Upper-division Science or Mathematical Concepts/Quantitative Reasoning | Completion of Areas 1 & 2. | 3 |
| UWR | | University Writing Req | | 3 |
| Major Required | EESC 360 | Introduction to GIS in Earth, Environmental and Sustainability Sciences Units :3 | | 3 |
| Major Required | EESC 397 | Advanced Field Experience Units: 2 | EESC 297 | 2 |
| Major Required | STAT 303 | Statistical Methods in Biology Units: 3 | | 3 |
| Free Elective/EESC 133 (Transfer) | TBD | TBD | | 1 |
| | | | Total: | 15 |
| Sixth Semester (SPRING) | | | | |
| UD Area 3 | | UD Arts OR Humanities | Completion of Areas 1 &2. | 3 |
| Overlay -Social Justice (SJ) | | | | 3 |
| UD Area 4 | | UD Social and Behavioral Sciences | Completion of Areas 1 &2. | 3 |
| Major Required | BIOL 350 | Ecology Units: 4 | STAT 303 and EESC 241 or BIOL 140B with grade C- or better | 4 |
| Free Elective | TBD | TBD | | 3 |
| | | | Total: | 16 |
| Seventh Semester (FALL) | | | | |

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| Overlay -Diversity (Div) | | | | 3 |
| Major Required | EESC 420 | Global Climate Change Units: 3 GE SUST | | 3 |
| Major Required Elective | EESC 350 or EESC 432 | Environmental Hydrology Units: 4 or Hydrogeology Units: 4 | CHEM 100 or CHEM 111, and either MATH 120, MATH 125, or MATH 130, and Highy | 4 |
| Major Required Elective | EESC 675, EESC 655, EESC 645 | Fire Ecology and Management, Sustainable Food Systems, Water Resources and Watersheds | | 3 |
| Free Elective | TBD | TBD | | 3 |
| | | | Total: | 16 |
| Eighth Semester (SPRING) | | | | |
| Major Required | EESC 499 | Capstone Seminar in Earth, Environmental and Sustainability Sciences Units: 3 | | 3 |
| Major Required | EESC 410 | Environmental Impact Analysis Units: 3 | | 3 |
| Major Required Elective | EESC 651, EESC 660, EESC 661 | Hydroinformatics, Advanced GIS in Earth, Environmental and Sustainability Sciences , Remote Sensing of the Environment in Earth, Environmental and Sustainability Sciences | EESC 660 requires EESC 360 | 4 |
| Major Required Elective | EESC 634, EESC 631, EESC 633 | Biogeochemistry, Isotope Geochemistry, Science of Soils | EESC 634 requires PHYS 125, PHYS 126, and CHEM 110 or CHEM 111. and EESC 631 requires CHEM 112 and CHEM 112L | 4 |

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| | | | Total: | 14 |
| Ninth Semester (FALL) | | | | |
| Grad Major | EESC 632, EESC 622, EESC 641 | Groundwater Flow and Contaminant Transport, Seismic Exploration, Earthquake Geology | | 4 |
| Grad Major | EESC 601 | Professional Ethics in Environmental Geosciences | | 1 |
| Grad Major | EESC 691 | University Thesis | | 3 |
| | | | | |
| | | | Total: | 8 |
| Ten Semester (SPRING) | | | | |
| Grad Major | EESC 6xx | Choice of Grad Class | | 4 |
| Grad Major | EESC 602 | Graduate Seminar | | 2 |
| Grad Major | EESC 691 | University Thesis | | 3 |
| Grad Major | EESC 671 | Field Experience | | 2 |
| | | | | |
| | | | Total: | 11 |
| Total Units: | | | | 140 |

Degree: BS MS Environmental Geoscience (Environmental Science Majors on Exam Track)

| Requirement Area | Course | Course Title | Prerequisites | Units |
|--|----------|---|---|-------|
| First Semester (FALL) | | | | |
| 1A | | Written Communication | | 3 |
| Major Required and Area 5 Physical and Biological Sciences (Physical) (old B1) 5A and SUST | EESC 280 | Humans and the Environment in California Units: 3 Breadth Area: GE-5A; Sustainability | | 3 |
| Area 4/Code 1 | | Social Science and U.S. Code (US 1,2) | | 3 |
| Major Required | PHYS 125 | Principles of Physics I Units: 4 ; Breadth Area: GE-5A 5C | Satisfactory score of 78 or higher on Math Proficiency Assessment or MATH 120. | 4 |
| Major Required | EESC 297 | Introductory Field Experience Units: 1 | | 1 |
| | | | | |
| | | | Total: | 14 |
| Second Semester (SPRING) | | | | |
| 1C | | Oral Communication | | 3 |
| Area 4/Code 2 | | Social Sciences and U.S. Code (1,3) | | 3 |
| Area 2 | MATH 130 | Calculus I Units: 4 ; Breadth Area: GE-2 | One from the following: Satisfactory score of 78 or higher on Mathematics Placement Exam, MATH 120 or MATH | 3 |
| Major Required | PHYS 126 | Principles of Physics II Units: 4 ; Breadth Area: GE-5A 5C | | 4 |
| Free Elective | | | | 3 |

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| | | | | |
| | | | Total: | 16 |
| Third Semester (FALL) | | | | |
| Area 1B | | Critical Thinking | | 3 |
| Major Required and Area 5 Physical and Biological Sciences (Biological) (old B2) 5B | EESC 240 | Environmental Biology Units: 3 ; Breadth Area: GE-5B | | 3 |
| Major Required and Area 5 Physical and Biological Sciences (Biological) (old B2) 5C | EESC 241 | Environmental Biology Laboratory Units: 1 ; Breadth Area: GE-5C | | 1 |
| Major Required and Area 5 Physical and Biological Sciences (Physical) 5A | EESC 210 | Physical and Environmental Geology and Geography Units: 4 with lab Breadth Area: GE-5A, GE-5C | | 4 |
| Major Required | CHEM 111 | General Chemistry I Units: 3 ; Breadth Area: GE-5A | | 3 |
| Major Required | CHEM 111L | Breadth Area: GE-5C | | 2 |
| | | | | |
| | | | Total: | 16 |
| Fourth Semester (SPRING) | | | | |
| Area 6 | | Ethnic Studies | | 3 |
| 3A | | Arts & Humanities | | 3 |

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|-----------------------------------|-----------|--|--|----|
| Major Required | CHEM 112 | General Chemistry II Units: 3 | CHEM 111 & CHEM 111L with a C- or higher | 3 |
| Major Required | CHEM 112L | General Chemistry II Laboratory Units: 2 | CHEM 111 & CHEM 111L with a C- or higher | 2 |
| 3B | | Arts & Humanities | | 3 |
| | | | Total: | 14 |
| Fifth Semester (FALL) | | | | |
| UD Areas 5 | | Upper-division Science or Mathematical Concepts/Quantitative Reasoning | Completion of Areas 1 & 2. | 3 |
| UWR | | University Writing Req | | 3 |
| Major Required | EESC 360 | Introduction to GIS in Earth, Environmental and Sustainability Sciences Units :3 | | 3 |
| Major Required | EESC 397 | Advanced Field Experience Units: 2 | EESC 297 | 2 |
| Major Required | STAT 303 | Statistical Methods in Biology Units: 3 | | 3 |
| Free Elective/EESC 133 (Transfer) | TBD | TBD | | 1 |
| | | | Total: | 15 |
| Sixth Semester (SPRING) | | | | |
| UD Area 3 | | UD Arts OR Humanities | Completion of Areas 1 & 2. | 3 |
| Overlay -Social Justice (SJ) | | | | 3 |
| UD Area 4 | | UD Social and Behavioral Sciences | Completion of Areas 1 & 2. | 3 |
| Major Required | BIOL 350 | Ecology Units: 4 | STAT 303 and EESC 241 or BIOL 140B with grade C- or better | 4 |
| Free Elective | TBD | TBD | | 3 |
| | | | Total: | 16 |
| Seventh Semester (FALL) | | | | |

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|---------------------------------|------------------------------------|---|---|----|
| Overlay -Diversity (Div) | | | | 3 |
| Major Required | EESC 420 | Global Climate Change Units: 3 GE SUST | | 3 |
| Major Required Elective | EESC 350 or EESC 432 | Environmental Hydrology Units: 4 or Hydrogeology Units: 4 | EESC 350 requires either CHEM 100 or CHEM 111, and either MATH 120, MATH 125, or MATH 130, and Highy | 4 |
| Major Required Elective | EESC 675, EESC 655, EESC 645 | Fire Ecology and Management, Sustainable Food Systems, Water Resources and Watersheds | EESC 460 requires EESC 360 | 3 |
| Free Elective | TBD | TBD | | 3 |
| | | | Total: | 16 |
| Eighth Semester (SPRING) | | | | |
| Major Required | EESC 499 | Capstone Seminar in Earth, Environmental and Sustainability Sciences Units: 3 | | 3 |
| Major Required | EESC 410 | Environmental Impact Analysis Units: 3 | | 3 |
| Major Required Elective | EESC 651, EESC 660, EESC 661 | Hydroinformatics, Advanced GIS in Earth, Environmental and Sustainability Sciences , Remote Sensing of the Environment in Earth, Environmental and Sustainability Sciences | EESC 660 requires EESC 360 | 4 |

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|------------------------------|------------------------------------|---|--|-----|
| Major Required Elective | EESC 634, EESC 631, EESC 633 | Biogeochemistry, Isotope Geochemistry, Science of Soils | EESC 634 requires PHYS 125, PHYS 126, and CHEM 110 or CHEM 111. and EESC 631 requires CHEM 112 and CHEM 112L | 4 |
| | | | Total: | 14 |
| Ninth Semester (FALL) | | | | |
| Grad Major | EESC 632, EESC 622, EESC 641 | Groundwater Flow and Contaminant Transport, Seismic Exploration, Earthquake Geology | | 4 |
| Grad Major | EESC 601 | Professional Ethics in Environmental Geosciences | | 1 |
| UD Major or Grad Major | EESC 3xx-6xx | Choice of Class | | 4 |
| | | | Total: | 9 |
| Ten Semester (SPRING) | | | | |
| Grad Major | EESC 6xx | Choice of Grad Class | | 4 |
| Grad Major | EESC 602 | Graduate Seminar | | 2 |
| Grad Major | EESC 692 | Exam | | 2 |
| Grad Major | EESC 671 | Field Experience | | 2 |
| | | | | |
| | | | | |
| | | | Total: | 10 |
| Total Units: | | | | 140 |