If you’re thinking about pursuing Environmental Studies (ES) at UC Santa Barbara the first important decision you must make is choosing which degree to pursue, the Bachelor of Arts (B.A.) or Bachelor of Science (B.S.) in Environmental Studies. While both majors are similar in design and stress the importance of understanding the complex interrelationships between the humanities, social sciences, and natural science disciplines, having two-degree options allows students maximum flexibility to choose a major that best fits their environmental interests and long-term goals. In this document we provide a detailed comparison of the academic requirements of the B.A. and B.S. major so one can understand the differences and can make an educated decision. Given your decision will also be based on what you want to do after graduation we thought it might be helpful to also highlight just a few example career paths each degree might lead to. Just remember, no matter which major you choose, your decision should be based on what you believe will ultimately make you happy.

Simply put, the B.A. degree in ES is the more interdisciplinary major, requiring a swath of introductory courses in the humanities, social, physical, and natural sciences. It stresses the importance of comprehending basic social, cultural, and scientific theories and understanding how they interact with one another and play a part of every environmental issues. While this degree will make one science literate, the degree offers maximum flexibility to select ES electives and outside concentration courses from just about every academic discipline at UCSB, including: arts, policy, culture, languages, humanities, and economics to name just a few.

The goal of the B.S. degree in ES is to train students to become proficient in the natural and physical sciences while still being aware of and understand the important role social and cultural influences have on addressing today’s environmental problems. The major curricular differences from the ES B.A. degree are an increased number of chemistry, calculus, biology, and physics courses required in the lower-division and the majority of ES electives and the outside concentration requirements are focused on the physical and natural science disciplines. This is done to enhance the B.S. student’s ability to apply scientific concepts in solving environmental problems. Please see the other side for a comparison of the B.A. vs. B.S. degree requirements.

What are the general employment differences between B.A. and B.S. majors?
Employment options vary widely depending on individual coursework taken by each student. However, as some career fields are heavily dependent on a strong scientific background those who pursue the B.S. degree would be more qualified for certain scientific/technical opportunities. B.S. majors tend to enter fields where the use of science is instrumental and experience with field and laboratory techniques is preferred. B.A. majors often develop a higher degree of writing proficiency and general communication skills and pursue opportunities dealing with interdisciplinary social, political, and economic issues such as planning and law. Below are just a few example careers one might pursue based on the ES degree chosen:

<table>
<thead>
<tr>
<th>B.A. Degree</th>
<th>Both</th>
<th>B.S. Degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>-- Urban/Regional Planning</td>
<td>-- Environmental Education</td>
<td>-- Pollution Monitoring, Control and Prevention</td>
</tr>
<tr>
<td>-- Green Business</td>
<td>-- Environmental Policy</td>
<td>-- Waste Management Specialist</td>
</tr>
<tr>
<td>-- Environmental Law</td>
<td>-- Sustainable Agriculture</td>
<td>-- Environmental Toxicology/Health</td>
</tr>
<tr>
<td>-- Non-government Organizing</td>
<td>-- Environmental Consulting</td>
<td>-- Field Scientist/Technician</td>
</tr>
<tr>
<td>-- Energy Consultant</td>
<td>-- Environmental Health and Safety Management</td>
<td>-- Conservation/Restoration Biology</td>
</tr>
<tr>
<td>-- Environmental Justice</td>
<td></td>
<td>-- Renewable Energy Designer</td>
</tr>
<tr>
<td>-- Environmental Media, Communication Specialist</td>
<td>-- Local/State/National Government</td>
<td>-- Natural Resource Management</td>
</tr>
<tr>
<td>-- Sustainability Management</td>
<td>-- Computing and Information Technologies</td>
<td>-- Environmental Engineering</td>
</tr>
<tr>
<td>-- Environmental Economist</td>
<td>-- Environmental Activism</td>
<td>-- Soil Scientist</td>
</tr>
<tr>
<td>-- Parks/Recreation Management</td>
<td>-- Landscape Designer/Architect</td>
<td>-- Wildlife Biologist/Management</td>
</tr>
<tr>
<td>-- Waste Management</td>
<td></td>
<td>-- Environmental Risk Assessment</td>
</tr>
<tr>
<td>-- Environmental Historian</td>
<td></td>
<td>-- Air Quality Specialist</td>
</tr>
</tbody>
</table>

Note: When thinking about environmental jobs remember the above is an overall generalization. There’s a lot of overlap between the two degrees and many examples of ES B.A. alumni securing “science” jobs and B.S. grads becoming lawyers, planners, teachers and businesswomen.
## ENVIRONMENTAL STUDIES MAJOR REQUIREMENTS: B.A. vs. B.S.

### LOWER–DIVISION FOR THE MAJOR (1st and 2nd years)

<table>
<thead>
<tr>
<th>Required Courses for Both B.A. and B.S.</th>
<th>UCSB Course(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Four</strong> introductory courses in Environmental Studies</td>
<td>Envs 1, 2, 3 and Envs 40</td>
</tr>
<tr>
<td><strong>One</strong> intro micro, macro, or general/environmental Economics</td>
<td>Econ 1 or 2 or 9 or Envs 30</td>
</tr>
<tr>
<td><strong>One</strong> general or physical Geography or Earth Science</td>
<td>Geog 3 or 4 or Earth Sci. 2 or 4 or 20</td>
</tr>
<tr>
<td><strong>One</strong> introductory Statistics</td>
<td>Pstat 5A or 5LS or Econ 5</td>
</tr>
<tr>
<td><strong>One</strong> introductory Ethics &amp; Justice</td>
<td>Envs 70 or Blkst 4 or Femst 50 or Lingst 50 or Phil 4 or Pols 1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Different Lower-division Requirements: B.A. vs. B.S.</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Culture &amp; Society</strong></td>
<td>One course from broad list of options</td>
</tr>
<tr>
<td><strong>Policy &amp; Politics</strong></td>
<td>One course from list of options</td>
</tr>
<tr>
<td><strong>Math (calculus)</strong></td>
<td>Two quarters: Math 34A or 2A or 3A and Math 34B or 2B or 3B or Envs 25 (Quantitative Thinking in ES)</td>
</tr>
<tr>
<td><strong>Biology and Ecology</strong></td>
<td>One or Two courses of intro Biology/Ecology: Envs 60 or MCDB 1A-1LL and EEMB 2</td>
</tr>
<tr>
<td><strong>Chemistry</strong></td>
<td>Two courses + One lab: Chem 1A-AL and 1B or Envs 15A and 15B-BL (Env Chem series)</td>
</tr>
<tr>
<td><strong>Physics</strong></td>
<td>None</td>
</tr>
</tbody>
</table>

**Total Lower-division Units = 61 to 68.5**

### UPPER – DIVISION FOR THE MAJOR (3rd and 4th years)

<table>
<thead>
<tr>
<th>Area</th>
<th>Bachelor of Arts (B.A.)</th>
<th>Bachelor of Science (B.S.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>13 units of Required Upper-division ES courses: ENVS 190 (one unit) and one course from each of three clusters of ES courses.</td>
<td>17-18 units of Required Upper-division ES courses: ENVS 190 (one unit), and one course from each of three clusters of ES courses, and an additional upper-division statistics, data science, or modeling course.</td>
</tr>
<tr>
<td>B</td>
<td>28 Upper Division ES Elective units: Any Environmental Studies courses #100-199 not used to satisfy Area A for a total of 28 units.</td>
<td>32 Upper Division ES Elective units from two sections: • B-1: 20 UD ES units which must be taken from a list of environmental “science” courses (see major sheet) • B-2: 12 units from any ES course #100-199 not already used to satisfy the 20 units in B-1 or Area A</td>
</tr>
<tr>
<td>C</td>
<td>16 Unit Outside Concentration: Complete any 16 upper-division units from any one College of L&amp;S department or program (double major or official minor will satisfy this area). OR Choose an interdisciplinary concentration of courses from more than one department forming a coherent environmental emphasis of their choice. Students can use courses from any department/programs or abroad.</td>
<td>16 Unit Outside Concentration: Complete any 16 upper-division units from one of the following STEM departments (dbl. mjr. or minor o.k.): Brain Science, Chemistry, EEMB and/or MCDB (bio), Geography, Earth Sci., Math, Statistics, or Physics. OR Choose an interdisciplinary concentration of courses from one or more of the departments listed above, forming a coherent environmental emphasis of choice.</td>
</tr>
</tbody>
</table>

**Total Upper-division Units = 57**

**Total Upper-division Units = 65 to 66**

*By petition, upper-division Study Abroad and/or Environmental Field Studies units may be transferred and applied to satisfy part or the entire Outside Concentration. Up to 12 abroad units may also apply to the Area B Electives.*
Environmental Studies Program, UCSB

BACHELOR OF ARTS (B.A.) WORKSHEET 2022-23

LOWER-DIVISION / PREPARATION FOR MAJOR (1st and 2nd years)

<table>
<thead>
<tr>
<th>Environment Studies</th>
<th>(1st year)</th>
<th>(2nd year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Env. St. 1 (F or Sum qtr)*</td>
<td>Env. St. 2 (W or Sum qtr)*</td>
<td>Env. St. 3 (S or Sum qtr)*</td>
</tr>
<tr>
<td>Env. St. 40 (F, W, S qtr)*</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Culture & Society:**
- Anthro. 2 or Geog. 5
- or Global St. 1 or 2
- or Psychology 1
- or Relig. St. 1 or 14
- or Sociology 1

**Chemistry:**
- Chemistry 1A/1AL
- and 1B (no 1BL lab)
- Env. St. 15A (W qtr)* and Env. St. 15B/BL(S qtr)*

**Quantitative Skills:**
- Math 34A or 3A (2A)
- and one course from
- Math 34B or 3B (2B)
- or Env. St. 25 (S qtr)*

**Statistics:**
- PSTAT 5A or 5LS
- or Econ 5
  - (Or Comm. 87, Poli. Sci 15, or Psych. 5 by petition)

**Biology & Ecology:**
- Env. St 60 (F or Sum qtrs)
- - - - - - - OR - - - - - - -
- MCDB 1A/1LL (W qtr)*
- and EEB 2 (W qtr)*

**Economics:**
- Env. St. 30 (F qtr)*
- or Economics 1 or 2 or 9

**Physical Earth Sci.:**
- Earth Sci. 2 or 4
- or 20 or Geog. 3 or 4

**Policy & Politics:**
- Hist. 5 or 7 or
- Poli. Sci. 6 or 7 or 12

**Ethics & Justice:**
- Env. St. 70 or Black St. 4 or Fem. St. 50
- or Linguistics 50 or
- Phil. 4 or Pol. Sci. 1

**ES Electives:**
- Any upper-division ES courses (#100-199) not used in Area A
- and with no more than one additional course from each cluster.
- No more than 8 units combined and 4 units each from Env. St. 192, 194, 199, and 199RA may apply. Up to 12 EAP units may apply by petition.

ES Elective Courses | Units
---|---
1. | 
2. | 
3. | 
4. | 
5. | 
6. | 
7. | 
| Total = 28 |

**Outside Concentration Courses** | Units
---|---
1. | 
2. | 
3. | 
4. | 
| Total = 16 |

**NOTE:**
- Study Abroad or Environmental Field Studies units may be used to satisfy part or all of Area C. Units earned must be UC transferable, upper-division level, and relate to a student's chosen emphasis using either option 1 or 2 above. A Request to Petition Degree Requirements must be approved by the ES Program before units will be accepted. See an ES Academic Advisor or ES website for additional info: [https://www.es.ucsb.edu/advising](https://www.es.ucsb.edu/advising)

**A. ES REQUIRED COURSES (13 UNITS)**

- Environmental Studies 190 (1 unit, P/NP only, offered F, W, S qtrs)*
- And one course from each cluster of courses below:
  1. Ecosystems & Society: Env. St. 101 or 130C or 149
  2. Energy, Water, Climate: Env. St. 115 or 117 or 163A
  3. Built Environment: Env. St. 116 or 135A or 155

**B. ES ELECTIVES (28 UNITS)**

- Any upper-division ES courses (#100-199) not used in Area A
- and with no more than one additional course from each cluster.

**C. OUTSIDE CONCENTRATION (16 UNITS)**

There are 2 options for the Outside Concentration:

1) **Single department**: Complete any 16 upper-division units from any one UCSB department or program and they will automatically apply. Completion of a double major will automatically satisfy this area as well an official minor as long as the 16 units don't overlap with Areas A or B.

OR

2) **Interdisciplinary emphasis**: Combination of 16 upper-division units from more than one department or program outside the ES Program may be used to create a concentration of study as long as they form a coherent focus or emphasis. A student pursuing this option must submit a Request to Petition Degree Requirements form to the ES Program justifying how courses taken relate to each other and one's desired emphasis. Petition forms are available from the ES Advisors or at: [https://www.es.ucsb.edu/forms](https://www.es.ucsb.edu/forms)

- A list of some example environmental emphases/concentrations one might use is available from the ES Advisors or at: [https://www.es.ucsb.edu/forms](https://www.es.ucsb.edu/forms)

**NOTE:**
- Study Abroad or Environmental Field Studies units may be used to satisfy part or all of Area C. Units earned must be UC transferable, upper-division level, and relate to a student's chosen emphasis using either option 1 or 2 above. A Request to Petition Degree Requirements must be approved by the ES Program before units will be accepted. See an ES Academic Advisor or ES website for additional info: [https://www.es.ucsb.edu/advising](https://www.es.ucsb.edu/advising)

* Denotes specific quarter a course is to be offered; accurate for current academic year ONLY & subject to change year to year

>>> See the other side for more info <<<
Environmental Studies Program, UCSB

BACHELOR OF Science (B.S.) WORKSHEET 2022-23

LOWER-DIVISION / PREPARATION FOR MAJOR (1st and 2nd years)

A. ES REQUIRED COURSES (17-18 UNITS)

Environmental Studies 190 *(1 unit, P/NP offered F, W, S qtrs)*
One course from: Env. St. 193SW; Geog. 172; EEMB 146, 179; PSTAT 120A (Math 4A required)

And one course from each cluster of courses below:

1. **Ecosystems & Society:** Env. St. 101 or 130C or 149
2. **Energy, Water, Climate:** Env. St. 115 or 117 or 163A
3. **Built Environment:** Env. St. 116 or 135A or 155

B. ES ELECTIVES (32 UNITS)

32 total upper-division ES units from courses (#100-199) not used in Area A and with no more than one additional course from each cluster.


<table>
<thead>
<tr>
<th>Courses</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td></td>
</tr>
</tbody>
</table>

Section B-2: Any 12 UD units of ES courses (#100-199) excluding units used to fulfill Area A or the first 20 units applying to section B-1.

| 6.      |       |
| 7.      |       |
| 8.      |       |

No more than 8 units combined and 4 units each from Env. St. 192, 194, 199, and 199RA may apply.

C. OUTSIDE CONCENTRATION (16 UNITS)

There are 2 options for the Outside Concentration:

1) **Single department:** Complete any 16 upper-division units from any one of the following STEM departments: Chemistry & Biochemistry, EEMB and/or MCDB (Bio), Earth Sciences, Geography (only courses that apply to the B.S. Physical Geog. major), Math, Statistics, Physics, or Psychological & Brain Sciences. Completion of a double major or minor from the above depts will satisfy this area. If pursuing an official minor make sure the 16 units don't overlap with Areas A or B. Spatial Studies minors must consult an ES Advisor first to assure proper STEM course selection.

OR

2) **Interdisciplinary emphasis:** Combination of 16 upper-division units from more than one department listed above may be used to create a concentration of study as long as they form a coherent focus or emphasis. A student pursuing this option must submit a Request to Petition Degree Requirements to the ES Program justifying how proposed courses relate to each other and the desired emphasis. Petition forms are available from the ES website: https://es.ucsb.edu/degreerequirements

A list of some example environmental emphases/concentrations one might use is available from the ES website at: https://www.es.ucsb.edu/forms

NOTE: Study Abroad or Environmental Field Studies units may be used to satisfy part or all of Area C using either option 1 or 2 above. Units earned must be UC transferable, upper-division, and relate to a student's chosen emphasis. A Request to Petition Degree Requirements must be approved by Environmental Studies before units will be accepted. See an ES Academic Advisor or the ES website for additional info: https://www.es.ucsb.edu/advising

**NOTE:** All courses, including cross-listed (either version), may apply to one area only in any part of the major. Courses taken to fulfill any major requirement must be taken for a letter grade unless only offered P/NP.

* Denotes specific quarter a course is to be offered; accurate for current academic year ONLY & subject to change year to year

>>> See the other side for more info <<<