

# Environmental Analysis Major

## Program Requirements

- **Total units required:** 49

The environmental analysis major is a flexible, 49-credit program that focuses on developing critical skills and competencies in interdisciplinary environmental problem-solving. It is ideal for students seeking interdisciplinary training focused on the environment and sustainability, and it is designed to stand alone or to complement another major.

### Required Courses

Students must complete a total of 28 units of required courses as described below:

- Choose three of the following (9 units):

Code	Title	Units
Biol 2950	Introduction to Environmental Biology	3
EnSt 101	Earth's Future: Causes and Consequences of Global Climate Change (I60 course)*	3
EnSt 102	To Sustainability and Beyond: People, Planet, Prosperity*	3
EnSt 111	Environmental Racism and the Health of Everyone*	3
EnSt 215	Introduction to Environmental Humanities	3
EnSt 250	One Health: Linking the Health of Humans, Animals, and the Environment	3
EnSt 251	Metropolitan Environment	3
EnSt 252	Sustainability in Business	3
EEPS 202	Introduction to Earth, Environmental, and Planetary Science	3
Pol Sci 2010	Introduction to Environmental Policy	3

\* These Beyond Boundaries courses, open to first-year students only, may apply to this section; students may count up to two toward the major.

- Required core courses in analysis and communication; choose four of the following (12 units):

Code	Title	Units
Drama 214	Public Speaking: Embodied Communication	3
Drama 4081	Theater for Social Change	3
EnSt 315	Fallout: Analyzing Texts and Narratives of the Nuclear Era	3

EnSt 316	Beyond the Evidence	3
EnSt 350W	Writing Skills for Environmental Professionals	3
EnSt 357	Multiparty Environmental Decision Making	3
EnSt 364	Field Methods for Environmental Science	3
EnSt 380	Applications in GIS	3
EnSt 415W	Writing Home: Creating Cultural Guides for Environmental Site Workers	3
EnSt 481	Advanced GIS	3
EnSt 4995	Foundations of Research: Building a literature review	3
IPH 3123	Introduction to Digital Humanities	3
SDS 2200	Elementary Probability and Statistics	3
or SDS 3200	Elementary to Intermediate Statistics and Data Analysis	
or SDS 3211	Statistics for Data Science I	

**Note:** Students may count a fifth analysis and communication course toward the depth electives.

- Required course in social identity and environment; choose one of the following (3 units):

Code	Title	Units
AFAS 1130	Introduction to Race	3
AAS 2010	The Roots of Ferguson: Understanding Racial Inequality in the Contemporary U.S.	3
EnSt 111	Environmental Racism and the Health of Everyone	3
GeSt 232	Intergroup Dialogue: Race/Ethnicity	3
JIMES 2910	Racism and Antiracism	3
SOC 2110	Social Inequality in America	3
SOC 2520	Inequality By Design: Understanding Racial/Ethnic Health Disparities	3
SOC 3212	The Social Construction of Race	3
SOC 3910	Economic Realities of the American Dream	3
SOC 4289	Neighborhoods, Schools, and Social Inequality	3
SOC 4810	Global Structures and Problems	3
SOC 4830	Global Racial Systems	3

- Required interdisciplinary environmental capstone course; choose one of the following (3 units):

Code	Title	Units
EnSt 405	Sustainability Exchange: Community and University Practicums	3
EnSt 407	RESET - Renewable Energy Policy, Engineering and Business	3
EnSt 452	International Climate Negotiation Seminar	var.; max. 6

EnSt 498	Senior Honors Research	3
EnSt 539	Interdisciplinary Environmental Clinic	var.; max. 6

**Note:** Due to the intensity of these project-based courses, students may only take one per semester. Students may count a second capstone course toward the depth electives.

- Fourth-year reflection seminar (1 unit):

Code	Title	Units
EnSt 492	Environmental Studies Fourth-Year Reflection Seminar	1

**Note:** The purpose of this seminar is to create a written narrative portfolio that synthesizes, integrates, and reflects on the student's learning across the courses and experiences of the major. Reflection will occur through personal writing and discussion with peers in the course.

## Elective Courses

Students will choose 21 units of depth and breadth elective courses from the three categories below: Social Sciences, Humanities and Arts, and Natural Science. Students must choose seven elective courses, with at least four courses from one category and at least one course in each of the other two categories. This requirement means that students can choose a 5/1/1 combination or a 4/2/1 combination from the elective categories.

The following flexibility is allowed regarding substitutions:

- Students may count a fifth analysis and communication course toward the depth electives.
- Students may count a second capstone course toward the depth electives.
- Students may request one course substitution outside of the electives listed below to take advantage of unique one-time or rarely-offered courses.

Students must complete no fewer than 18 units of courses numbered 300 or above within the major with a grade of C- or better. There is no double counting of advanced (300- and 400-level) courses between two majors or between a major and a minor. This "no double-counting rule" also applies to students who are double majoring across schools.

- Social sciences electives:

Code	Title	Units
AMCS 227	Topics in Native American Culture	3
AMCS 299	The Study of Cities and Metropolitan America	3
Anthro 3102	Topics in Anthropology: Sustainability in Extractive Communities	3
Anthro 3215	Food, Culture, and Power	3
Anthro 3472	Global Energy and the American Dream	3
Anthro 3602	Environmental Inequality: Toxicity, Health, and Justice	3

Anthro 361	Culture and Environment	3
Anthro 374	Social Landscapes in Global View	3
Anthro 379	Meltdown: The Archaeology of Climate Change	3
Anthro 4281	Ecological Anthropology	3
Econ 451	Environmental Policy	3
EnSt 255	Systems Thinking	3
EnSt 3060	Community Based Conservation: Madagascar Sustainability Initiative	3
EnSt 310	Ecological Economics	3
EnSt 316	Beyond the Evidence	3
EnSt 346	Environmental Justice	3
EnSt 347	Sustainable Cities	3
EnSt 4527	IPCC: Governance, Policy and Science	3
EnSt 461	Intro to Environmental Law	3
EnSt 481	Advanced GIS	3
EnSt 482	Applications in Geospatial Intelligence	3
EnSt 4995	Foundations of Research: Building a literature review	3
MGT 450R	Business & Government: Understanding and Influencing the Regulatory Environment	3
MGT 460L	Introduction to Social Entrepreneurship	3
MPH 5002	Epidemiology*	3
MPH 5323	TPS: Climate Change and Public Health*	3
Pol Sci 332B	Energy Politics	3
Pol Sci 3760	Globalization, Urbanization, and the Environment	3
Pol Sci 363	Quantitative Political Methodology	3
Pol Sci 389A	Power, Justice, and the City	3
Pol Sci 4043	Public Policy Analysis, Assessment and Practical Wisdom	3
Pol Sci 495	Research Design and Methods	3
SOC 3350	Poverty and the New American City	3
SOC 4810	Global Structures and Problems	3

\* Students should request permission from the instructor to enroll in this course.

- Environmental humanities and arts electives:

Code	Title	Units
AFAS 3075	Recipes for Respect: Black Foodways in the United States	3
ARCH 209	Design Process	3
ART 318P	Photography: Art Practice (Art, Environment, Culture & Image)*	3
Art-Arch 3961	Art & Ecology	3
Comp Lit 4111	Pastoral Literature	3
Drama 351	Intro to Playwriting	3

Drama 4081	Theater for Social Change	3
EnSt 315	Fallout: Analyzing Texts and Narratives of the Nuclear Era	3
EnSt 3410	Native American Storytelling - Healthy Land Practice	3
EnSt 415W	Writing Home: Creating Cultural Guides for Environmental Site Workers	3
History 2561	Urban America	3
History 3194	Environment and Empire	3
IPH 312	Introduction to Digital Humanities	3
IPH 431	Statistics for Humanities Scholars: Data Science for the Humanities	3
LAND 530F	Foodscapes: Art Food Space Activism	3
LAND 553A	Seeds	3
Phil 235F	Introduction to Environmental Ethics	3
Writing 309	Writing the Natural World	3

\* This course has a prerequisite.

- Natural science electives:

Code	Title	Units
Anthro 3053	Nomadic Strategies and Extreme Ecologies	3
Anthro 3660	Primate Ecology, Biology, and Behavior	3
Anthro 3662	Writing for Primate Conservation Biology	3
Anthro 4285	Environmental Archaeology	3
Anthro 4803	Advanced GIS Modeling and Landscape Analysis	3
Biol 3171	Biology for Climate Change Solutions	3
Biol 3220	Woody Plants of Missouri	3
Biol 3221	Research and Public Education in the Arboretum	3
Biol 343A	Plants, Environment and Civilization	3
Biol 3494	Microbes and the Environment	4
Biol 370	Animal Behavior	3
Biol 373W	Laboratory on the Evolution of Animal Behavior (Writing Intensive)	3
Biol 381	Introduction to Ecology	3
Biol 3900	Science for Agriculture and Environmental Policy	3
Biol 419	Community Ecology	3
Biol 4193	Experimental Ecology Laboratory	4
Biol 4195	Disease Ecology	4
EEPS 317	Soil Science	3
EEPS 323	Biogeochemistry	3
EEPS 340	Minerals, Rocks, Resources and the Environment	4
EEPS 342	Environmental Systems	3
EEPS 385	Earth History	3

EEPS 386	The Earth's Climate System	3
EEPS 387	Geospatial Science	4
EEPS 407	Remote Sensing	3
EEPS 409	Surface Processes	3
EEPS 428	Hydrology	3
EEPS 442	Aqueous Geochemistry	3
EEPS 454	Exploration and Environmental Geophysics	4
EEPS 468	Geospatial Field Methods	3
EEPS 486	Paleoclimatology	3
EnSt 3630	Arctic Climate System	3
EnSt 364	Field Methods for Environmental Science	3
EnSt 365	Applied Conservation Biology	3
EnSt 375	Urban Ecology	3
EnSt 481	Advanced GIS	3
EnSt 483	Introduction to Spatial Epidemiology	3
LAND 551A	Landscape Ecology	3

## Additional Information

### Grades and Credits

The program has set the following policy concerning the minimum acceptable grade performance. A grade of C- is the minimum acceptable performance for each unit of credit for all course work for the major. Courses with grades of D may fulfill the College's requirement for 120 total units of credit, but they do not meet the program requirements. A grade of C- is also the minimum acceptable performance for each unit of credit for any course required as a prerequisite to enrolling in advanced or sequential courses. Please visit the Academic Regulations page of the College of Arts & Sciences Bulletin for more information. **Note:** Students must make sure that, while completing the major, they complete a minimum of 18 units of upper-level course work (300 level or above). At least half of the units (i.e., 25 units) for the major must be completed in residence.

### Substitutions and Transfer Credit

Requests for substitutions for courses from other institutions (transfer credit) need approval by the College Office. Please visit the Policies and Procedures for more information.

For Majors requesting a course substitution, please complete the Course Petition Form.

### Study Abroad

To study abroad, students must be in their junior or senior year and have at least a 3.0 grade point average. Students must understand the language of the country in which they plan to study. Grades do not transfer back to Washington University. Credits can be applied toward the 120 credits needed to graduate, and courses taken abroad can substitute for courses for the environmental major and minors. These substitutions should be worked out before leaving for Study Abroad.

Final decisions for course credit will be made once the student has returned and the courses and grades are reported back to Washington University. The minimum grade for study abroad coursework to apply to major/minor credit is C-.

Environmental Studies will accept up to 4 courses (12-16 units) from a study abroad program toward the Environmental Analysis Major. This can include courses in the social identity and environment and breadth and depth elective sections of the major, as well as a research methods courses taken on a field-based program, but not other sections of the major. Requests for substitutions should be submitted to the director and study abroad coordinator for Environmental Studies, Dr. Jeff Catalano.

## Considerations

- Participating in a Washington University program allows financial assistance, and students may earn full academic credit for study abroad if they participate in Washington University programs.
- Students wishing to participate in non-Washington University programs must petition for credit before participating in the program.
- Students must communicate regularly with their advisors while abroad and report to them upon return.
- Each student must contact the Overseas Office to arrange for the transfer of credit.
- For details, contact the Overseas Office.

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