

Bachelor of Science in Environmental Sciences

# Alternative Energy Option

Major Code 842 | Revised: 7/26/2018 | ceoas.oregonstate.edu | ceoas.undergrad@oregonstate.edu | 541-737-1201

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The Environmental Sciences BS option in Alternative Energy offers an interdisciplinary foundation in the contemporary policy and practice of energy systems. The option contains a nine-credit core with a selection of courses from the physical and social sciences. These courses provide students with a common base in both science and policy aspects of today's energy questions. Rounding out the 27-credit option, elective courses draw from programs across Oregon State's curriculum.

This non-technical option prepares the Environmental Sciences BS student to be well informed about energy alternatives. Students selecting this option will graduate with a solid general science base suitable for understanding critical issues related to sustainable energy alternatives. In contrast, students seeking an educational background leading to the engineering of alternative energy systems should consider courses in thermodynamics and vector calculus and majors in physics, chemistry, geology, environmental engineering, mechanical engineering, electrical engineering, and biological and ecological engineering.

Numerous experiential learning opportunities for Environmental Sciences majors specializing in Alternative Energy exist. These include internships and independent research projects associated with the following:

- Energize Corvallis, project design at NGO, Corvallis
- Seeds for the Sol, solar power promotion with cost-sharing, Corvallis
- Cities beyond Corvallis with active programs focused on shifting away from fossil fuels
- Pacific Power (and other utilities), energy audits, Oregon
- Local agencies, private firms, and university researchers working in solar, wave, wind, nuclear, and thermal energy, as well as various kinds of bioenergy

Given global concerns about energy futures, career and graduate education opportunities are bright, including in the following areas:

- Urban and regional planning
- Municipal government
- NGOs promoting energy alternatives to fossil fuels sources
- Power companies working with the public
- Consulting firms that work with public agencies and private firms to develop energy strategies
- Policymaking in the energy field
- Law school with an aim toward environmental law



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The Alternative Energy option draws from a variety of disciplines that offer courses in energy-related topics, not engineering. Students in this option will be well-informed about energy alternatives for work in urban and regional planning, city government, NGOs promoting energy alternatives to fossil fuel sources, power companies working with the public, policymaking in the energy field, and law school with an aim toward environmental law.

NOTE:

- Classes used to fulfill requirements in the specialization cannot double count with ENSC Core. All courses must be taken for a letter grade, no S/U grades. Students must earn at least a C- in upper division (300 or higher) major/option courses.
- This worksheet may not match the catalog or MyDegrees due to updates in progress.

**ALTERNATIVE ENERGY CORE: Choose a minimum of 9 credits.**

On Campus	Ecampus	
<input type="checkbox"/>	<input type="checkbox"/>	BRR 325 Energy Technology and Social Change <sup>S</sup> (3) [+]
<input type="checkbox"/>	<input type="checkbox"/>	BRR 350 Introduction to Regional Bioenergy (2)
<input type="checkbox"/>	--	BRR 450 Interdisciplinary Research: Bioenergy Focus (2)
<input type="checkbox"/>	--	ENGR 363 Energy Matters <sup>S</sup> (3) [+]
<input type="checkbox"/>	--	PH 313 Energy Alternatives <sup>S</sup> (3) [+]
<input type="checkbox"/>	<input type="checkbox"/>	PS 473 US Energy Policy (4)

**ELECTIVES: Choose from the list below or additional core courses to total at least 27 credits.**

On Campus	Ecampus	
<input type="checkbox"/>	<input type="checkbox"/>	AEC/ECON 352 Environmental Economics and Policy <sup>G</sup> (3) [+]
<input type="checkbox"/>	<input type="checkbox"/>	AEC 432 Environmental Law (4) [+]
<input type="checkbox"/>	--	ANTH 469 Energy in Cultural Perspective (4) [+]
<input type="checkbox"/>	<input type="checkbox"/>	BA 432 Environmental Law, Sustainability, and Business (4) [+]
<input type="checkbox"/>	--	ENGR 350 Sustainable Engineering <sup>S</sup> (3)
<input type="checkbox"/>	<input type="checkbox"/>	GEO 306 Minerals, Energy, Water, and the Environment <sup>S</sup> (3)
<input type="checkbox"/>	<input type="checkbox"/>	GEOG 300 Sustainability for the Common Good <sup>G,S</sup> (3) [+]
<input type="checkbox"/>	--	NSE 319 Societal Aspects of Nuclear Technology <sup>S</sup> (3)
--	<input type="checkbox"/>	PPOL 441 Energy and Society <sup>S</sup> (4)
<input type="checkbox"/>	<input type="checkbox"/>	PS 455 The Politics of Climate Change <sup>G</sup> (4)
<input type="checkbox"/>	<input type="checkbox"/>	PS 477 International Environmental Politics and Policy (4)
<input type="checkbox"/>	--	PS 478 Renewable Energy Policy (4)
<input type="checkbox"/>	--	WSE 473 Bioenergy and Environmental Impact (3) [+]

Total Credits: 27

G – Contemporary Global Issues

S – Science Technology and Society

+ Course has prerequisites