Sustainable Energy, PhD

Learn how to develop transdisciplinary solutions that guide society toward a sustainable energy future. Receive training from leading sustainability scientists and scholars in this flexible, interdisciplinary program that integrates social, environmental and technical knowledge of energy systems.

Program Description

Degree Awarded: PHD Sustainable Energy

Society is in the midst of a transition toward sustainable energy. Because the global energy system is a complex, socio-technical system, the transition toward sustainable energy requires the next generation of leaders to possess a transdisciplinary perspective comprising both technical and societal dimensions of energy.

The PhD program in sustainable energy integrates these perspectives in preparing students to address the challenges in energy transitions. Students enter the program from diverse backgrounds in engineering, planning, business, policy, and natural and social sciences. The core classes provide them with an interdisciplinary expertise and skills related to current and emerging energy technologies and systems, economic analysis of energy systems, and social and policy dynamics of energy transitions. Elective classes allow students to develop more specialized methodological skills, technical expertise and topical knowledge.

At a Glance

- College/School: College of Global Futures
- Location: Tempe campus

Degree Requirements
84 credit hours, a written comprehensive exam, an oral comprehensive exam, a prospectus and a dissertation

**Required Core (17 credit hours)**
- SOS 571 Sustainable Energy Technologies and Systems (3)
- SOS 572 Sustainable Energy Transitions (3)
- SOS 573 Sustainable Energy Policy (3)
- SOS 574 Data Analytics for Sustainable Energy (3)
- SOS 575 Sustainable Energy Research Seminar (4)
- SOS 589 Community of Graduate Student Scholars (1)

**Electives or Research (12 credit hours)**

**Other Requirement (13 credit hours)**
- SOS 792 Research (13)

**Culminating Experience (12 credit hours)**
- SOS 799 Dissertation (12)

**Additional Curriculum Information**
Students take SOS 575 in four different semester terms for 1 credit hour each term.

Electives can be chosen from applicable courses in the following areas based on the student's area of interest and approval from the committee: engineering of matter, transport and energy; sustainable engineering and the built environment; geographical sciences and urban planning; molecular sciences; life sciences; future of innovation in society; physics; and sustainability.

Other electives may be used with approval from the academic unit. Student electives are customizable based on the student's area of research.

Doctoral students are expected to include higher level courses (600 and 700 levels) as part of the elective and research coursework.

When approved by the student's supervisory committee and the Graduate College, this program allows 30 credit hours from a previously awarded master's degree to be used for this degree. If students do not have a previously awarded master's degree, the 30 credit hours of coursework is made up of electives and research.

**Admission Requirements**
Applicants must fulfill the requirements of both the Graduate College and the College of Global Futures.

Applicants are eligible to apply to the program if they have earned a bachelor's or master's degree, in any field, from a regionally accredited institution.
Applicants must have a minimum cumulative GPA of 3.25 (scale is 4.00 = "A") in the last 60 hours of their first bachelor's degree program, or applicants must have a minimum cumulative GPA of 3.00 (scale is 4.00 = "A") in an applicable master's degree program.

All applicants must submit:

1. graduate admission application and application fee
2. official transcripts
3. resume or curriculum vitae
4. GRE scores
5. statement of intent
6. three letters of recommendation
7. proof of English proficiency

Additional Application Information
An applicant whose native language is not English must provide proof of English proficiency regardless of current residency.

The school encourages applicants with diverse educational backgrounds and experiences. Sample related fields include engineering, geography, urban planning, environmental science, physics, chemistry or planning for future innovations and societal changes.

All applicants must upload a statement of intent as part of the application process. In no more than 600 words, applicants must explain the goals they intend to achieve through their program of study at the College of Global Futures. Applicants should describe how their background will contribute to their success in the program and how completion of their degree will support their long-term career goals. Finally, applicants should elaborate on key research questions they wish to address or problems they wish to solve as part of their program of study and identify potential faculty advisors.

Application Deadlines

Fall

Global Opportunities

Global Experience
Study abroad is possible for graduate students, with more than 50 program opportunities spanning six continents. Faculty-directed programs tend to be the best fit for graduate students; taking courses over the summer or during academic breaks with ASU professors offers close mentorship and professional network growth in many fields of study while earning ASU credit. Exchange program participation is also possible with careful planning. [https://mystudyabroad.asu.edu/students/graduate-students](https://mystudyabroad.asu.edu/students/graduate-students)

Students may also participate in a School of Sustainability study abroad program ([https://schoolofsustainability.asu.edu/student-life/study-abroad](https://schoolofsustainability.asu.edu/student-life/study-abroad)). Many students in the program also conduct research abroad as part of their culminating experience.
Career Opportunities

From the School of Sustainability's 2020 alumni employment survey, 100% of doctoral program respondents are employed. Of those employed, 90% have jobs directly related to sustainability.

Professionals with expertise in sustainable energy are in high demand across industries that including academia, business, planning and government. Skills in cross-disciplinary research, socio-technical innovation, sustainable energy solutions and policymaking are valuable to businesses and institutions relying on data-driven strategies to solve urgent sustainability problems and shape global futures.

Career examples include:

- assistant or associate professor
- chief sustainability officer
- director of policy advocacy
- energy analyst
- project manager
- renewable energy project manager
- researcher
- science and technology policy advisor
- senior policy analyst
- sustainability consultant
- sustainability specialist
- urban and regional planner

Contact Information

School of Sustainability | WGHL 108
SOSGradSunDevil@asu.edu | 480-727-6963
Admission Deadlines