

Sustainable Energy, PhD

SUSUEPHD

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, sociotechnical 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 students with 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](#)

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 (42 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
- future of innovation in society
- geographical sciences and urban planning
- life sciences
- molecular sciences
- physics
- sustainability
- sustainable engineering and the built environment

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 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. statement of intent
5. three letters of recommendation
6. proof of English proficiency

Additional Application Information

An applicant whose native language is not English must provide proof of [English proficiency](#) regardless of their 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.

Tuition information

When it comes to paying for higher education, everyone's situation is different. Students can learn about [ASU tuition and financial aid](#) options to find out which will work best for them.

Application deadlines

Fall

[expand](#)

Global opportunities

Global experience

Studying abroad is encouraged for graduate students. Nearly all of the College of Global Futures faculty-directed programs offer graduate credit. In addition, the Global Education Office offers more than 50 program opportunities, with programs on every continent.

Faculty-directed programs tend to be the best fit for graduate students; taking courses with ASU professors over the summer or during academic breaks offers students close mentorship and professional network growth in many fields of study while they earn ASU credit. Exchange program participation is also possible with careful planning.

Students can find programs specific to their interests on the [College of Global Futures Study Abroad webpage](#), and additional opportunities and information on the [ASU Global Education Office website](#). These sites also include additional information about applying for funding to support global travel.

Graduate students are also encouraged to apply for funding for international research, study and professional development through ASU's [Lorraine W. Frank Office of National Scholarships Advisement](#).

Career opportunities

From the School of Sustainability's 2022 alumni employment survey, 100% of doctoral program respondents are employed. Of those respondents employed, 100% 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, sociotechnical 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:

- chief sustainability officer
- director of policy advocacy
- energy analyst
- professor
- 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

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[Admission deadlines](#)