Overview
Earn this power systems certificate and gain skills to create modern solutions for the world’s mounting energy needs. With the rise of electric vehicles, more ubiquitous personal technologies, and demand for renewable energy sources, the electric grid as it stands is not equipped to meet 21st century requirements.

Additionally, much of the power and energy workforce will be retiring in the coming years; as such, the time is ripe to update your knowledge to be more competitive among the next generation of professionals, and help usher in a modern, secure energy smart grid.

What you learn
This certificate addresses important contemporary issues, helping you develop expertise that will be immediately relevant to jobs in the power and energy sector.

Through power systems engineering courses, you will learn to:

- Enhance energy systems
- Plan and implement alternative energy sources
- Design and manage energy networks
- Support power and energy infrastructures

More specifically, you will learn about concepts related to the modernization of the electricity grid, and how to efficiently integrate and operate renewable energy technology. You will also develop computer skills for modeling, simulating, and analyzing new technology insertion into the smart grid, as well as learn about electricity as a tradeable commodity, and how to make sense of electrical systems data.

Courses are taught using video, narrated presentations, and lecture capture. Assignments include technical writing projects in the form of conference papers, presentations through web conferencing software, and collaborative team projects.

Curriculum
Choose three from the following courses:

- ECE 508 - Introduction to Power System Markets (3 cr.)
- ECE 509 - Signal Processing for Power Systems (3 cr.)
- ECE 566 - Grid Integration of Wind Energy Systems (3 cr.)
- ECE 565 - Electrical Power Engineering (3 cr.)
- ECE 623 - Electric Power Quality (3 cr.)
Application Deadlines

Students can be admitted for either the fall or spring semester. Summer admission is not available. For full consideration, submit your application prior to the dates below.

Fall semester: **July 1**

Spring semester: **December 1**

1. **Review Admission Requirements**

This graduate certificate requires applicants to have the following, at a minimum:

- Bachelor of Science from a regionally accredited institution in electrical engineering, computer engineering, computer science, or related field.
- International students must hold degrees equivalent to U.S. bachelor’s degrees. Bachelor of Science in Electrical Engineering Technology (BSEET) degrees are not accepted.

2. **Complete Online Application**

Complete the [online graduate application](#) and pay the nonrefundable application processing fee (payable online). As soon as you have completed the required information, please submit your application. Your application will not be reviewed until it is complete and all required materials have been received.

- Select “Power and Energy (Certificate) – Distance” when choosing the Program of Study. (Note: You must first select “Certificate” at the top.)

3. **Request Transcripts**

Request one official transcript of all collegiate work completed from every institution attended, whether or not you received a degree from those institutions. Transcripts from Colorado State University are not required. Official transcripts can either be mailed in or sent as e-transcripts.

Send e-transcripts to: [gradadmissions@colostate.edu](mailto:gradadmissions@colostate.edu)

Send paper copies to:
Graduate Admissions
Colorado State University – Office of Admissions
1062 Campus Delivery
Fort Collins, CO 80523-1062

Check Your Application Status

View your [application status](#) at any time to ensure your application checklist is complete or to check on updates. Once the department receives your complete application package, including supporting materials, the Graduate Program Committee will review your application and notify you of their decision.

**International Students**

See [website](#) for test score and transcript requirements.