

# Renewable Electric Energy Systems (Certificate)

The Graduate Certificate in Renewable Electric Energy Systems provides graduate students with the opportunity to develop expertise in renewable electric energy systems and advanced electric power grid technology in addition to their major area of graduate study.

## Requirements

The Graduate Certificate in Renewable Electric Energy Systems requires a minimum of 12 hours, including one 3-hour core course and 9 credit hours of electives to be selected from a list that contains relevant courses for the certificate. Students must maintain a minimum overall GPA of B (3.0).

## More Information

Renewable Electric Energy Systems Program Website (<https://ece.ncsu.edu/grad/certificate/>)

## Admissions

Applicants with appropriate background must meet one of the three following requirements:

- be a graduate of an accredited four-year college or university, and have a GPA of at least 3.0 on a 4-point scale in their last 60 credit hours of undergraduate study;
- be a degree student in good standing in an NC State University graduate program; or
- have a Master's degree in a related field of study.

A student may obtain more than one graduate certificate in a different field. Each certificate must have at least nine (9) credit hours that are unique to it.

## Applicant Information

- **Delivery Method:** On-Campus
- **Entrance Exam:** None
- **Interview Required:** None

## Application Deadlines

Please visit The Graduate School Application Deadlines (<https://grad.ncsu.edu/admissions/deadlines/>) page for more information.

## Plan Requirements

Code	Title	Hours	Counts towards
<b>Required Courses</b>			
ECE 552	Renewable Electric Energy Systems	3	
Select three of the following		9	
<b>Advanced Courses:</b>			

ECE 550	Power System Operation and Control
ECE 581	Electric Power System Protection
ECE 534	Power Electronics
ECE 551	Smart Electric Power Distribution Systems
ECE 535	Design of Electromechanical Systems
ECE 585	The Business of the Electric Utility Industry
ECE 589	Solid State Solar and Thermal Energy Harvesting
ECE 736	Power System Stability and Control
<b>Total Hours</b>	<b>12</b>