Electric Power System Engineering

The Master of Science in Electric Power Systems Engineering (MS-EPSE) gives students a thorough understanding of the tools, methods, and practice of electric power engineering. It is both focused and practical in its orientation, with the goal of providing an education that is directly applicable to a career in industry.

The MS-EPSE degree is an accelerated program suitable for a new or recent graduate, as well as experienced professionals who want to receive the necessary retraining to change careers. The program is offered both in-class and as an online degree.

Master's Degree Requirements

The MS-EPSE program requires 30 credit hours of graduate coursework. Twenty-seven credits include four core electric power engineering courses; two interdisciplinary courses on power electronics, data communications, cyber security and environmental issues associated with electric power systems; professional skills training on project management, communication skills, and the business aspects of electric power utilities, and solid hands-on experience through laboratories and a capstone project. This program provides a one-to-one interaction with industry partners.

Student Financial Support: Student scholarships are available through an application process. Please contact the program manager for further information.

Other Relevant Information

To further promote integration of concepts and provide hands-on experience, the program includes an industry sponsored capstone project.

Electric Power Systems Engineering Program Website (http://www.ece.ncsu.edu/graduate/msepse/)

Admission Requirements

Students must have a bachelor's degree from an accredited college or university in electrical engineering with an overall GPA of at least 3.0. Students who do not have a bachelor's degree from an accredited college or university in electrical engineering must satisfy:

1. Completion of the following ECE courses (or electrical engineering courses equivalent to ECE 200, 211, 220, 301, and 303.
2. Applicants must have also completed the following courses or equivalent courses: three semesters of calculus, one semester of probability/statistics, two semesters of physics, and one semester of chemistry.

Three strong recommendations from persons able to comment on the applicant's qualifications for graduate study.

All non-US citizen applicants (i.e., non-resident aliens and permanent residents) must demonstrate proficiency in English at a level necessary to be successful in a graduate program at NC State University. The TOEFL or IELTS test must have been taken within two years of the date of anticipated admission. On the TOEFL iBT, students must have a minimum score of 18 on the Listening, Reading and Writing sections, 19 on the Speaking section, and a minimum Total score of 90. On the IELTS, students must have a minimum score of 6.5 on the Listening, Reading and Writing sections, 7.0 on the Speaking section, and a minimum Overall Band Score of 6.5. Scores on previous versions of the TOEFL and IELTS are considered with the same qualitative standard. The TOEFL and IELTS tests will be waived if the applicant is a citizen of a country where English is an official language and the language of instruction in higher education or if the applicant has successfully completed at least one year of full-time study in a degree program at a four-year US college or university.

TOEFL - institution code 5496; department code 66.
GRE - institution code 5496; department code 1203.

Applicant Information

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

Application Deadlines

- **Fall:** January 9 (US and Intl)
- **Spring:** July 1

Degrees

- Electric Power System Engineering (MS) (http://catalog.ncsu.edu/graduate/engineering/electric-power-system-engineering/electric-power-systems-engineering-ms/)
- Electric Power System Engineering (MS): Internship Concentration (http://catalog.ncsu.edu/graduate/engineering/electric-power-system-engineering/electric-power-systems-engineering-ms-internship-concentration/)
- Electric Power System Engineering (MS): Wide Bandgap Power Electronics Concentration (http://catalog.ncsu.edu/graduate/engineering/electric-power-system-engineering/electric-power-systems-engineering-ms-wide-bandgap-power-electronics-concentration/)

Faculty

Full Professors

Mesut E. Baran

Subhashish Bhattacharya

Aranya Chakrabortty

Robert Wendell Heath

Iqbal Husain

Ning Lu

Srdjan M. Lukic

Daryoosh Vashaee

John Victor Veliadis

Wenye Wang

Jonathan Wierer

Associate Professors

Zeljko Pantic

Nuria Gonzalez Prelcic

Nitin Sharma

Assistant Professors

Amay Jairaj Bandodkar

Spyridon Pavlidis

Wenyuan Tang

Practice/Research/Teaching Professors

Douglas C. Hopkins

David Lee Lubkeman

Leonard Wilson White

Wensong Yu