

# Electric Power Systems Engineering (MS)

## Master of Science Degree Requirements

Code	Title	Hours	Counts towards
<b>Core Courses</b>			<b>18</b>
ECE 550	Power System Operation and Control		
ECE 551	Smart Electric Power Distribution Systems		
ECE 552	Renewable Electric Energy Systems		
ECE 583	Electric Power Engineering Practicum I		
ECE 584	Electric Power Engineering Practicum II		
ECE 534	Power Electronics		
	or ECE 587 Power System Transients Analysis		
<b>Elective Courses</b>			<b>12</b>
Select a minimum of four of the following:			
ECE 516	System Control Engineering		
ECE 534	Power Electronics		
ECE 535	Design of Electromechanical Systems		
ECE 554	Electric Motor Drives		
ECE 581	Electric Power System Protection		
ECE 585	The Business of the Electric Utility Industry		
ECE 586	Communication and SCADA Systems for Smart Grid		
ECE 587	Power System Transients Analysis		
ECE 589	Solid State Solar and Thermal Energy Harvesting		

ECE 592	Special Topics In Electrical Engineering
ECE 726	Advanced Feedback Control
ECE 732	Dynamics and Control of Electric Machines
ECE 736	Power System Stability and Control
ECE 753	Computational Methods for Power Systems
CE 578	Energy and Climate

**Total Hours** **30**

## Accelerated Bachelor's/Master's Degree Requirements

The Accelerated Bachelors/Master's (ABM) degree program allows exceptional undergraduate students at NC State an opportunity to complete the requirements for both the Bachelor's and Master's degrees at an accelerated pace. These undergraduate students may double count up to 12 credits and obtain a non-thesis Master's degree in the same field within 12 months of completing the Bachelor's degree, or obtain a thesis-based Master's degree in the same field within 18 months of completing the Bachelor's degree.

This degree program also provides an opportunity for the Directors of Graduate Programs (DGPs) at NC State to recruit rising juniors in their major to their graduate programs. However, permission to pursue an ABM degree program does not guarantee admission to the Graduate School. Admission is contingent on meeting eligibility requirements at the time of entering the graduate program.

## Faculty

### Full Professors

Mesut E. Baran

Subhashish Bhattacharya

Aranya Chakraborty

Robert Wendell Heath

Iqbal Husain

Ning Lu

Srdjan M. Lukic

Daryoosh Vashaee

John Victor Veliadis

Wenye Wang

Jonathan Wierer

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## **Associate Professors**

Zeljko Pantic

Nuria Gonzalez Prelicic

Nitin Sharma

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## **Assistant Professors**

Amay Jairaj Bandodkar

Spyridon Pavlidis

Wenyuan Tang

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## **Practice/Research/Teaching Professors**

Douglas C. Hopkins

David Lee Lubkeman

Leonard Wilson White

Wensong Yu