Electric Power Systems Engineering (MS)

Master of Science Degree Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>Core Courses</td>
<td></td>
<td>18</td>
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<tr>
<td>ECE 550</td>
<td>Power System Operation and Control</td>
<td></td>
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<tr>
<td>ECE 551</td>
<td>Smart Electric Power Distribution Systems</td>
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<td>ECE 552</td>
<td>Renewable Electric Energy Systems</td>
<td></td>
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<tr>
<td>ECE 583</td>
<td>Electric Power Engineering Practicum I</td>
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<tr>
<td>ECE 584</td>
<td>Electric Power Engineering Practicum II</td>
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<tr>
<td>ECE 534</td>
<td>Power Electronics</td>
<td></td>
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<tr>
<td>or ECE 587</td>
<td>Power System Transients Analysis</td>
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Elective Courses 12
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 Chakrabortty
Iqbal Husain
Ning Lu
Srdjan M. Lukic
Daryoosh Vashaee
John Victor Veliadis
Wenyue Wang

Associate Professors
Amay Jairaj Bandodkar
Zeljko Pantic

Assistant Professors
Spyridon Pavlidis
Wenyuan Tang

Practice/Research/Teaching Professors
Douglas C. Hopkins
David Lee Lubkeman
Leonard Wilson White
Wensong Yu