Physics (MS)

Master of Science Degree Requirements

**Thesis (Option A) Requirements**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
<th>Counts towards</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Letter-Graded Courses</strong></td>
<td></td>
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<tr>
<td></td>
<td>Select six PY 500-level / 700-level courses approved in conjunction with the academic committee</td>
<td>24</td>
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<tr>
<td></td>
<td><strong>Research Course</strong></td>
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<tr>
<td></td>
<td>PY 695 Master's Thesis Research (Optional)</td>
<td>6</td>
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<td></td>
<td><strong>Total Hours</strong></td>
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<td>30</td>
</tr>
</tbody>
</table>

**Non-Thesis (Option B) Requirements**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
<th>Counts towards</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Letter-Graded Courses</strong></td>
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<tr>
<td></td>
<td>Select six PY 500-level / 700-level courses approved in conjunction with the academic committee</td>
<td>18</td>
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<tr>
<td></td>
<td><strong>Department Qualifying Exam</strong></td>
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<td>12</td>
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<tr>
<td></td>
<td>Students must pass a Department Qualifying Exam from the following courses:</td>
<td></td>
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<tr>
<td></td>
<td>PY 721 Statistical Physics I</td>
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<tr>
<td></td>
<td>PY 782 Quantum Mechanics II</td>
<td></td>
<td></td>
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<td></td>
<td>PY 783 Advanced Classical Mechanics I</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>PY 785 Advanced Electricity and Magnetism I</td>
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</tr>
<tr>
<td></td>
<td><strong>Total Hours</strong></td>
<td></td>
<td>30</td>
</tr>
</tbody>
</table>

1 Excludes: PY 501 Quantum Physics I, PY 511 Mechanics I, and PY 514 Electromagnetism I.
2 Students may opt to select a minor, by which three graded courses from other departments will be accepted as determined in conjunction with the academic committee.

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**

Harald Ade
David E. Aspnes
Robert J. Beichner
Jerzy Bernholc
John Michael Blondin
John D. Brown
Laura I. Clarke
Karen E. Daniels
William L. Ditto
Daniel B. Dougherty
Carla Frohlich
Robert Golub
Kenan Gundogdu
Hans D. Hallen
Paul R. Huffman
Chueng Ryong Ji
James P. Kneller
Gail C. McLaughlin
Lubos Mitas
Jagdish Narayan
Robert Riehn
Christopher M. Roland
Maria C. Sagui
Thomas M. Schaefer
John E. Thomas
Mithat Unsal
Keith R. Weninger
Albert R. Young
Associate Professors
Matthew Piron Green
Alexander Kemper
Divine Philip Kumah
Shuang Fang Lim
Richard Leigh Longland
Hong Wang

Assistant Professors
Julio Monti Belmonte
Rongmon Bordoloi
Mary Williard Elting
Sebastian Konig
Sharonda Leblanc
Katherine Jean Mack
Vladimir Skokov
Dali Sun

Practice/Research/Teaching Professors
Jason Russell Bochinski
Kazimierz Borkowski
Abay Dinku
Brand Irving Fortner
Keith Heyward
Parminder Kaur
John H. Kelley
Hayen Leendert
Kent Leung
Wenchang Lu
Vijaya Mehta
Zodiac T. Webster

Emeritus Faculty
Ruth W. Chabay
Kwong T. Chung
James W. Cook Jr.
Stephen R. Cotanch