## 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>Letter-Graded Courses</td>
<td>24</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Select six PY 500-level / 700-level courses approved in conjunction with the academic committee</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Research Course</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>PY 695</td>
<td>Master's Thesis Research (Optional)</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Total Hours</td>
<td></td>
<td>30</td>
<td></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>Letter-Graded Courses</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Select six PY 500-level / 700-level courses approved in conjunction with the academic committee</td>
<td>12</td>
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</tr>
<tr>
<td></td>
<td>Department Qualifying Exam</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Students must pass a Department Qualifying Exam from the following courses:</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>PY 721</td>
<td>Statistical Physics I</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>PY 782</td>
<td>Quantum Mechanics II</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>PY 783</td>
<td>Advanced Classical Mechanics I</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>PY 785</td>
<td>Advanced Electricity and Magnetism I</td>
<td>4</td>
</tr>
<tr>
<td>Total Hours</td>
<td></td>
<td>30</td>
<td></td>
</tr>
</tbody>
</table>

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 Bachelor's/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

- 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
- Robert Riehn
- Christopher M. Roland
- Maria C. Sagui
- Thomas M. Schaefer
- John E. Thomas
- Mithat Unsal
- Keith R. Weninger
- Albert R. Young
- Matthew Piron Green
- Alexander Kemper
Divine Philip Kumah
Shuang Fang Lim
Richard Leigh Longland
Hong Wang
Julio Monti Belmonte
Rongmon Bordoloi
Mary Williard Elting
Sebastian Konig
Sharonda Leblanc
Katherine Jean Mack
Vladimir Skokov
Dali Sun
Jason Russell Bochinski
Kazimierz Borkowski
Abay Dinku
Daniel Jacob Doucette
Brand Irving Fortner
Keith Heyward
Parminder Kaur
John H. Kelley
Hayen Leendert
Kent Leung
Wenchang Lu
Vijaya Mehta
Zodiac T. Webster
Ruth W. Chabay
Kwong T. Chung
James W. Cook Jr.
Stephen R. Cotanch
William Robert Davis
Donald C. Ellison
Raymond Earl Fornes
Christopher Robert Gould
David G. Haase
Karen L. Johnston
Fred Lado Jr.

Jacqueline Krim
George W. Parker III
Richard R. Patty
Stephen Reynolds
Phillip J. Stiles

Associate Professor
Ian Roederer

Assistant Professor
Xingcheng Lin

Teaching Professor
Aaron Titus

Teaching Assistant Professor
Kasey Wagoner