Physics (MS)

Master of Science Degree Requirements

Non-Thesis Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Letter-Graded Courses</td>
<td>24-30</td>
</tr>
<tr>
<td></td>
<td>Select a minimum of six 500-level / 700-level graded courses *</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Department Qualifying Exam</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Students must pass the Department Qualifying Exam</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total Hours</td>
<td>30</td>
</tr>
</tbody>
</table>

* Excludes: PY 501 Quantum Physics I, PY 511 Mechanics I, and PY 514 Electromagnetism I.

Thesis Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Research Course</td>
<td>0-6</td>
</tr>
<tr>
<td></td>
<td>PY 695 Master's Thesis Research (Optional)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Graduate Minor Courses</td>
<td>18-24</td>
</tr>
<tr>
<td></td>
<td>Select minor option below</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total Hours</td>
<td>30</td>
</tr>
</tbody>
</table>

Minor Options

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Requirements with Minor</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Select 15 graduate credit hours in Physics 1</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>Select nine credit hours outside the department</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Total Hours</td>
<td>24</td>
</tr>
</tbody>
</table>

1 Cannot include PY 501 Quantum Physics I, PY 502 Quantum Physics II, PY 512 Mechanics II, PY 515 Electromagnetism II

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Requirements without a Minor</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Select 18 graduate credit hours minimum in Physics 1</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>Total Hours</td>
<td>18</td>
</tr>
</tbody>
</table>

1 Cannot include PY 501 Quantum Physics I, PY 511 Mechanics I, PY 514 Electromagnetism I

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 (DGP) 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
Robert Golub
Kenan Gundogdu
Hans D. Hallen
Paul R. Huffman
Chueng Ryong Ji
Jacqueline Krim
Thomas H. LaBean
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

Associate Professors

Carla Frohlich
Alexander Kemper
James P. Kneller
Shuang Fang Lim
Richard Leigh Longland
Hong Wang

**Assistant Professors**

Julio Monti Belmonte
Rongmon Bordoloi
Mary Williard Elting
Matthew Piron Green
Sebastian Konig
Divine Philip Kumah
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
Raymond E. Fornes
David G. Haase
James W. Cook Jr.
Stephen R. Cotanch