Physics (PhD)

Degree Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>Core Courses</td>
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<tr>
<td>PY 785</td>
<td>Advanced Electricity and Magnetism I</td>
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<tr>
<td>PY 721</td>
<td>Statistical Physics I</td>
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<tr>
<td>PY 782</td>
<td>Quantum Mechanics II</td>
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<tr>
<td>PY 783</td>
<td>Advanced Classical Mechanics I</td>
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<tr>
<td>Additional 700-level course ¹</td>
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<tr>
<td>PY 801</td>
<td>Seminar</td>
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<tr>
<td>Research Ethics Courses ¹²</td>
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<tr>
<td>Select four of the following elective courses: ²</td>
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<tr>
<td>PY 711</td>
<td>Advanced Quantum Mechanics I</td>
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<tr>
<td>PY 712</td>
<td>Advanced Quantum Mechanics II</td>
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<td>PY 753</td>
<td>Condensed Matter Physics II</td>
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<tr>
<td>PY 506</td>
<td>Nuclear and Subatomic Physics</td>
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<td>PY 507</td>
<td>Elementary Particle Physics</td>
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<td>PY 509</td>
<td>General Relativity</td>
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<td>PY 516</td>
<td>Physical Optics</td>
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<td>PY 517</td>
<td>Atomic and Molecular Physics</td>
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<td>PY 519</td>
<td>Biological Physics</td>
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<td>PY 525</td>
<td>Computational Physics</td>
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<td>PY 528</td>
<td>Introduction to Plasma Physics and Fusion Energy</td>
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<td>PY 543</td>
<td>Astrophysics</td>
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<td>PY 552</td>
<td>Condensed Matter Physics I</td>
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<td>PY 590</td>
<td>Special Topics In Physics (CM/Bio Seminar)</td>
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<td>PY 599</td>
<td>Special Topics In Physics (Quantum Optics )</td>
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<td>Half-Semester Specialized Courses</td>
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<td>&quot;Half-Semester Specialized Courses&quot; are approved in conjunction with the academic committee to meet 72 total hours</td>
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<td>Additional Courses in Related Fields</td>
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<tr>
<td>Total Hours</td>
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</table>

¹ Cannot be PY 781 Quantum Mechanics I
² Not an exhaustive list

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
Chuang Ryong Ji
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
William Robert Davis
Donald C. Ellison
Christopher Robert Gould
Karen L. Johnston
Fred Lado Jr.
Jacqueline Krim
Gary E. Mitchell
George W. Parker III
Richard R. Patty
Stephen Reynolds