PHYSICS - PH.D.

College of Arts and Sciences
Department of Physics
www.kent.edu/physics

About This Program

The Ph.D. degree in Physics provides training of professionals to conduct independently conceived programs of research or teaching in universities or research laboratories. Original research is required in fundamental or applied areas of physics, and the Ph.D. dissertation must be orally defended. Two years of graduate coursework and four years of research are typical.

Contact Information

- John Portman | jportman@kent.edu | 330-672-9518
- Connect with an Admissions Counselor: U.S. Student | International Student

Program Delivery

- Delivery: In person
- Location: Kent Campus

For more information about graduate admissions, visit the graduate admission website. For more information on international admissions, visit the international admission website.

Admission Requirements

- Bachelor’s degree or higher from an accredited college or university
- Minimum 2.750 GPA on a 4.000-point scale
- Official transcript(s)
- Résumé or vita
- Goal statement
- Three letters of recommendation
- English language proficiency - all international students must provide proof of English language proficiency (unless they meet specific exceptions to waive) by earning one of the following: 1
  - Minimum 79 TOEFL iBT score
  - Minimum 6.5 IELTS score
  - Minimum 58 PTE score
  - Minimum 110 DET score

1 International applicants who do not meet the above test scores may be considered for conditional admission.

Application Deadlines

- Fall Semester
  - Priority deadline: February 1
    Applications submitted by this deadline will receive the strongest consideration for admission.
- Spring Semester

Program Requirements

Major Requirements

<table>
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<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
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<tr>
<td>PHY 75204</td>
<td>CLASSICAL ELECTRODYNAMICS II</td>
<td>3</td>
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<tr>
<td>PHY 75301</td>
<td>STATISTICAL MECHANICS I</td>
<td>4</td>
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<td>PHY 76162</td>
<td>QUANTUM MECHANICS II</td>
<td>3</td>
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<td>PHY 76163</td>
<td>QUANTUM MECHANICS III</td>
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<td>PHY 76201</td>
<td>PARTICLE PHYSICS</td>
<td>3</td>
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<td>PHY 76303</td>
<td>APPLICATIONS OF QUANTUM CHROMODYNAMICS</td>
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<tr>
<td>or PHY 76403</td>
<td>ADVANCED CONDENSED MATTER PHYSICS</td>
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<td>or PHY 78401</td>
<td>LIQUID CRYSTAL PHYSICS</td>
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<td>PHY 76401</td>
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Additional Program Requirements 3

Culminating Requirement

- PHY 80199 | DISSERTATION I 2                         | 30           |

Minimum Total Credit Hours for Post-Baccalaureate Students

Minimum Total Credit Hours for Post-Master’s Students

Graduation Requirements

Minimum Major GPA: 3.000
- Minimum Overall GPA: 3.000

Program Learning Outcomes

Graduates of this program will be able to:

1. Demonstrate cognitive skills important to a physicist, including the following:
   a. Think critically and analytically;
   b. Define and solve problems in physics; and
   c. Perform research in contemporary areas of physics research at the highest level and with a great deal of independence.
2. Demonstrate a core knowledge and understanding of the foundations of physics.
3. Communicate results of their work to peers, various target groups within the physics community and people outside the discipline.