Yale Physics Graduate Program Team

Prof. Karsten Heeger  
Chair

Prof. Daisuke Nagai  
Director of Graduate Studies

Prof. Helen Caines  
Director of Graduate Admissions

Dr. Rona Ramos  
Graduate Program Coordinator & Lecturer

Stacey Watts  
Graduate Program Registrar
Yale Applied Physics Faculty Representatives

Prof. Yu He
Applied Physics & Physics

Prof. Logan Wright
Applied Physics
Graduate Student Representatives

Emily Pottebaum
Particle Experiment
Graduate Student, Year 2

Rohin McIntosh
Atomic & Optical Physics
Graduate Student, Year 3
# Statement of Principles

<table>
<thead>
<tr>
<th>Respect</th>
<th>We continually strive to make our department a place that respects people with diverse backgrounds and values each others’ creativity.</th>
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<tbody>
<tr>
<td>Well-being</td>
<td>We commit to actively engage in creating a supportive and safe environment. Criticism and praise are professional and constructive.</td>
</tr>
<tr>
<td>Integrity</td>
<td>We carry out our work with honesty and with the highest standards. We shall not commit scientific or academic misconduct, defined as plagiarism, fabrication, or falsification.</td>
</tr>
<tr>
<td>Community</td>
<td>Our community actively includes all, enhancing collaboration and promoting our common mission to advance the frontiers of knowledge.</td>
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[physics.yale.edu/statement-principles](https://physics.yale.edu/statement-principles)
Yale Physics by the Numbers 2023

**People**

<table>
<thead>
<tr>
<th>Role</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>faculty (primary)</td>
<td>36</td>
</tr>
<tr>
<td>faculty (secondary)</td>
<td>32</td>
</tr>
<tr>
<td>research scientists</td>
<td>28</td>
</tr>
<tr>
<td>postdocs</td>
<td>30</td>
</tr>
<tr>
<td>grad students (physics)</td>
<td>156</td>
</tr>
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- median time to graduation 6.6 years
- many opportunities to seek Interdisciplinary research

Physics students have diverse interests working with advisors in Physics and related disciplines
Research Areas

Traditional and emerging research areas

Departments research portfolio evolving

New faculty being hired

Current science initiatives on campus

- data science
- quantum science
- instrumentation

https://physics.yale.edu/research
Yale Physics Research in Campus Centers

- Wright Laboratory
- Yale Quantum Institute
- YCAA (Yale Center for Astronomy & Astrophysics)
- Yale Center for Research Computing
- Yale's Integrated Graduate Program in Physical and Engineering Biology
- Quantitative Biology Institute [QBio]
- Systems Biology Institute
- Energy Science Institute

Yale Physics
1. Students will acquire a general foundational knowledge of physics at the graduate level and the necessary accompanying methodological aspects of mathematics, computing, and instrumentation.

2. Students will learn to identify and solve problems at the frontier of physics knowledge, uphold standards of scientific integrity, and disseminate their research.

3. Students will become educators and communicators with the ability to promote an understanding and appreciation of physics across the university and in society.

4. Department members and students will work together to develop and realize, in the department and in the community, progress and success in diversity, equity, and inclusion in all aspects of the scientific enterprise.
Graduate Program

- **Coursework**
  - Must take, waive or pass-out of 6 core courses, take at least one advanced elective and a Special Investigation (research) course

- **Teaching**
  - 10hrs/week of teaching for first 2 years
  - Learn to teach, deepen your knowledge of Physics

- **Qualifying Event**
  - Four 4-question “Event” → Not an exam! Taken at the beginning of the 2nd year. Part of the learning milestone’s of the department. All students pass by participation!

- **Research**
  - typically, start in first year, full-time in summer after year 1
  - by mutual arrangement, you can start summer before you start graduate school (early start)

- **Flexibility in program**
  - many ways to personalize your course of study and research
  - admission to Yale does not bind you to a specific program

https://physics.yale.edu/academics/graduate-studies
Academic Life and Campus Resources

Graduate Student Leadership

★ Regular town halls with department leadership
★ Graduate Student Advisory Committee
★ Graduate Students on Departmental Committees

Physics Colloquia and Seminars

Department of Physics

Yale Poorvu Center for Teaching and Learning

Graduate Students

About the Graduate Writing Laboratory
Writing and Public Speaking Consultations
Graduate Students, Writing Workshops and Panels
Teaching Workshops
GWL Writing Retreats and All Writings
Writing Resources for Graduate Students
Teaching Programs and Grants
About Teaching Development for Graduate and Professional School Students
Teaching Forums
Peer-Review Groups
Teaching Consultations and Classroom Observations
Resources for Graduate Student Teachers

McDougal Graduate Student Center

Upcoming Events

OCTOBER 12, 2022

11:00am YCRC Research Support Office Hours
4:30pm Nobel Prize in Physics 2022 Lecture: A. Douglas Stone, Yale University, “Spooky Action at a Distance wins the Nobel Prize”

OCTOBER 13, 2022

student support resources and community
Student Groups

Climate and Diversity Committee

Women in Physics (+Allies)

QuARK
(Queer Affiliated fRiends of physiKs)

GSAC
Graduate Student Advisory Committee

History and Foundations of Physics Reading Group (HoFoP)

Department Happy Hour

Women in Physics (+Allies)
Diversity, Equity, and Inclusion

Yale Physics Graduate Diversity Fellowship

Climate and Diversity Committee

APS Inclusion, Diversity, and Equity Alliance (APS IDEA)

Office for Graduate Student Development & Diversity (OGSDD)

physics.yale.edu/diversity-equity-and-inclusion
The Physics PhD Application Components

- Personal Details
- Program of Study
- Statement of Academic Purpose (Research interests)
- 3 Letters of Recommendations
- Academic History
- Program-Specific Questions (subfields/faculty of interest)
- Additional Questions (All optional, Personal Narrative Recommended)
- Languages
- Test Scores (*GRE scores are Optional. TOEFL/IELTS scores are required for non-english speakers.)
  
  https://gsas.yale.edu/faq/admissions/standardized-test-questions

- Resume/CV

https://gsas.yale.edu/admissions/degree-program-application-process
Frequently Asked Questions

Testing -

GREs - Optional

TOEFL/IELTS - Not required from an institution where English is the primary language of instruction. No minimum if not, 25+ on TOEFL speaking test, or 7.5+ on IELTS to teach

Application Costs and Deadlines -

Application Fee - $105 USD, Fee waiver request forms must be submitted before submitting applications

Application Deadline - December 15th

Graduate Student Support -

Tuition and Health Fees - $0 cost to student

Graduate Stipend - $40,530 USD, increases yearly

Early Program Opportunities -

Early Start Research - Paid research in a Research Group, June 1 - Aug 15

Physics Bootcamp - Basic refresher class in several foundational physics topics

physics.yale.edu/prospectivegrad/FAQ
Come and meet us!

Oct. 26-28 — SACNAS Conference
Nov. 7 — Joint Webinar with Astronomy
Nov. 8 — Joint Webinar with Applied Physics
Nov. 9-10 — NSBP Conference

Dec. 15 — Applications Due
Early Feb. — Offer letters sent
April 15 — Deadline to Accept

Physics Open House

April 4-6, 2024