Yale Physics Graduate Program Webinar

physics.yale.edu
Yale Physics Graduate Program Team

Prof. Karsten Heeger  
Chair

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Director of Graduate Studies

Prof. Helen Caines  
Director of Graduate Admissions

Dr. Rona Ramos  
Graduate Program Coordinator & Lecturer

Stacey Watts  
Graduate Program Registrar
Yale Physics Graduate Student Representatives

Charles Lomba
Biological Physics/PEB, Year 4

Yarone Tokayer
Astrophysics/Cosmology, Year 3

Molly Watts
Particle Experiment, Year 3
Yale Physics by the Numbers 2023

People

- faculty (primary) 36
- faculty (secondary) 32
- research scientists 28
- postdocs 30
- grad students (physics) 156

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

- Physics 63%
- Bio/Medical 13%
- Engineering 6%
- Other 3%
- AP 15%
Research Areas

Traditional and emerging research areas

Research portfolio of department is evolving

New faculty being hired

Current science initiatives on campus

- data science
- quantum science
- instrumentation

https://physics.yale.edu/research
State-of-the Art Facilities
Physics Ph.D students’ learning objectives
guide to the graduate program

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

Physics Colloquia and Seminars

Department of Physics

Graduate Student Leadership

Regular town halls with department leadership

Graduate Student Advisory Committee

Graduate Students on Departmental Committees

Yale Poorvu Center for Teaching and Learning

Graduate Students

About the Graduate Writing Laboratory

Writing and Speaking Consultations

Writing Workshops and Panels

Peer-Review Groups

GWL Writing Retreats and All Writings

Writing Resources for Graduate Students

About Teaching Development for Graduate and Professional School Students

Teaching Workshops

Teaching Programs and Grants

Teaching Forums

McDougal Graduate Student Center

student support resources and community
Diversity, Equity, and Inclusion

Statement of Principles

Respect
We continually strive to make our department a place that respects people with diverse backgrounds and values each others’ creativity.

Well-being
We commit to actively engage in creating a supportive and safe environment. Criticism and praise are professional and constructive.

Integrity
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.

Community
Our community actively includes all, enhancing collaboration and promoting our common mission to advance the frontiers of knowledge.

Yale Physics Graduate Diversity Fellowship

Climate and Diversity Committee

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

Office for Graduate Student Development & Diversity (OGSDD)

https://physics.yale.edu/statement-principles
https://physics.yale.edu/diversity-equity-and-inclusion
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)

Women in Physics (+Allies)

Department Happy Hour
Outreach Opportunities

https://physics.yale.edu/outreach-events
Career Mentoring

• Career development workshops through YPPDO (Yale Physics Professional Development Organization)
  – https://yppdo.yale.edu/ and https://wlab.yale.edu/calendar/year

• Majority of our students go on to University/Lab Post-doctoral positions. Second largest group goes to Data Science/Engineering in Industry

• Support Career Mentoring towards academia, government, industry, and beyond

https://physics.yale.edu/people/alumni
The Physics PhD Application Components

- Personal Details
- Program of Study
- Statement of Academic Purpose
- Recommendations (3)
- Academic History
- Program-Specific Questions
- Additional Questions (All optional, Personal Narrative Recommended)
- Languages
- Test Scores (*GRE scores are Optional. TOEFL scores are required for non-english speakers.)
  [https://gsas.yale.edu/faq/admissions/standardized-test-questions](https://gsas.yale.edu/faq/admissions/standardized-test-questions)
- Resume/CV
- Background Check Information

[https://gsas.yale.edu/admissions/degree-program-application-process](https://gsas.yale.edu/admissions/degree-program-application-process)
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

Tentatively…. March 6-8 or April 4-6, 2023