

GRADUATE PROGRAM IN APPLIED PHYSICS

Overview

Northwestern

Northwestern

Applied Physics

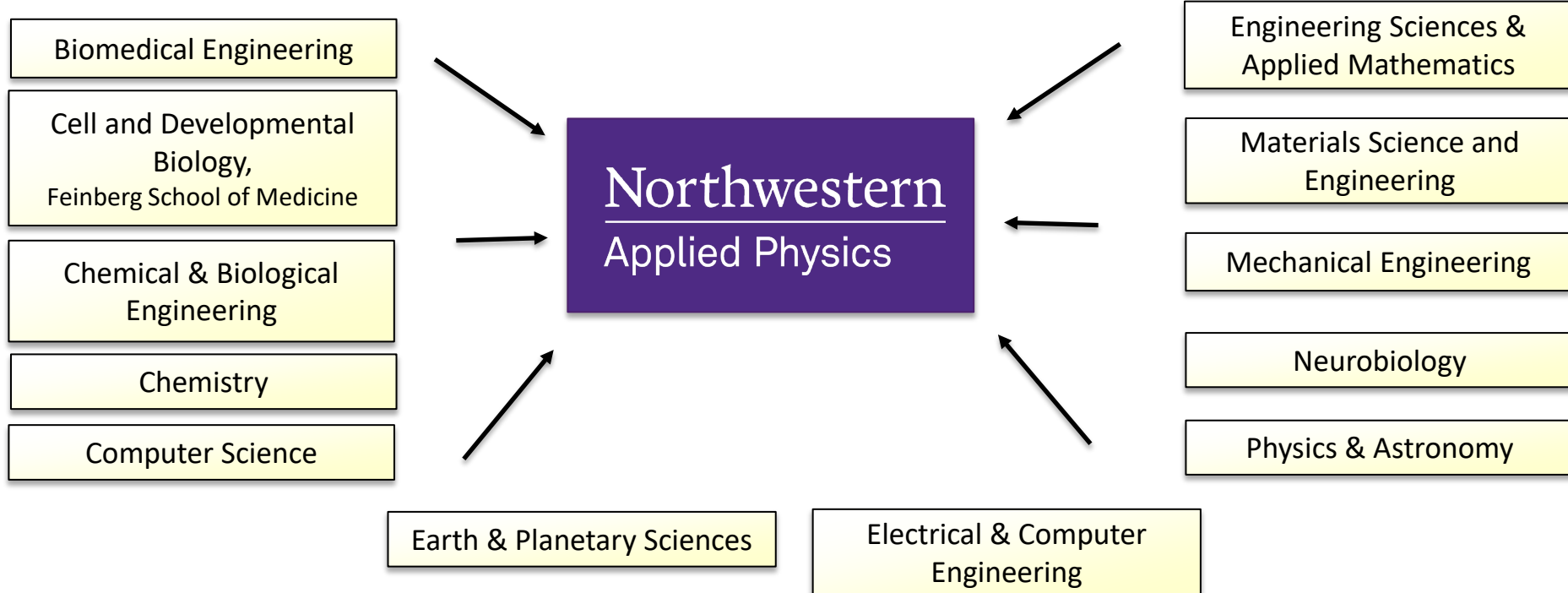
Affiliation:

2 Schools, 10+ Departments/Programs

WEINBERG COLLEGE
OF ARTS & SCIENCES

&

McCORMICK SCHOOL OF
ENGINEERING



Nate Stern



Weinberg
Co-Director

Pedram Khalili



McCormick
Co-Director

Michelle Driscoll



Director of
Graduate Studies

Mahdi Hosseini



Admissions
Chair

Clarence Morales



Program
Assistant



Clarence Morales,
Program Assistant
Tech F237
(847) 491-5455
appliedphysics@northwestern.edu



Michelle Driscoll,
Director of Graduate Studies



Mahdi Hosseini
Admissions Chair

Student Council



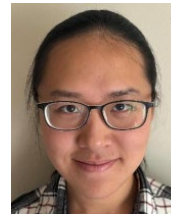
Emmanuel Aneke
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Maggie Quinn
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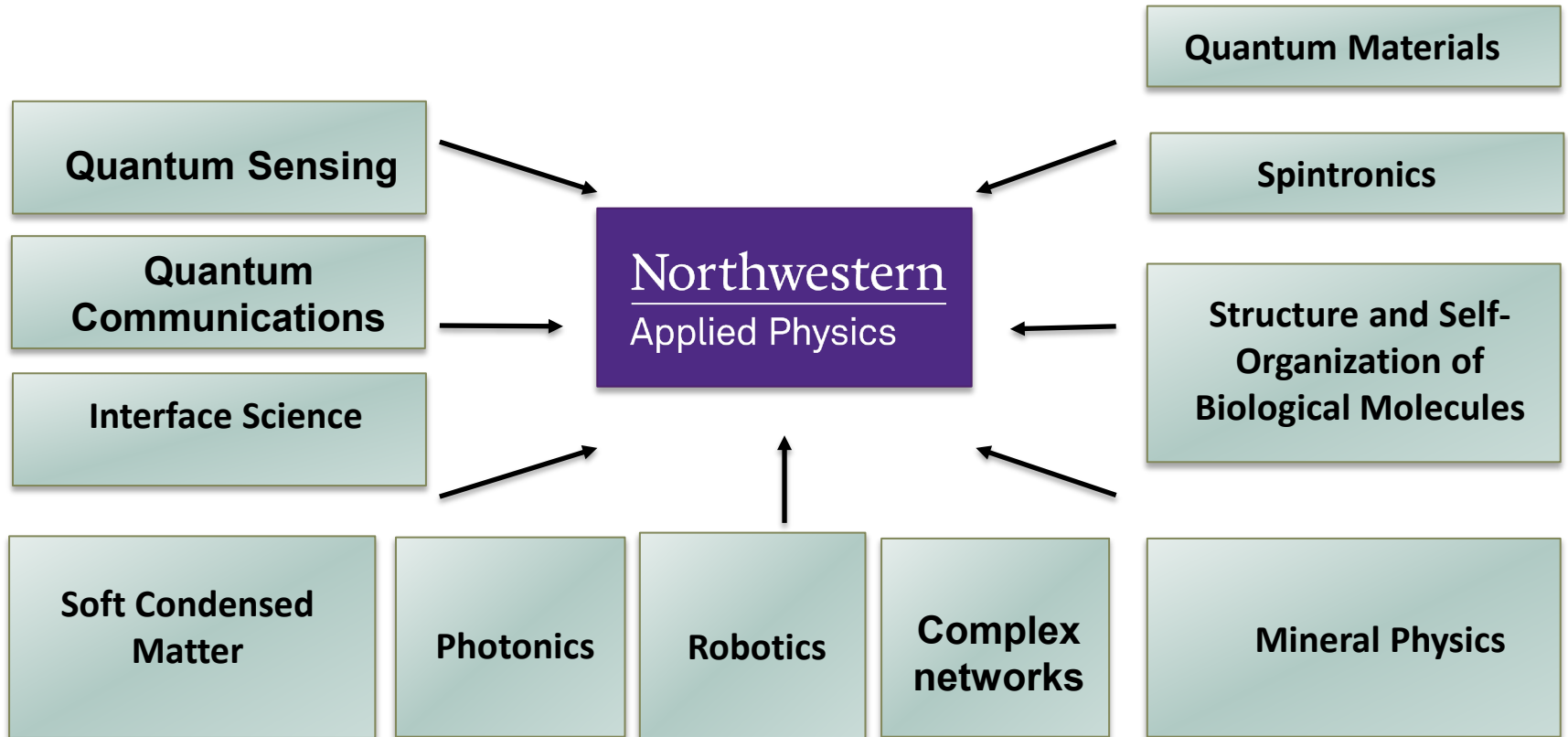


Gina Talcott
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Rong Wu
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As of March, 2026



Northwestern Applied Physics

Collaborative Research Centers and Institutes



Materials Research Center
Northwestern University



Northwestern
PAULA M. TRIENENS INSTITUTE FOR
SUSTAINABILITY AND ENERGY

CMQT
CENTER FOR MOLECULAR
QUANTUM TRANSDUCTION



INTERNATIONAL INSTITUTE
FOR NANOTECHNOLOGY
Northwestern University

CAPST
Center for Applied Physics and Superconducting Technologies



Fermilab
Northwestern



Argonne
NATIONAL LABORATORY



Chemistry of
Life Processes
Institute

NAISE
Northwestern University
Argonne National Laboratory
Institute of Science and Engineering

NUANCE
Northwestern University Atomic and
Nanoscale Characterization Experimental Center



ICET

Institute for Cellular Engineering Technologies

MATERIALS RESEARCH SCIENCE
AND ENGINEERING CENTER



Northwestern

Center for Hydrogen in Energy and Information
Sciences (HEISs)



Center for
Network Dynamics



Northwestern

#1

We need you:

your skills and talent, your unique ideas and perspective

#2

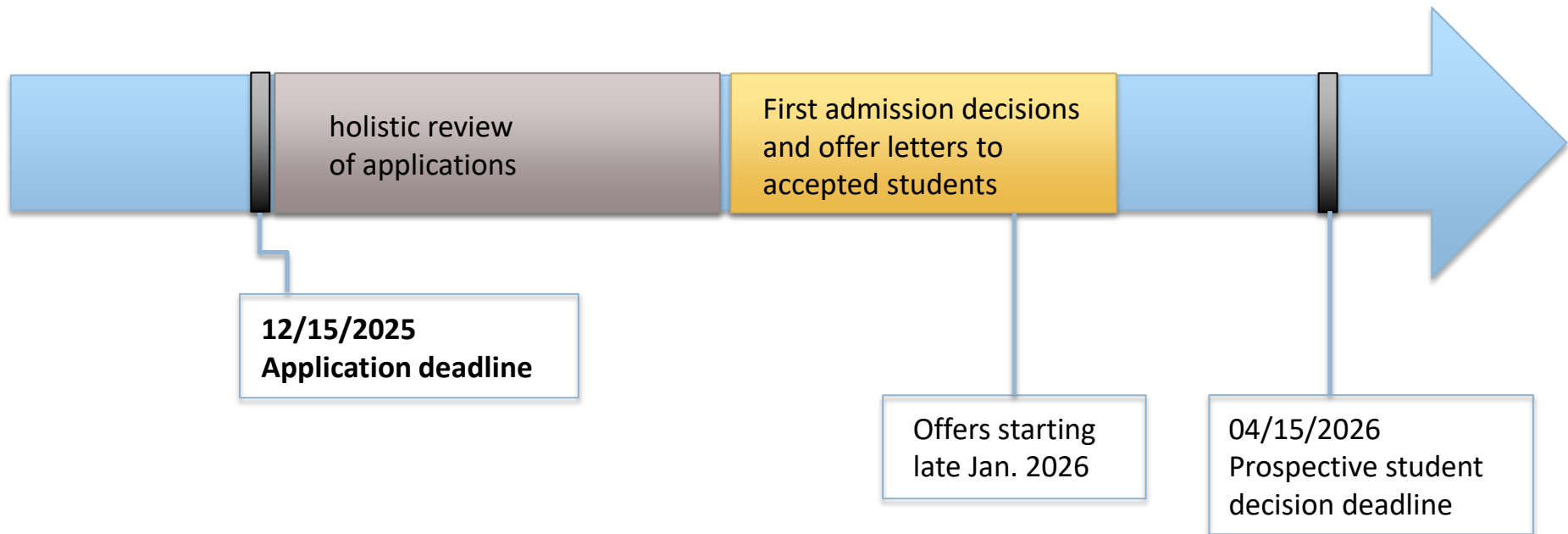
Unique Research Opportunities

- interdisciplinary, multiple departments
- many faculty members (experiment, theory)
- new QIS centers

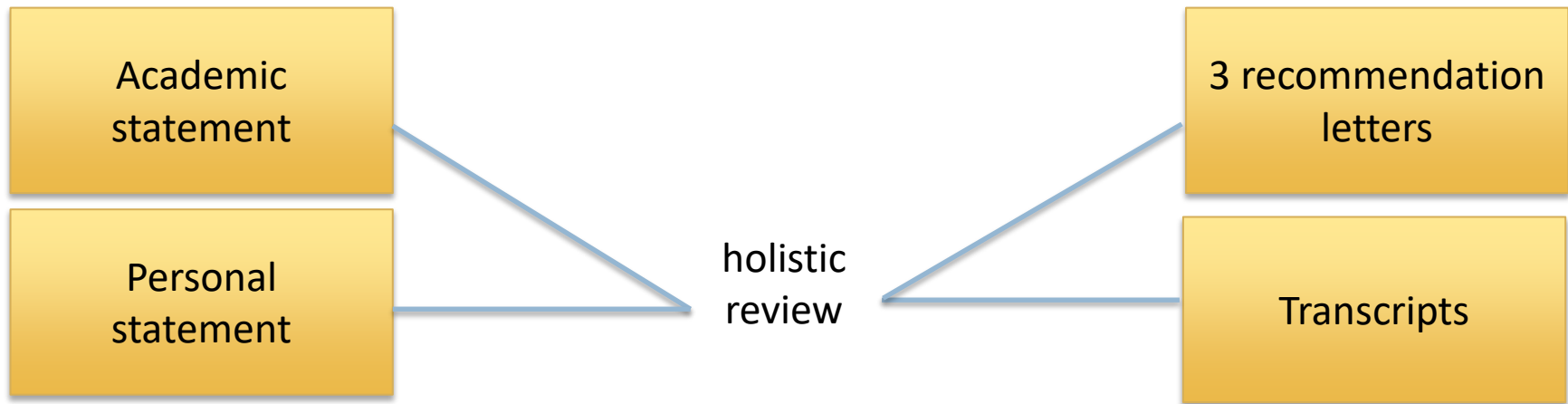
#3

Start your own research early (second quarter!)

interact with AP students and faculty doing research in a variety of disciplines



Content of your application



Optional

[GRE Physics]

*Not required for applications submitted in 2025 for fall 2026 enrollment**

**If GRE Physics scores are submitted, the admissions committee will review them as part of a holistic evaluation of the applicant's academic preparation in physics*

- ➔ What are your academic interests, and why do you wish to pursue graduate studies in Applied Physics?
- ➔ How has your academic and professional background prepared you for graduate study? (Please include any research, training, or educational experiences that align with Applied Physics)
- ➔ Why is the Northwestern Applied Physics the best place for you to pursue your academic, intellectual, and professional goals?
- ➔ Please make sure to address any scholarly questions you wish to explore and name any specific faculty members whose research interests align with your own

- ➔ Pivotal experiences, opportunities, and/or challenges that have influenced your educational and professional development.
- ➔ Leadership experiences, community outreach, service initiatives, or research projects you have participated in or plan to pursue that aim to positively impact others or the broader community.
- ➔ Anything you would like to share with the admissions committee that you have yet to discuss in other areas of the application (ex: gaps in your academic and professional experience, or additional context)
- ➔ If needed, you may also use this space to expand upon the topics discussed in the essays

Northwestern

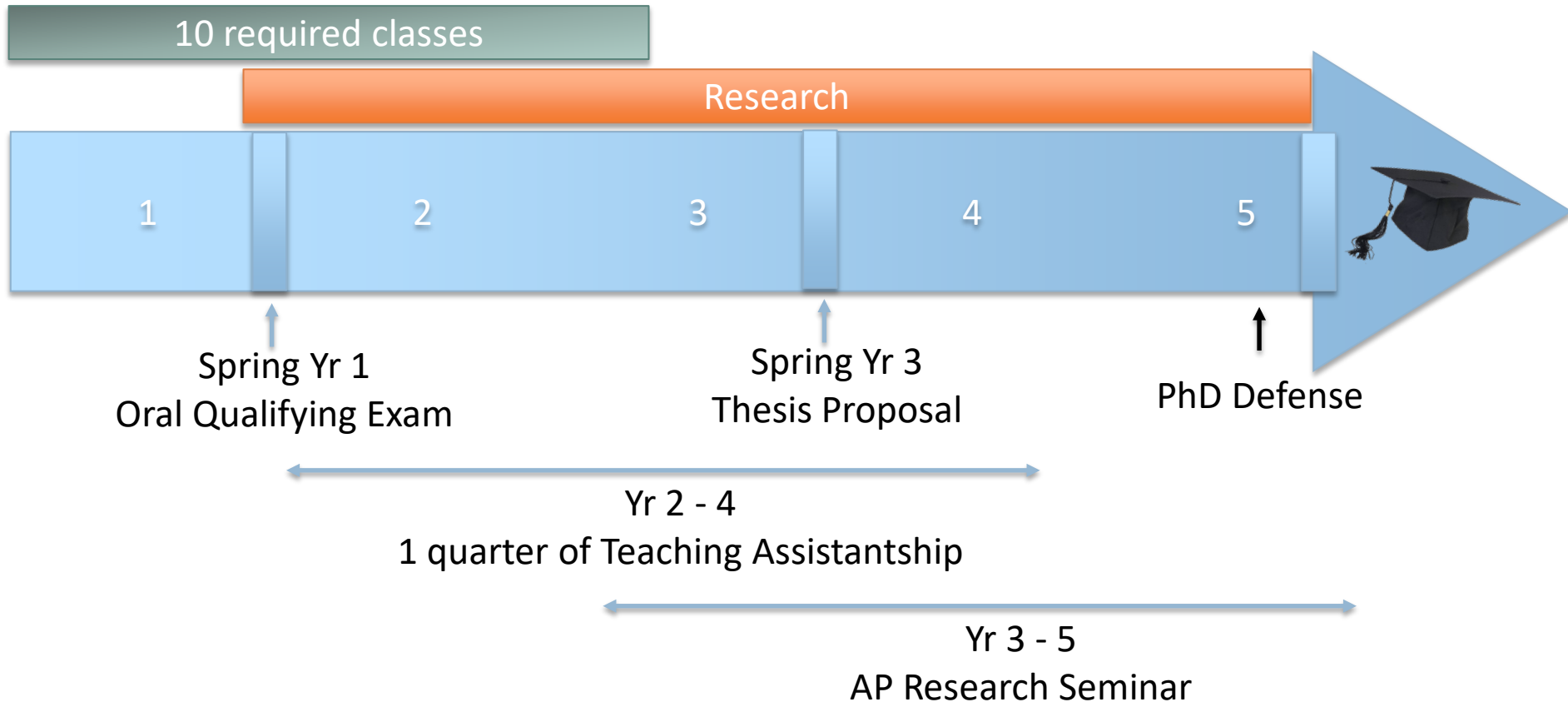
Applied Physics

Program Components & Goals

provide you
with a
solid foundation
in **physics**

enable you
to become an
**independent
researcher**

prepare you for
and assist you in
planning and realizing
your
career plans

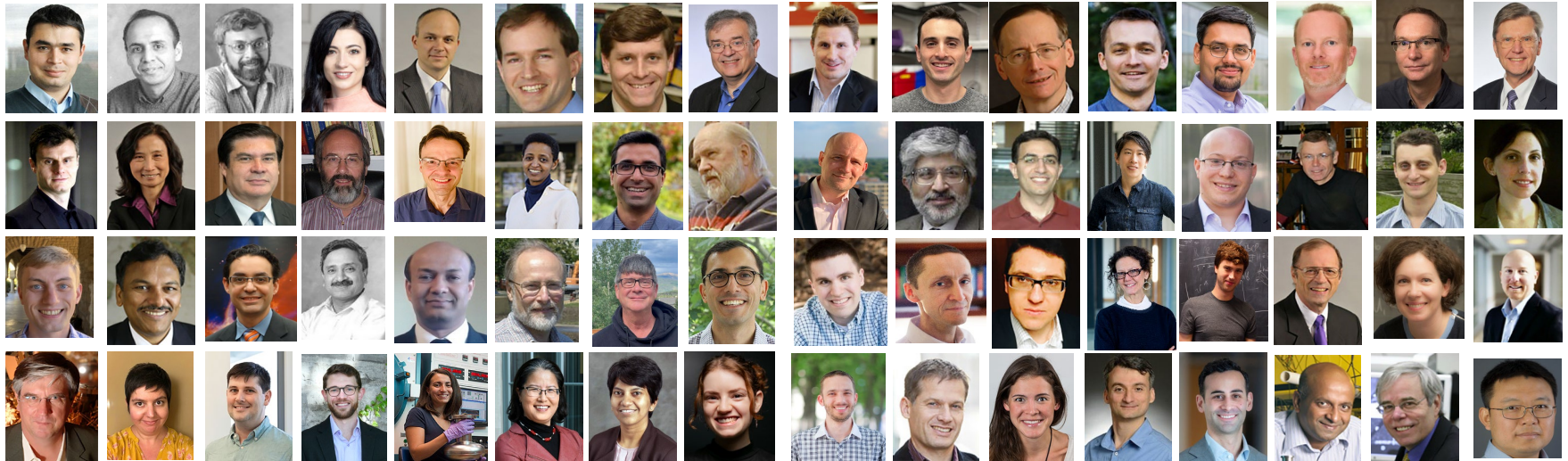


The screenshot shows the Northwestern University Graduate School website. The header includes the Northwestern logo, navigation links for POLICIES, CALENDAR, CONTACT, and RESOURCES FOR YOU, and the text 'THE GRADUATE SCHOOL'. A search bar is present. The main navigation menu includes Admissions, Academics, Funding, Diversity, Professional Development (highlighted), Campus Life, and About. A sidebar on the left lists: Professional Development (circled in red), Career Paths, Core Competencies, Professional Development Funding, and Careers and Job Search. The main content area features a photograph of a professional development workshop with a presenter and an audience. Below the photo is the heading 'Professional Development' and a paragraph: 'The Graduate School at Northwestern University (TGS) offers a variety of resources and programming to contribute to the professional development of our graduate students and postdoctoral fellows. In addition to providing direct services (such as workshops and speakers), TGS serves as a gateway to programming and resources across campus. TGS partners with several University offices to provide skill acquisition in five major Core Competencies. In addition, students are encouraged to explore the Career Pathways, where professional development opportunities and resources are organized by career path, in a timeline format. Finally, TGS offers'.

OUR PARTNERS

- Center for Civic Engagement
- Office of Fellowships
- Center for Leadership
- Office of Postdoctoral Affairs
- Searle Center for Advancing Learning and Teaching

- Career Exploration
- Leadership and Management
- Speaking and Presenting
- Teaching
- Writing and Research



~ 50 faculty members in:

- Biomedical Engineering
- Cell and Developmental Biology,
Feinberg School of Medicine
- Chemical & Biological Engineering
- Chemistry
- Computer Science
- Earth & Planetary Sciences
- Electrical and Computer Engineering
- Engineering Sciences and Applied Mathematics
- Materials Science and Engineering
- Mechanical Engineering
- Neurobiology
- Physics and Astronomy

As of June 2026

First Year

Fall

MAT SCI 401: Chemical & Statistical Thermodynamics of Materials
or **PHYS 416:** Introduction to Statistical Mechanics (Winter Yr1)

PHYS 412-1: Quantum Mechanics

PHYS 411-1: Methods of Theoretical Physics

GEN ENG 519: Responsible Conduct of Research Training (not for credit)

Winter

PHYS 412-2: Quantum Mechanics

PHYS 414-1: Electrodynamics

PHYS 416-0: Introduction to Statistical Mechanics
or **MAT SCI 401:** Chemical & Statistical Thermodynamics of Materials
(Fall Yr1)

MAT SCI 405: Physics of Solids*
or **PHYS 422-1:** Condensed Matter Physics (Fall Yr2)

Before the end of year 3

Computational Methods of Applied Physics

Experimental Methods of Applied Physics

2 Electives

Second Year

Fall

PHYS 422-1: Condensed Matter Physics
or **MAT SCI 405:** Physics of Solids (Spring Yr1)

Start your own research

**if schedule does not conflict with other required classes,
otherwise Winter of year 2*

Northwestern Applied Physics

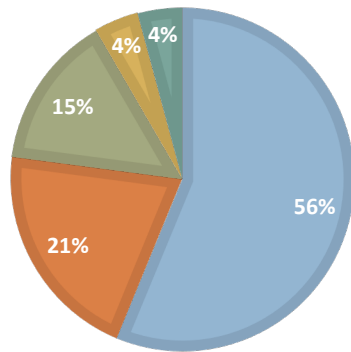
Graduate Students

 Aziz Abogoda Sauls group	 Pravan Chakravarthy First Year Student	 Junhang Duan Wasielowski group	 Swan Htun Jacobsen group	 Gilhwan (Peter) Lim Hersam/ David groups	 Margaret Quinn Rondinelli group	 Madison Schwinn Chen group	 Qin Tong Wu Swearer Group
 Emmanuel Aneke Jacobsen group	 Shu Chen Petford-Long/ Phatak Groups	 Ely Eastman Kumar group	 Joseph Humphries First Year Student	 Chenguang Liu Jacobsen/ Pankuch groups	 Rohan Rajmohan Koch group	 Antara Sen Olvera de la Cruz Group	 Andre Vallieres Koch Group
 Mauricio Angelone Jacobsen group	 Tse-Min Chiang Schatz group	 Matthew Farnese Olvera de la Cruz group	 Ubaid Kazianga Sargent group	 Chen Lu First Year Student	 Lawrence Rhoads Grayson group	 Neil Shah First Year Student	 Parker Watts Wasielowski group
 Sevede Nur Arpaci Khalili group	 Gregor Dairaghi Odom, T. group	 Jennifer Garland Petford-Long group	 Samira Khan Driscoll group	 Eric Matt Khalili group	 William Rogers Rondinelli Group	 Banibrato Sinha Khalili group	 Noah Welke Bedzyk group
 Matthew Liam Beaudoin First Year student	 Arya Desai First Year Student	 Gamze Gul Kumar group	 Trevor Kling Hosseini group	 Ennis Mawas Kamal group	 Benjamin Roter Jacobsen group	 Gina Talcott Kumar group	 Joseph Yaker Koch / Romanenko group
 Matthew Capocci Koch group	 Vin San Dinh Koch / Romanenko groups	 Kara Hokenstad Kumar group	 Wing-Shun Li Backman / Dravid group	 Jasmine Panthee Chandrase-khar group	 James Rush	 Yi Wang Odom, T. group	 Tianpu Zhao Koch Group

As of Sept. 2025

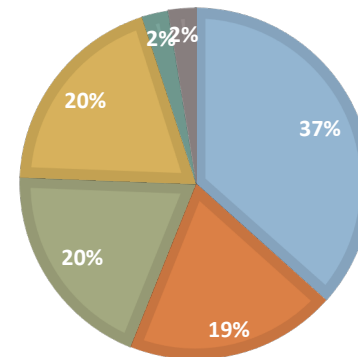
TOTAL: 48 STUDENTS

BY REGION



- USA
- East Asia
- South Asia
- Middle East, North Africa, and greater Arabia

BY DEPARTMENT



- P&A
- ECE
- MSE
- Chem
- MSE/BME
- IEMS

As of Sept. 2025



ACADEMIA



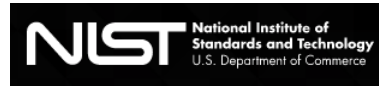
NATIONAL LABS



INDUSTRY



FINANCE





City of Evanston

- Population of ~75,000.
- Convenient, quiet.
- Quick and easy connections to downtown Chicago. (Metra: ~20 mins)

City of Chicago

- Population of 2.7M
- Great museums, restaurants, sports, culture,...
- And beaches!

