

GRADUATE PROGRAM IN APPLIED PHYSICS

Overview*

Northwestern

* As of Sept. 2024

Northwestern

Applied Physics

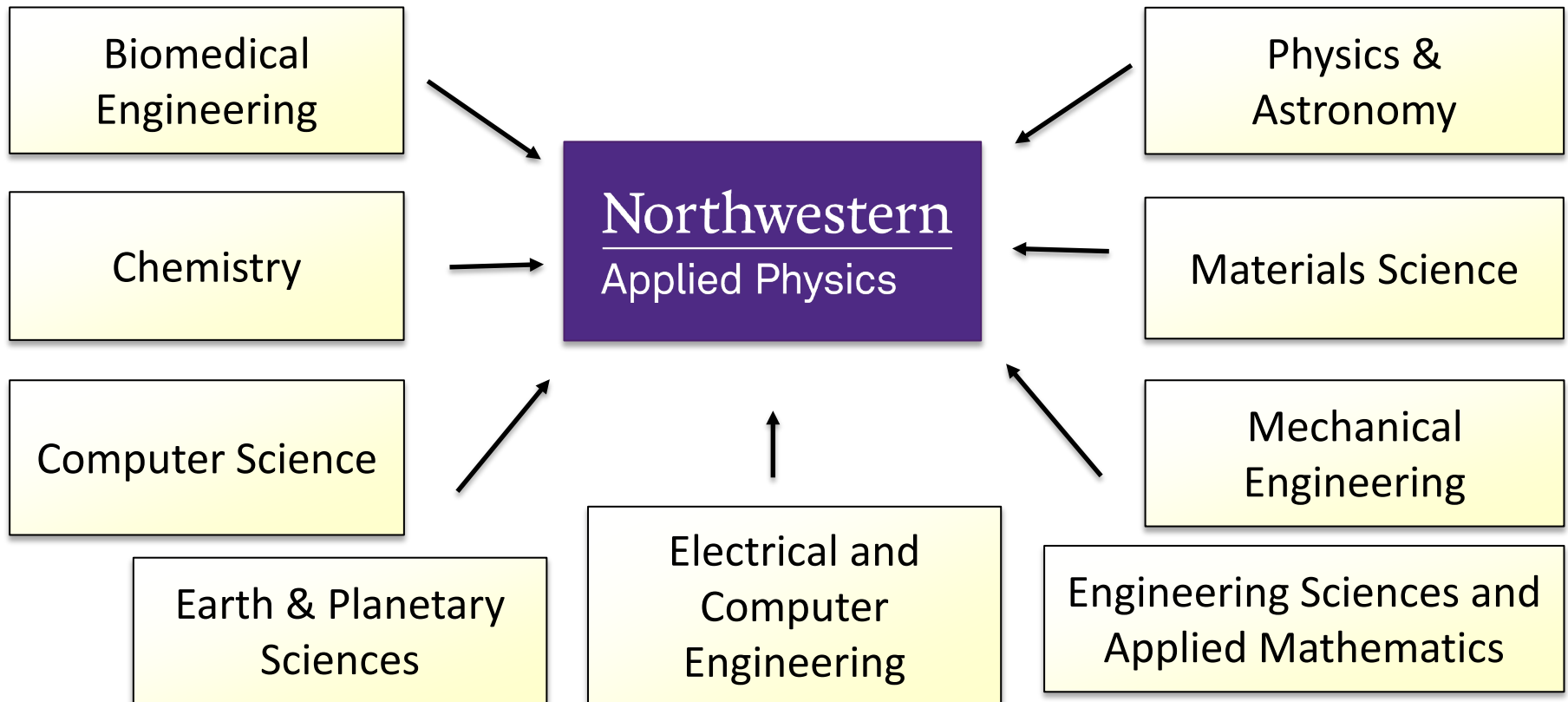
Affiliation:

2 Schools and 9 Departments

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



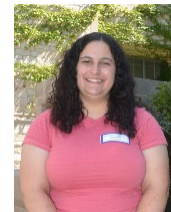
Emmanuel Aneke
eaneke@u.northwestern.edu



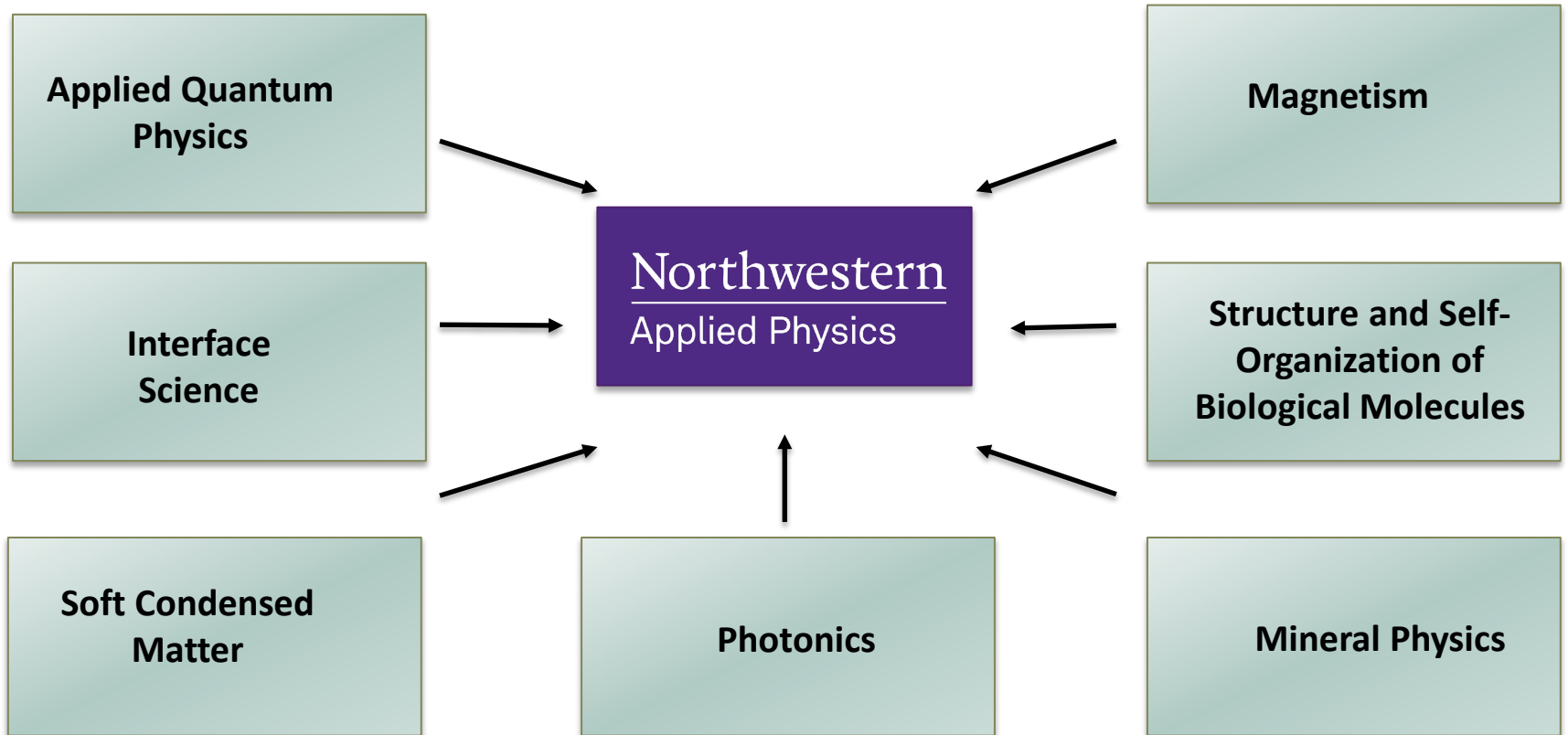
Samira Khan
SamiraKhan2028@u.northwestern.edu

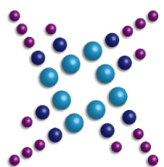


Maggie Quinn
margaretQuinn2026@u.northwestern.edu



Gina Talcott
ginaTalcott2028@u.northwestern.edu





Materials Research Center
Northwestern University



Northwestern
PAULA M. TRIENENS INSTITUTE FOR
SUSTAINABILITY AND ENERGY



INTERNATIONAL INSTITUTE
FOR NANOTECHNOLOGY
Northwestern University

CAPST



Fermilab
Northwestern

Center for **Applied Physics and Superconducting Technologies**



Chemistry of
Life Processes
Institute

Argonne 
NATIONAL LABORATORY

 Fermilab

 **NAISE** Northwestern University
Argonne National Laboratory
Institute of Science and Engineering

#1

We need you:

your skills and talent, your unique ideas and perspective

#2

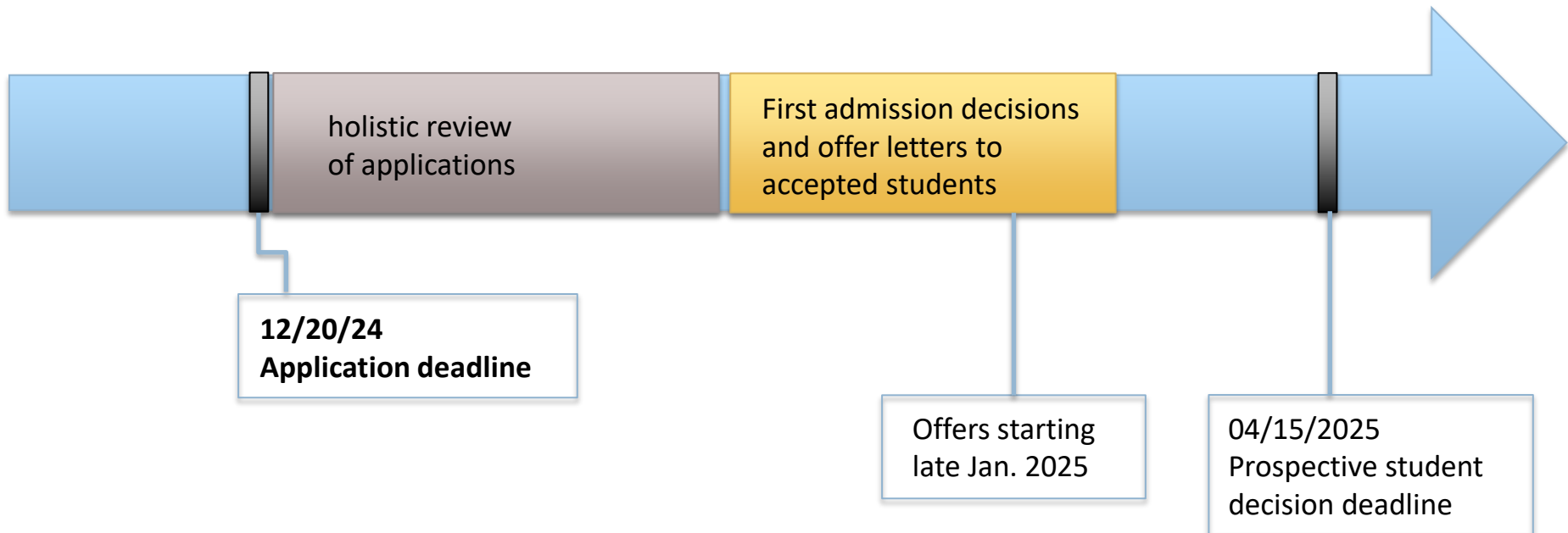
Unique Research Opportunities

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

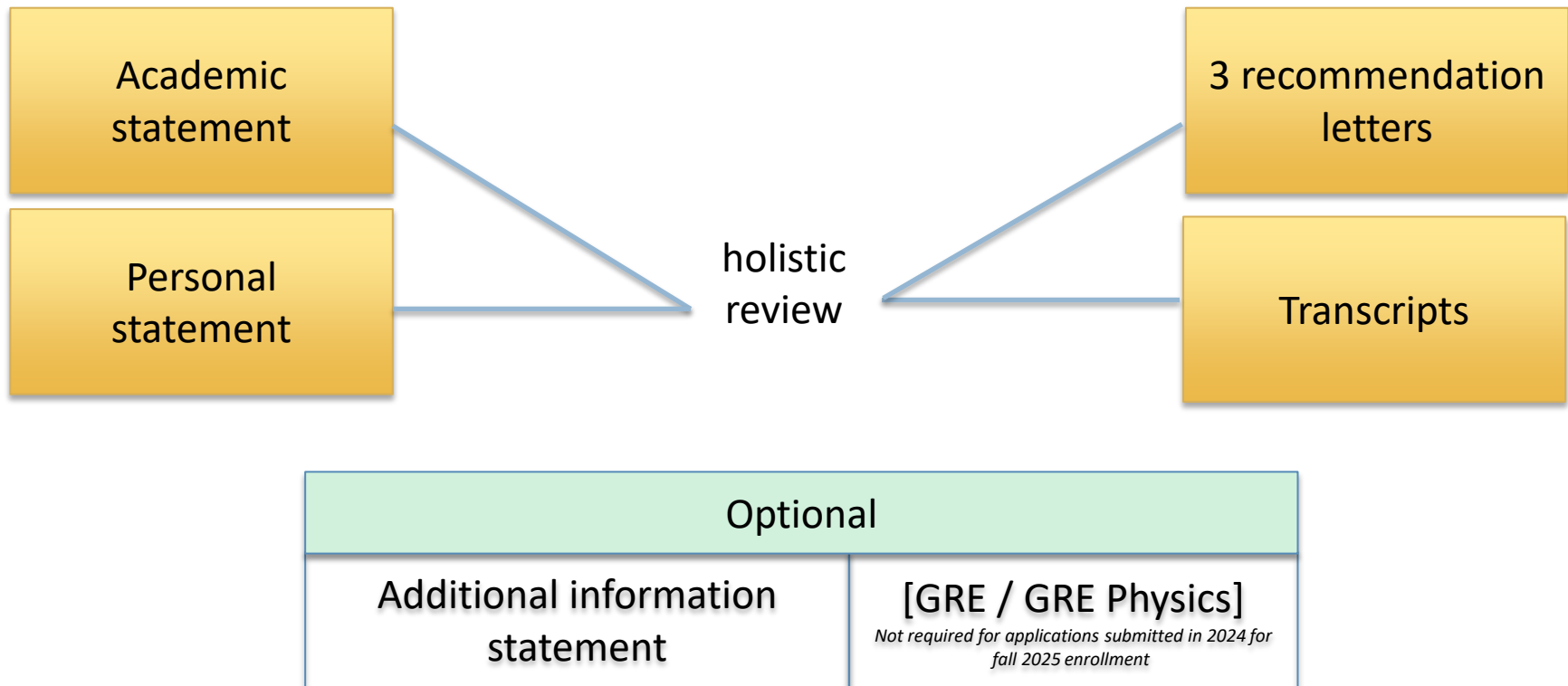
#3

Start your own research early (second quarter!)

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



Content of your application



- ➔ **Tell your story!**
The admissions committee and faculty want to get to know you
- ➔ **Why Applied Physics?**
- ➔ **What inspires you?** What drives you? What makes you different?
- ➔ Mention **faculty you might be interested** in working with.
- ➔ If applicable, mention any **research experience**.
- ➔ **Mention obstacles you faced,**
and how you managed to overcome them.
Resilience and determination are strengths!

Northwestern

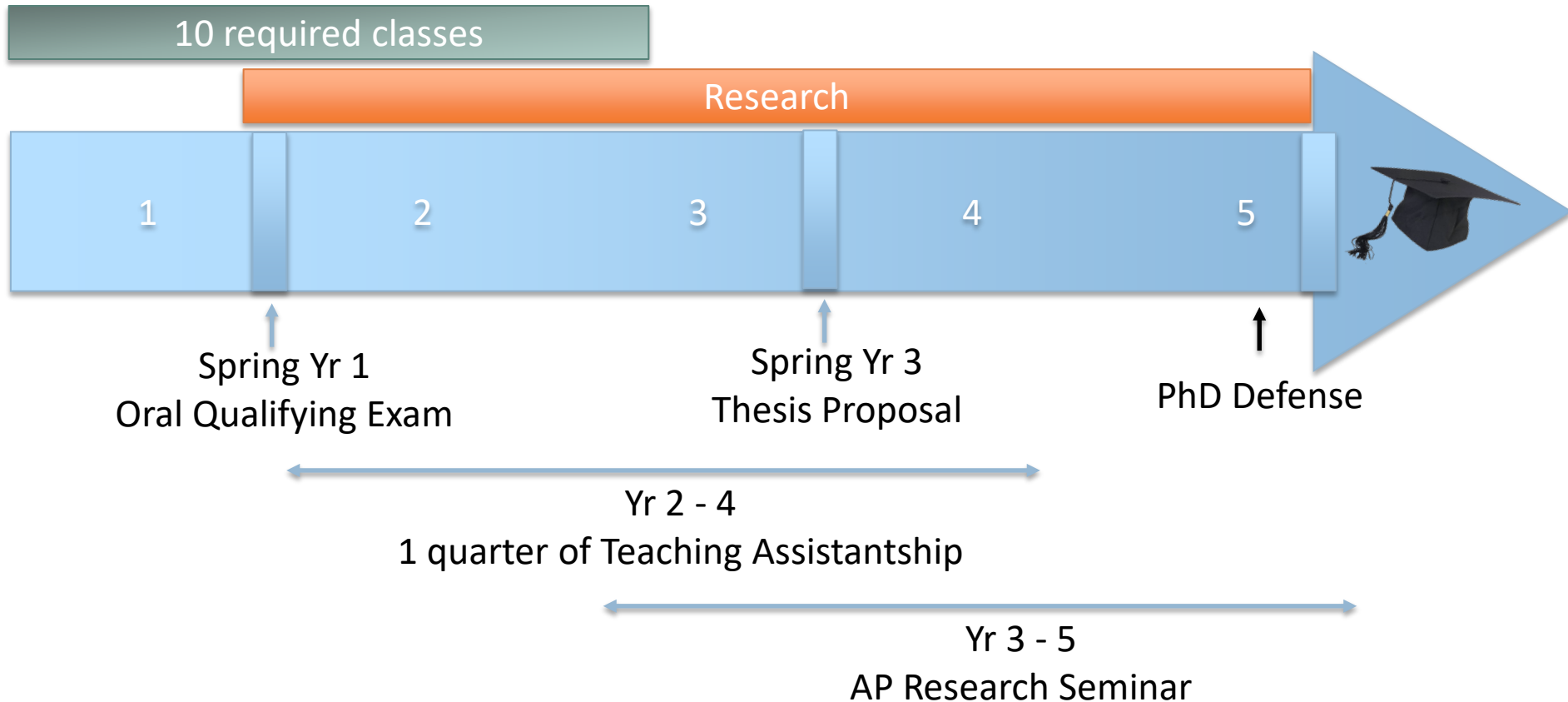
Applied Physics

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



Northwestern

POLICIES CALENDAR CONTACT RESOURCES FOR YOU

THE GRADUATE SCHOOL

Search this site

Admissions Academics Funding Diversity **Professional Development** Campus Life About

HOME > PROFESSIONAL DEVELOPMENT

Professional Development

Career Paths

Core Competencies

Professional Development Funding

Careers and Job Search

Professional Development

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



- Biomedical Engineering
- Chemistry
- Computer Science
- Earth and Planetary Sciences
- Electrical and Computer Engineering
- Engineering Sciences and Applied Mathematics
- Materials Science and Engineering
- Mechanical Engineering
- Physics and Astronomy

* As of Sept. 2024

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

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)

Spring

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

Second Year or later

Fall

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

Fall or later

Computational Methods of Applied Physics

Experimental Methods of Applied Physics



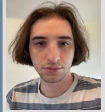




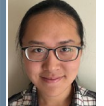


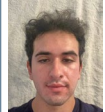

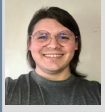

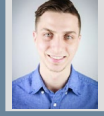

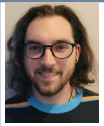

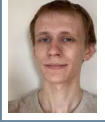
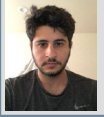


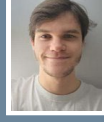


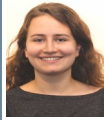

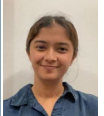
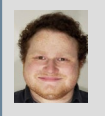
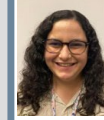

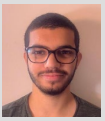

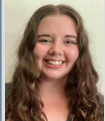



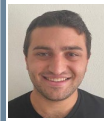


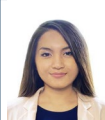


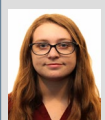


2 Electives

Start your own
research

Northwestern

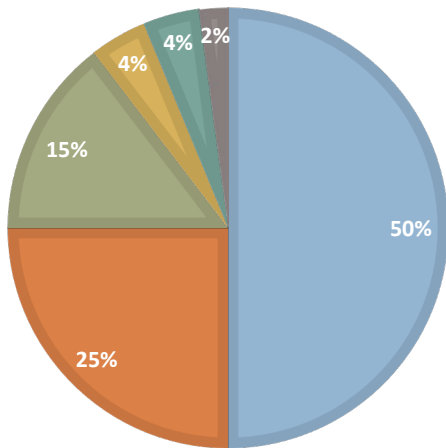
Applied Physics

Graduate Students

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

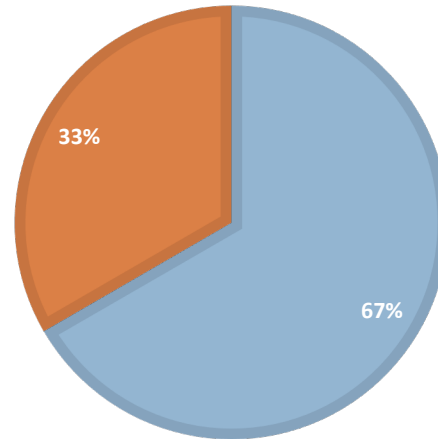
* As of Sept. 2024

2024 APPLIED PHYSICS STUDENTS BY REGION



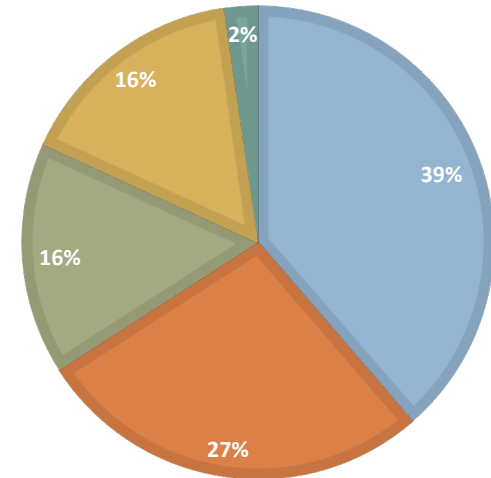
- USA
- East Asia
- South Asia
- Middle East, North Africa, and greater Arabia
- Canada

2024 APPLIED PHYSICS STUDENTS BY GENDER



- Male
- Female

2024 AP STUDENTS BY DEPARTMENT (AS OF SEPT. 2024)



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

As of Sept. 2024



ACADEMIA



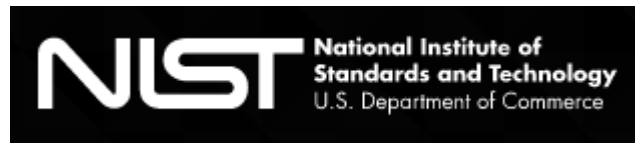
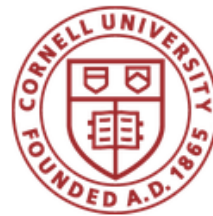
NATIONAL LABS



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!

