



Navigating the Astronomy and Physics Majors (and Tamale Dinner!)

Presenters: Dr. Gurtina Besla (Professor of Astronomy and TIMESTEP Director), Kristy Merdinger (astro/physics academic advisor), Suhani Surana & Hina Suzuki (TIMESTEP student leaders)

Please sign in →



Agenda

4:45-5:20	Serving tamale dinner and welcome
5:20-5:30	Lauren James- Astrobiology Ambassadors
5:30-5:45	Kristy Merdinger- Academic advising and walking students through the online newsletter
5:45-6:05	Gurtina- Career trajectories and planning majors/minors/courses and experiential learning activities
6:05-6:25	Suhani & Hina- benefits & challenges of combining majors (Compsci, ECE)
6:25-6:30	Final questions & ending survey

Wednesdays, 5:00 – 6:30 pm in Steward or PAS

Introductory workshops:

- Navigating the astronomy & physics majors 9/10
- Preparing for research & grad school: a pathway for years 1-3 9/17
- International Student Forum 10/8

Graduate school series:

- Graduate student panel 9/24
- Overview of grad school application process 10/15
- Graduate school application workshops 10/22 & 29

Research series:

- Undergrad research student panel 11/12
- Undergrad research application workshops 11/19

Spring semester- focus on resume writing, industry internships, and post-grad plans

Research Apprenticeship

- Academic year program for 2nd year astronomy and physics majors, paid for 10 hours/week
- Build technical and professional skills
- Work with a research group on an intro project/tasks

Summer Tech Internships

- Paid (\$5K) part-time positions with local employers
- Experience industry; build professional connections
- Advanced sophomores, juniors, and continuing seniors

NEW!!! Astronomical Software Engineering Internship

- Paid 10 hour/week internship for juniors, seniors
- Opportunity to learn software engineering best practices
- Begins in Fall 2025 in collaboration with Dr. C.K. Chan

TIMESTEP

4 year plan

Year 1

- Focus on courses- tutoring, office hours, study groups
- Build community- Astro/Physics Club
- Learn coding-CSC110, 120, workshops, etc
- Spring-apply for TS Research Apprenticeship

Year 2

- Keep grades up- use available supports
- Explore research opportunities on campus, attend group meetings, read papers
- Apply for research/internships, including TIMESTEP internships

Year 4

- Continue research/internships
- Plan grad school applications & complete apps
- Start job hunting and exploring gap year options, reach out to your network.

Year 3

- Last push to raise GPA for grad school apps
- Focus on research/internships to build skills
- Build professional connections for references
- Save \$\$\$ for grad school apps
- Apply for research/internships, including TIMESTEP internships

Year 1 in detail

Overview:

- Focus on courses
 - tutoring, office hours, study groups
- Build community
 - Astro/Physics Clubs and others
- Focus on coding
 - CSC110, CSC120, workshops, etc
- Explore what Research looks like by attending group meetings.
- Summer: improve your coding skills.
- Spring- Apply for TIMESTEP Research Apprenticeship for following academic year

TIMESTEP meetings to attend:

Introductory workshops:

- Navigating the astronomy & physics majors 9/10
- Preparing for research & grad school: a pathway for years 1-3 9/17
- International Student Forum 10/8

Research series:

- Undergrad research student panel 11/12
- Undergrad research application workshops 11/19

Year 2 in detail

Overview:

- Keep grades up
 - Use available supports
- Build community
 - Astro/Physics Clubs and others
- Explore research opportunities on campus
 - attend group meetings
 - read papers
- Apply for summer research/internships
 - TIMESTEP Summer Tech Internship*
 - Astronomical Software Engineering*

TIMESTEP meetings to attend:

Introductory workshops:

- Navigating the astronomy & physics majors 9/10
- Preparing for research & grad school: a pathway for years 1-3 9/17
- International Student Forum 10/8

Research series:

- Undergrad research student panel 11/12
- Undergrad research application workshops 11/19

Year 3 in detail

Overview:

- Last push to raise GPA for grad school apps
- Focus on research/internships to build skills
- Build professional connections for references
- Save \$\$\$ for grad school apps
- Apply for summer research/internships
 - TIMESTEP Summer Tech Internship
 - TS Astronomical Software Engineering
- Spring: secure positions for your senior year.
E.g. Thesis projects and TS Astronomical Software Engineering Internship

TIMESTEP meetings to attend:

Introductory workshops:

- Preparing for research & grad school: a pathway for years 1-3 9/17
- International Student Forum 10/8

Graduate school series:

- Graduate student panel 9/24
- Overview of grad school application process 10/15
- Graduate school application workshops 10/22 & 29

Research series:

- Undergrad research student panel 11/12
- Undergrad research application workshops 11/19

Spring semester- focus on resume writing & industry internships

Year 4 in detail

Overview:

- Continue research/internships
- Plan & prepare grad school applications
 - Contact reference writers
 - Write personal/research statements
 - Have others review your materials
- Start job hunting and exploring gap year options, reach out to your network.

TIMESTEP meetings to attend:

Graduate school series:

- Graduate student panel 9/24
- Overview of grad school application process 10/15
- Graduate school application workshops 10/22 & 29

Spring semester- focus on resume writing, industry internships, and post-grad plans

Interest Areas: Computation &/or Observations

Career Path	Modality	Additional Minors Recommended*
Research in Astronomy (Astronomy Major)	Academia (Graduate School), National Labs, Observatories	Physics, Math, Astrobiology, Planetary Science, Applied Math, Statistics & Data Science, Comp Sci (including AI minor), Electrical and Computer Engineering/Software Engineering
Research in Physics (Physics Major)	Academia (Graduate School), National Labs, Observatories	Applied Math, Statistics & Data Science, Comp Science (including AI minor), Electrical and Computer Engineering/Software Engineering
Education (Astronomy or Physics Majors)	Teaching Certificates/College, K-12 Education, Science Outreach	
Industry (Astronomy or Physics Majors)	Software Development, Data Analytics, Data Science/Machine Learning, Image Processing, Financial Modeling	Software Engineering, Comp Sci (including AI minor), Statistics & Data Science, Electrical and Computer Engineering

Interest Area: Instrumentation/Experimentation

→ talk with academic advisors to see if an applied physics major is a good fit

Career Path	Modality	Additional Minors Recommended*
Research in Astronomy (Astronomy Major)	Academia (Graduate School), National Labs, Observatories	Optical Sciences, Applied Physics, Mechanical Engineering, Electrical and Computer Engineering, Planetary Science
Research in Physics (Physics Major)	Academia (Graduate School), National Labs, Observatories	Optical Sciences, Mechanical Engineering, Electrical and Computer Engineering
Telescope Operations and Instrumentation (Astronomy Major)	Ground-Based Observatories, Research Labs, Federal Labs	Optical Sciences, Mechanical Engineering, Electrical and Computer Engineering
Education (Astronomy or Physics Majors)	Teaching Certificates/College, K-12 Education, Science Outreach	
Industry (Astronomy or Physics Majors)	Space Instrumentation, Optics, Defense +++	Optical Sciences, Mechanical Engineering, Electrical and Computer Engineering

Student experiences- Suhani Surana and Hina Suzuki

- Intro- tell us about your academic path and any research or internships you've done or continue to do
- How did you decide on your majors?
- What benefits have you experienced from combining astronomy with other majors (Compsci & ECE)?
- What are some classes you've taken that have been particularly beneficial for research or internships?
- In what ways have you benefited from TIMESTEP?
- As an international student, how have you navigated having fewer options for research or internships?
- How have you found or created community to help you persist in difficult endeavors?

What was most helpful?

Please complete this quick survey to let us know what your most valuable takeaways are from this meeting.



Explore our website for additional events and information: **timestep.arizona.edu**