

ASTR/PHYS PROFESSIONAL DEVELOPMENT



Join current and former educators from APS and
Physics for a discussion on

Careers in Teaching and Outreach

5:00-6:00PM

Wednesday March 5

Duane G130

Careers in Education & Outreach
5 March 2025, 5-6pm
G130

Opening remarks: John Keller

Panelists:

- Barton Tofany, Aspen HS
- Katie Fitzgerald, Thomas Jefferson HS
- Mia Overcash, CU Teach Program
- Dr. KaChun Yu, DMNS

APS/PHYS Professional Development

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University of Colorado **Boulder**

Astrophysical & Planetary Sciences
COLLEGE OF ARTS AND SCIENCES

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Professional Development

APS/PHYS Professional Development is a resource for undergrads in fields related to physics and astronomy at CU Boulder. This website includes resources and information designed to help undergraduates in APS/Physics develop successful long term careers. This website is designed to offer resources and advice that will help you succeed in your career after graduating CU Boulder. Navigate with the following main sections:

Upcoming Events:

Tentative Spring Dates:

5 March, Careers in Education and Outreach

19 March, Careers in Industry, Aerospace

9 April, Careers in Startups

23 April, Applying for Jobs



Upcoming ASTR/PHYS Professional Development Events

Most in G130, 5-6pm, Wednesdays – with pizza!

- 19 March: Careers in Industry & Aerospace
- 9 April: Careers in Startups
- 23 April: Applying for Jobs

ASTR/PHYS students: read your weekly emails!

Everyone: check our departmental websites:

<https://www.colorado.edu/aps>

<https://www.colorado.edu/physics>



APS/PHYS Graduates - where are they now?

(Education & Outreach positions)

- Public/Private School Teaching: Denver Public Schools, Boulder Valley public schools, many others
- Planetariums: Fiske Planetarium, SkyScan Corporation, Salt Lake City Planetarium
- Education & Public Outreach: Jet Propulsion Lab, LASP
- Informal Education: Wow Children's Museum, AstroTours

Barton Tofany

I graduated with a double major in physics and astrophysics from CU in 2012, with plans to go to grad school. Unfortunately, those plans fell through at the last minute, but I had always wanted to eventually get into teaching and had served as a learning assistant for both physics and astronomy courses at CU. I went through the Colorado Alternative Licensure Program and have been teaching high school math and science for 12 years. After teaching for a few years I enrolled in a Math for Teaching Master's Program through the Harvard Extension school which allowed me to further my education while continuing to teach full time, graduating in 2022, and became a National Board Certified Teacher last year. I now live in Aspen teaching IB Physics and Earth Space Science in the same classroom where I first developed a love for these fields, plus I get to lead an experiential education backpacking trip through Utah every year along with coaching the track and cross country teams.



Barton Tofany



Katie Fitzgerald



I graduated from CU in 2012 with a degree in Astronomy. During my senior year, I was a part of a work study with LASP where I was involved in the Maven project. I continued this work study for about six months after I graduated and it was during this time that I came to terms with the reality that I was not necessarily enjoying what I was doing. I then had the opportunity to be a Math Fellow at Grant Beacon Middle School where I discovered my interest in teaching. I was able to pursue an alternative licensure program and the rest is history. I have been an officially licensed math teacher for 10 years now and I am currently teaching Integrated Math 3 and Honors Pre Calculus at Thomas Jefferson High School in Denver.

Mia Overcash

I started my time at CU Boulder in the astrophysics program, but felt a bit lost within the program. I enjoyed what I was learning, but I realized that a long-term career in research wasn't something that felt fulfilling to me. On a bit of a whim, I signed up for Designing STEM Learning, and it completely changed everything. I'd always enjoyed tutoring and helping others understand tough concepts, but that class helped me realize just how much I loved education.

Now, I'm finishing up my second degree in Education, along with my Secondary Science Teaching License. I've had the chance to work with both middle and high school students in a range of science subjects, and right now I'm at Centaurus High School helping teach Chemistry and Earth Space Science. Next semester, I'll be student teaching full-time at Niwot High School, which will be my final step before completing the licensure program.

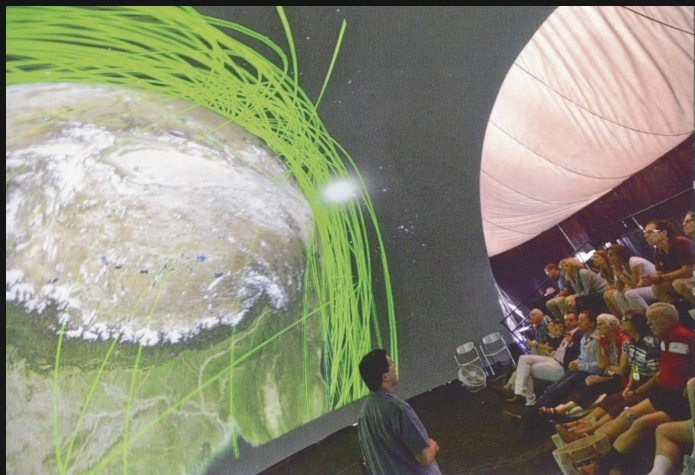


Dr. KaChun Yu



After completing a PhD from CU Boulder with a thesis about outflows from young stars, I started at the Denver Museum of Nature & Science to help convert the Gates Planetarium into a digital facility, a job that included writing visualization software for the dome. Since then, I have done educational research to look at how to teach effectively in digital planetariums, and have been involved in projects to use the dome for climate and environmental change education. As a museum scientist and science communicator, I have helped develop planetarium shows, consulted on museum exhibits, produced educational programs, and delivered hundreds of public talks to a wide variety of audiences and media channels.











<http://colorado.edu/cuteach>

Dr. Ian Her Many Horses

Dr. Will Lindsay

Mia Overcash

Did you know

- There are scholarships and student loan forgiveness programs for math and science teachers?
- Most teaching jobs have better retirement and vacation benefits than private industry?
- You can get a job almost anywhere in the U.S. or abroad as a science or math teacher?
- Mid-career teacher salaries typically range between \$60,000 and \$130,000?
- ***Teachers rate their lives better than all other occupation groups, trailing only physicians?***

TWO PATHWAY OPTIONS for LICENSURE



Middle and High School Teaching Major

PREREQUISITES: 26 credits of college coursework, 2.75 GPA, EDUC 2035 OR 25 hours working with youth

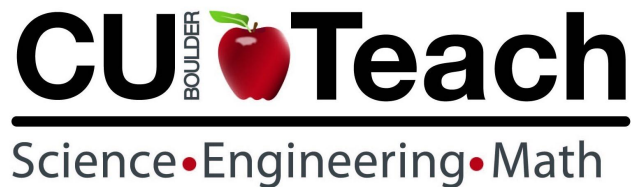
PATHWAY: Complete STEM degree, 25 credits of education coursework, semester of student teaching



Master's + Licensure

PREREQUISITES: Bachelor's degree, 3.00 GPA, 25 hours of working with youth

PATHWAY: 11-month program starting in the summer



If you enjoy STEM and want to give back
and empower youth, ***TRY TEACHING!***

ENROLL IN EDUC 2035:

Designing STEM Learning Environments and Experiences

- A three-credit exploratory course that gives you **real teaching experience** in local schools facilitating hands-on, engaging science, math, and engineering activities.
- Geared toward any students interested in interacting with local youth, acquiring service hours, or trying out teaching.

001: Tue & Thu, 11:00 am - 12:15 pm

002: Tue & Thu, 12:30 pm - 1:45 pm



colorado.edu/cuteach

Questions?

“There were so many things that I enjoyed about this class. However, it always boils down to the students. I love working with kids. Their excitement and passion for life and learning are inspiring. It is a friendly reminder to all of us of how we should approach our work and how we live our own lives. It is very rewarding to see the students grow through the semester and develop meaningful relationships with them.”

- Former CU Teach student

Dr. Ian Her Many Horses, ian.hermanyhorses@colorado.edu

Dr. Will Lindsay, william.lindsay@colorado.edu

Mia Overcash, Mia.Overcash@colorado.edu

colorado.edu/cuteach ← Great list of resources, application information, and contacts!



If you enjoy STEM, want to teach and empower youth, and would like \$37,000 in scholarship funding, ***become a CU Teach Noyce Scholar!***

Financial Support - \$18,500 each during junior and senior years

Make a Difference - Become a STEM teacher for equity & justice

Job Opportunities - 100% of CU Teach graduates have found a job

Preference is given to recruiting students interested in returning to their local communities.

(visit the CU Teach website for more information about applications)

Learn More!

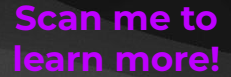


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Learning Assistant (LA) Program

<https://www.learningassistantalliance.org/>



As an undergraduate LA, you'll grow through interactions with faculty in weekly preparation meetings, the 2-credit course "Becoming a Learning Assistant," and working with your students.



Undergrads, join our community!

Apply to be a Learning Assistant (LA) in Fall 2024

Get paid to collaborate with faculty to support in-class student learning and success!

Engage in training and support to help you do this important, fun, and challenging work!

Applications open:

March 15, 2024

Priority application deadline:

April 3, 2024
for full consideration

Hiring Departments:

APPM
ASEN
ASTR
BCHM
CHEM
COMM

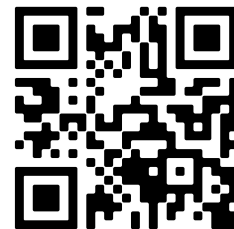
CSCI
ENGL
ENVS
GRMN
HIST
INFO

MATH
MCDB
NRSC
PHYS
PSYC
RUSS
WRTG



*Some appointments in Continuing Education Online Learning

Scan me to learn more!



Learning Assistant Program
UNIVERSITY OF COLORADO **BOULDER**

<https://www.colorado.edu/program/learningassistant/>