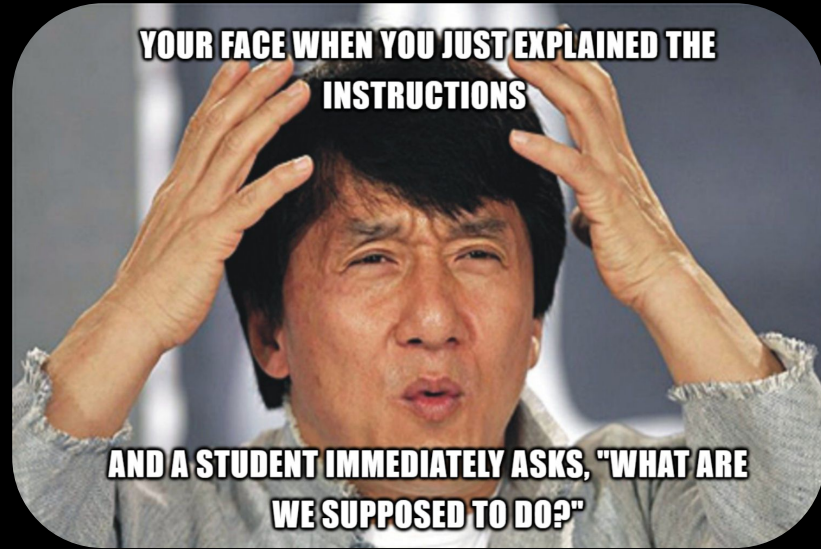
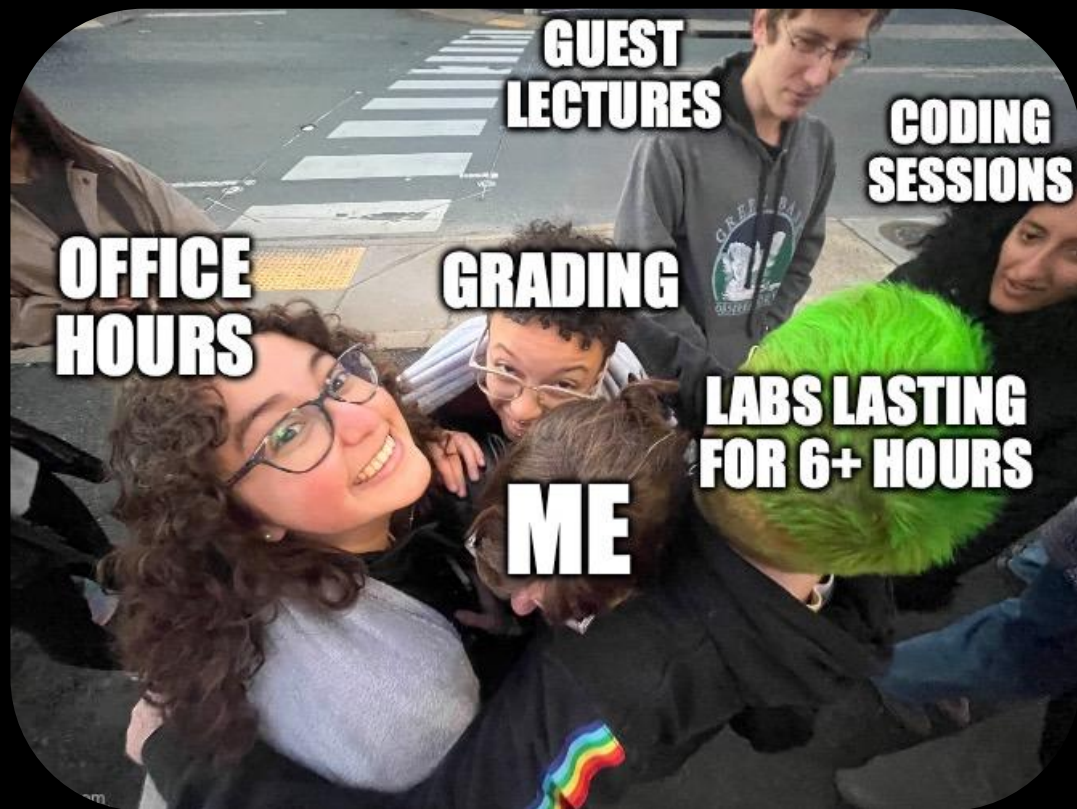


Teaching is Hard
Teaching is Rewarding
Teaching Takes Care

Yanbo Pan
ASTR8500



First time TAing



Student-centered Learning

Motivation through relevance: Connect knowledge and techniques through examples

Minimal assumptions: Constant check-in to ensure no one is left behind

Active learning: Keep students engaged, not just awake

Collaboration over isolation: Structure opportunities for students to learn from each other

Growth mindset as an mentor: It's okay to make mistakes, and say "I don't know"

Case Studies: The Social Loafer

EVERY GROUP PROJECT



IN SCHOOL YOU HAVE EVER DONE

Case Studies: The Social Loafer

A two-weeks photometry lab. Groups of four must: select comparison stars, perform aperture photometry, construct a light curve, identify variable star types, and submit one joint report.

Midway through week two, Group 3 is failing:

- One student has done all the image reduction alone.
- Two members sit silently, contributing nothing.
- A fourth member hasn't logged into the course website in five days.

You ask a silent member: *"Why did you choose that aperture radius?"*

Her reply: *"I don't know. I've just been letting [the lead student] handle it. I don't want to slow them down."*

The lead student looks exhausted. The absent student never responds to messages.

Case Studies: The Social Loafer

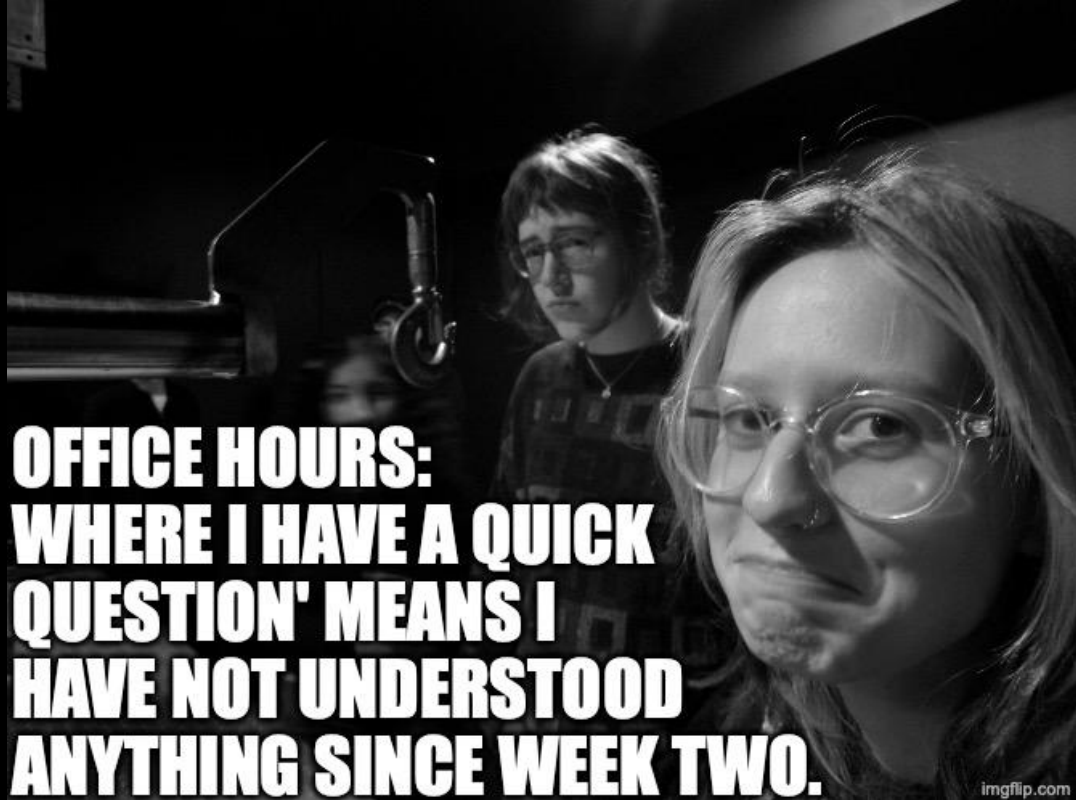
Make Effort Visible: collect contribution statement, peer evaluation, role rotations

Add Motivations: “Without your comparison stars, no one’s light curve means anything”

Design Structure: The Jigsaw method, smaller groups, shuffle groups for each lab



Case Studies: The Scary Office-hours



**OFFICE HOURS:
WHERE I HAVE A QUICK
QUESTION' MEANS I
HAVE NOT UNDERSTOOD
ANYTHING SINCE WEEK TWO.**

Case Studies: The Scary Office-hours

You teach an lab course where students learn to use telescopes, CCD cameras, and reduction pipelines. After the first midterm exam, a student comes to your office hours. She looks exhausted and anxious. She says:

"I've been lost since week two. I didn't understand flat-fielding, so I fell behind on dark subtraction. Then I got confused about aperture photometry. I wanted to ask questions in lab, but everyone else seemed to get it. I didn't want to look stupid. I failed the exam. I don't even know where to start asking."

Case Studies: The Scary Office-hours

1. *“You’re not alone. This happens often when techniques build on each other.”*
Normalizes struggle, reduces shame
2. *“Let’s start from week two. Tell me the last thing you feel solid on.”*
Identify where students got stuck
3. *“What’s one question you wanted to ask in lab but didn’t?”*
Models that questions are valid, not embarrassing
4. *“Let me see your raw frame, your dark, and your flat. Walk me through what you did.”*
Reveal where misunderstanding started
5. *“This looks great! You did it. Let’s check this off and move to dark subtraction.”*
Follow-up with encouragement

Center for Teaching Excellence (CfTE)



Established in 1990, the **Center for Teaching Excellence** (CTE) is dedicated to building collegial community, enhancing teaching and learning, and fostering teaching innovation at all levels and in all academic disciplines.

About the CTE

2024-2025 Year in Review

FACULTY

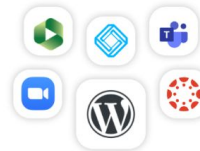
Course Design Institute

Helping instructors become the teachers they dream of being



Teaching Hub

Connected resources to



Learning Tech

CfTE Workshops: cte.virginia.edu



Workshops & Events

Need help with your teaching?

Schedule a confidential consultation with our trained teaching consultants.


[Learn More](#)

8
APR

WORKSHOP

Designing Custom Chatbots for Teaching and Learning

Explore how custom AI chatbots can support teaching and learning by focusing on writing effective prompts that guide chatbots toward more accurate, meaningful, and pedagogically aligned responses.

 April 8, 2026
3:00 PM - 4:30 PM

 New Cabell 349 & Zoom

[Register](#)

[Details](#)

Teaching Statement: Your beliefs about optimal teaching and learning

Know your audience

Keep it brief (1-2 pages)

Be yourself

Brag (but just a little)

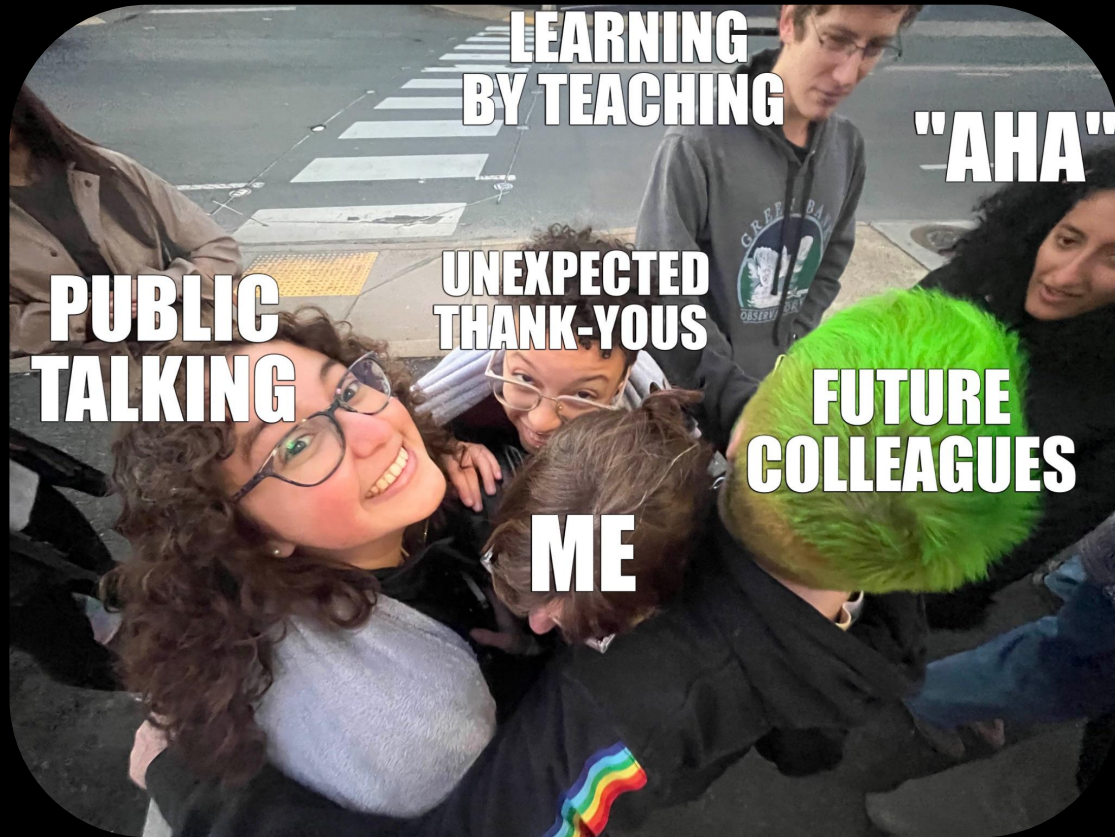
Be specific



Enhancing Learning | Fostering Innovation | Building Community

Reflective Teaching Statement

Teaching is Rewarding!



**LEARNING
BY TEACHING**

"AHA"

**PUBLIC
TALKING**

**UNEXPECTED
THANK-YOVS**

**FUTURE
COLLEAGUES**

ME

References:

<https://cte.virginia.edu/>

<https://phdplus.virginia.edu/teaching>