#### **Adventures in Online Teaching**

Frank Timmes School of Earth and Space Exploration Simons Fellow in Theoretical Physics American Physical Society Fellow Senior Lead Editor, American Astronomical Society Journals http://cococubed.asu.edu I will <not> talk at the length and depth that I do in this Mar/Apr 2020, 13 video (~4 hr) YouTube Series on behalf of the American Astronomical Society:

> Teaching Astronomy Online -Tools and Tips



Before discussing AST111 and SES141, a note on a online teaching "apprenticeship" effort for junior profs:

# Katrina Bossert is "tagging-along" in the running of SES141 in Summer A 2020.



Molly Simon is "tagging-along" in the running of AST111 Open Scale for Summer 2020.



### AST111 Introduction to Solar Systems Astronomy

In 2008, I started teaching AST111 in-person. By 2009 the course was experimenting with hybrid, flipped formats.

In 2010, Phil Regier asked if the course could go online for the fledging "ASU Online" program.

AST111 became the first ASU online course completely shot in green screen, quickly hit ~1200 enrollments, and clips were shown to the Board of Regents several times.

In 2015, ~\$100k was invested in on-location shoots. AS111x became the first Global Freshman Academy course on the EdX platform, the first college-credit eligible MOOC in the world, the largest astronomy course in the world with~15,000 learners/run, and clips were shown to the Board of Regents several times.

In 2018, AST111 transitioned to the Earned Admissions program. Today enrollments are ~600 (~ +20% per run) consisting mostly of Starbucks, Uber, Nike, and military employees who seek admission to ASU. In Summer 2020, AST111 joined the new Open Scale program, consisting of learners who want to test the college waters and begin making progress towards a college degree, without committing financially (similar to the old EdX program). Enrollment for the first run is ~600.

#### Through it all, I keep experimenting with the course :)

Introduction to Solar Systems Astronomy - AST 111

#### SES141 Energy in Everyday Life

In 2013, SES194 began as part of an initiative between the Teachers College, CLAS, and Ed PLus to build a new set of modular courses that could be integrated with other subjects. SES 141 is the lone survivor.

Between 2013-16, Fall Semesters of SES194 were restricted to WP Carey students in their Sustainability degree program, and team-coordinated with Eng101 and WPC140. The Spring Semesters were open to all learners and enrollments rose to ~900 per run. In 2017, SES141 became a permanent course. Spring B 2020 enrollment cleared 1200 and 40% growth. Summer A 2020 enrollment hit ~140 and ~20% growth.

"Energy in Everyday Life is an online multi-disciplinary survey course that offers learners the opportunity to master practical job skills - the ability to observe, gather data, and think critically to make accurate order-of-magnitude estimates."

#### A new video shoot is being planned :o



## Thank you for your time and your attention