

Available Teaching Opportunities

We will list available opportunities here and email them out to the graduate community as they become available on a rolling basis each term. If no description of the opportunity is noted below, that means we have not been provided information from a faculty supervisor who is actively looking.

Spring 2025

1. Teaching Opportunity

12.409: Observing Stars and Planets

Introduction to observational astronomy and astrophotography. Intended as an entry level class for freshmen and sophomores investigating astronomy. Basic concepts are covered in lectures, practical skill are developed in nighttime TA-led labs.

Instructor: Michael Person

Number needed: 1 100% FTE

Graduate Student TA (stipended)

Experience Preferred: Some experience with small telescopes and open eye sky observing is best. DSLR Photography experience is helpful.

Description: TA would lead one night time observing section a week (7-11pm). Also attendance at 1 hour lecture and 1 hour of staff meeting per week.

Hours: Approximately 10 hours a week for the spring semester

Apply: email to mjperson@mit.edu Include a listing of any relevant experience.

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2. Teaching Opportunity

12.307: Weather and Climate Laboratory

Course 12.307 is an undergraduate Laboratory course intended to illustrate, by means of 'hands on' projects, the basic dynamical and physical principles that govern the general circulation of the atmosphere and ocean and the day to day sequence of weather events. Four projects are carried out during the semester, each taking approximately 3 weeks to complete. The first three projects include a fluids laboratory component and analysis of observations of the atmosphere and ocean. For the fourth project, students define their own research questions that guide further inquiry into some aspect of the first three projects. The course also satisfies the CI-M (communication intensive module) requirement, by practicing communicating scientific results through written reports and oral presentations.

Instructor: Talia Tamarin-Brodsky

Number needed: 1 50% FTE

Graduate Student TA (stipended)

Experience preferred: Preferably a background in fluid dynamics

Description: Grading reports and helping in the lab

Hours: 4 months appointment, 10 hours per week on average

Apply: Email Talia at: talia_tb@mit.edu, including a CV

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3. Teaching Opportunity

12.421/12.621: Physical Principles of Remote Sensing

Description: This course is an introduction to the physics of remote sensing, with applications to the study of Earth, the Moon, and other planets and solar system bodies as well as to emerging fields such as autonomous navigation. We will cover the principles of optical, thermal, radar, and lidar remote sensing with an emphasis on the fundamental properties of electromagnetic waves; the principles of electromagnetic scattering from real and idealized materials, including various types of surfaces and vegetation; the interaction of electromagnetic radiation with the atmosphere; and thermal and microwave emission from various media. We will also discuss

remote sensing platforms along with the essentials of orbital mechanics and data processing tools and methods.

Instructor: Brent Minchew

Number needed: 1 50% FTE, possibility of a 100% depending upon enrollment.

Graduate Student TA (stipended)

Experience preferred: Previously taken the course or extensive experience with remote sensing

Description: Hold office hours, help students (undergrad and grad) with psets and labs, co-advise student projects

Hours: 4-month appointment, 10 hours per week

Apply: Email minchew@mit.edu

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