Physics 610: “General Relativity”  
(CRN 33031)  
*Pre-requisite: General Relativity, first term*

**Instructor:**  
Prof. Tien-Tien Yu (she/her): tientien@uoregon.edu  
Office Hours: Tu 3:00pm-4:00pm WIL474 or https://uoregon.zoom.us/my/tientien.yu

**Teaching Assistant:**  
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Office Hours: TBD  
https://uoregon.zoom.us/j/96579921008?pwd=QUtvaFRMUTFmSkZiRjJFbXpUSGJJCZz09

**Logistics**

**When and Where:** TuTh 10:00am - 11:50am in Willamette 350

**Recommended Textbooks:**


**Overview:**

This course part of a two-course sequence on General Relativity. This term will expand on the topics introduced in the first term. The primary focus of this term will be on applications of General Relativity and connections to modern-day research. The course will focus extensively on primary literature on topics ranging from gravitational waves to alternative theories of General Relativity.
Course Objectives

Students will develop knowledge on the following topics:

- Post-Newtonian Expansion
- Gravitational waves
- Relativistic stars
- Methods of Finding and Studying Solutions to Einstein’s Equations
- Alternative theories to General Relativity

Assessment and Grading

Your course grade will be based on bi-weekly presentations on a paper or calculation related to the material of the course.

Letter Grade Interpretation:

≥ A- (Mastery): Presentation is clear, well-organized, and questions are properly addressed.

≥ B- (Pass): Presentation is coherent and organized, but some questions were not adequately addressed.

≤ C+ (Fail): Presentation is unclear or disorganized and questions cannot be properly addressed.

Campus resources to support your learning:

Instructional Accommodations: The Accessible Education Center (http://aec.uoregon.edu) exists to help students achieve access to educational resources. If there are aspects of the instruction or design of this course that result in barriers to your participation, please contact me as soon as possible so we may discuss your situation.

Counseling Center: Call anytime to speak with a therapist who can provide support and connect you with resources. Located on the 2nd Floor of the Health Center (541) 346-3227.
Policies:

Course load: Per UO policy, 1 credit hour is approximately 30 real hours of student work, both in and out of class. This is a 4-credit course, which corresponds to about 120 hours over the fall term or 12 hours per week that you spend on lecture + discussion, reading course materials, and asking questions. This number will vary from student-to-student, and week-by-week. However, if you find yourself spending significantly more time than this on the course, please contact the instructor.

Inclusivity: Open inquiry, freedom of expression, and respect for difference are fundamental to a comprehensive and dynamic education. We are committed to upholding these ideals by encouraging the exploration, engagement, and expression of divergent perspectives and diverse identities.

Don’t be a jerk: This course requires students to collaborate with one another; therefore, we must treat each other with respect in our constructive criticism. Bullying and trolling will not be tolerated by anyone in this course; the teaching staff reserves the right to punish misbehavior with zero credit on assignments or failure in the course.

Academic Integrity: All students are expected to complete assignments in a manner consistent with academic integrity. Academic dishonesty devalues the reputation of our institution, its faculty, its students, and the degrees we offer. Moreover, academic misconduct is particularly unfair for the students who do their work with integrity and honor. Students can find more complete information about the University of Oregon’s Policy on Academic Dishonesty in the University of Oregon Student Handbook. Suspected academic dishonesty will be reported.

Mandatory Reporter: I am a student-directed employee; my reporting obligations can be found here. Students experiencing any form of prohibited discrimination or harassment, including sex or gender-based violence, may seek information and resources at safe.uoregon.edu, respect.uoregon.edu, or investigations.uoregon.edu or contact the non-confidential Title IX office/Office of Civil Rights Compliance (541-346-3123), or Dean of Students offices (541-346-3216), or call the 24-7 hotline 541-346-SAFE for help. I am also a mandatory reporter of child abuse.

Important Dates: (academic calendar)
Apr  2    Last day to drop without a “W”
Apr  4    Last day to add a class
May 15   Last day to withdraw (drop with a “W”) or change grading option to P/N