Spring 2023

PHYS 421 - 002: General Relativity

Dale Gary

Course Syllabus

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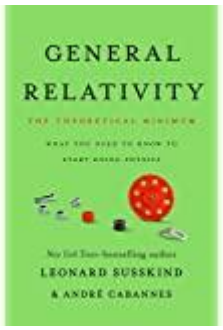

(https://www.amazon.com/General-Relativity-Theoretical-Leonard-Susskind/dp/1541601777)

General Relativity

(The theoretical minimum)

by

Leonard Susskind & Andre Cabannes

Time	1:00 pm - 2:20 pm T, R
Location:	407 Faculty Memorial Hall
Instructor:	Prof. Dale E. Gary
Office:	101 Tiernan; Office Hours:
Office Hours:	T, R 11am -- noon
Phone:	(973) 642-7878
E-Mail:	dgary@njit.edu (mailto:dgary@njit.edu)
Web Page:	http://web.njit.edu/~gary (http://web.njit.edu/~gary)

Phys 421: General Relativity (Spring 2023)

This course will use the Canvas Learning Management System. Log on at canvas.njit.edu (http://canvas.njit.edu) .

Readings: There are many textbooks and reference sources on the topic of General Relativity, but most are very heavy on the mathematical formalism, which in my view obscures the physics. This course is geared to undergraduates with a wide variety of experiences coming into the course, so we will take a slow and measured approach to the subject with a minimum of theoretical formalism. The course is heavily influenced by a series of lectures by Prof. Leonard Susskind of Stanford University (https://cosmolearning.org/courses/modern-physics-general-relativity/) . It will suffice to refer to these lectures rather than giving reading assignments per se. However, a printed version of this material unexpectedly became available on Jan. 10, 2023 (General Relativity, the Theoretical Minimum, by Leonard Susskind and Andre Cabannes (https://www.amazon.com/General-Relativity-Theoretical-Leonard-Susskind/dp/1541601777)), so it could be a good idea to purchase this inexpensive book and read the relevant sections as we go along.

Homework: The homework assignments will generally be informal and we will mainly be working examples in class.

Exams: There will be two in-class exams during the semester, and the final exam during exam week.

Grades: Your grade will be based on your homework+reading+participation scores (40%), in-class exams (30%), and final exam (30%).

Here are the approximate weights to be used for calculating the final grade and the final grade scale:

30% for the two common exams (15% each)	85% and more	A
30% for the final exam	80% - 84%	B+
40% for the total homework grade,	70% - 79%	B
attendance, and class participation	65% - 69%	C+
	55% - 64%	C
	50% - 54%	D
	49% and less	F

Statement on academic integrity:

Academic Integrity is the cornerstone of higher education and is central to the ideals of this course and the university. Cheating is strictly prohibited and devalues the degree that you are working on. As a member of the NJIT community, it is your responsibility to protect your educational investment by knowing and following the **academic code of integrity policy.** **(http://www5.njit.edu/policies/sites/policies/files/academic-integrity-code.pdf)**

Please note that it is my professional obligation and responsibility to report any academic misconduct to the Dean of Students Office. **Any student found in violation of the code by cheating, plagiarizing or using any online software inappropriately will result in disciplinary action. This may include a failing grade of F, and/or suspension or dismissal from the university**. If you have any questions about the code of Academic Integrity, please contact the Dean of Students Office at **dos@njit.edu** **(mailto:%20dos@njit.edu)** .

Course Summary:

Date	Details	Due
	Roll Call Attendance **(https://njit.instructure.com/courses/26783/assignments/315776)**	