COURSE SYLLABUS **PHYSICS 202A – All sections** **Fall 2025**

INSTRUCTOR	Name TBA and E-mail: TBA
OFFICE HOURS	Hours and Location: TBA
TEXTBOOK	Astronomy Laboratory Manual (Physics 202A), sold by NJIT bookstore. The manual is also used as a lab report.
DESCRIPTION	PHYS 202A is a laboratory course associated with Introductory Astronomy and Cosmology course (PHYS 202).
HELP	- Visit or email your instructor if you are having trouble with the lab course. - If you need an accommodation due to a disability, please contact the Office of Accessibility Resources and Services at OARS@NJIT.EDU, or visit the office in Kupfrian Hall 201 to discuss your specific needs.
GENERAL INFORMATION	- There is no exam in the lab course. - No make-up for missing labs is allowed. - No eating or drinking in the laboratory room. - Experiments are a group effort. - Laboratory reports should be individual ones submitted by each student. - Lab computer login method: Username: your UCID and Password: your UCID password - NJIT physics lab website: https://research.njit.edu/introphysics/
DELIVERY MODE	- Face-to-Face: Delivery of instruction is structured around in-person classroom meeting times. Instruction is delivered in person and students are expected to attend class.
LEARNING OBJECTIVES	- Students will master basic physics concepts by performing an experiment relevant to corresponding course work. - Students will gain hands-on experiences with experimental processes. - Students should develop collaborative learning skills by working in a group.
LEARNING OUTCOMES	- Students will demonstrate basic experimental skills by practicing setting up and conducting an experiment. - Students will demonstrate an understanding of the analytical methods required to interpret and analyze results and draw conclusions as supported by their data. - Students will demonstrate basic communication skills by working in groups on laboratory experiments and the thoughtful discussion and interpretation of data.
ATTENDANCE	- Attendance policy is very strict. It is a student's responsibility to confirm his/her attendance with the Lab instructor. - It is required for students to attend all lab experiments since grading is based on attendance, participation, and lab report. - It is required for a student to sign the attendance sheet in every lab class. If a student fails to sign it, it is treated as being absent. - Attendance will be checked in the beginning and middle of each class by your instructor. - If a student does not appeal and resolve his/her attendance within 7 days, no further complaint will be accepted. - If a student makes more than 3 unexcused absences, the student is very likely to fail the lab course. - If a student has excusable absences, the student should contact the Office of the Dean of Students to email an official excuse to his/her lab instructor. - Students can check their Attendance and Participation grade by appointment with the TA - There might be a camera recording by a lab instructor for attendance and participation (It is required for **the students to sign a waiver acknowledging that they are being recorded).**
GENERAL GRADING POLICY	1. The grading guidelines are as follows: Attendance (20%); Participation (20%); Laboratory Report (60%) 2. Attendance Points: Attendance for each lab session is 1 point

	3. Lateness penalties: Late by 10-20 minutes (-0.2 points); Late by 20-30 minutes (-0.5 points); Late by more than 30 minutes (marked as absence). 4. Participation Points: Active (2 points), Average (1 point), Not participate (0). 5. A grade of zero (0) will be given for any missed experiment with no excuse. 6. Submission of the lab report is due the following week class begins – penalty for lateness is 10 % per day.
GRADING SCALE	90 - 100 % = A, 85 – 89 % = B+, 80 – 84 % = B, 75 – 79 % = C+, 65 – 74 % = C, 50 – 64 % = D, 0 – 49 % = F

LAB COURSE SCHEDULE

Week	Period	Experiment
1*	9/2(T) - 9/8(M)	Introduction
2	9/9(T) - 9/15(M)	The Celestial Sphere: Horizon Coordinate System
3	9/16(T) - 9/22(M)	The Celestial Sphere: The Ecliptic
4	9/23(T) - 9/29(M)	The Celestial Sphere: Equatorial Coordinate System & Sidereal Time
5**	9/30(T) - 10/6(M)	Motion of Mercury: Drawing the Orbit
6	10/7(T) - 10/13(M)	Orbit of Mercury: Kepler's Laws
7	10/14(T) - 10/20(M)	The Moon
8	10/21(T) - 10/27(M)	Planetary Configuration
9	10/28(T) - 11/3(M)	The Synodic Period of the Sun
10***	11/4(T) - 11/10(M)	Spectroscopy
11	11/11(T) - 11/17(M)	Reflection and Refraction
12	11/18(T) - 11/24(M)	Thin Lenses and Astronomical Telescope
13****	11/25(T) - 12/3(W)	The Hertzsprung-Russell Diagram
14*****	12/4(R) - 12/11(R)	The Hubble Classification of Galaxies and Cosmology

* **9/8 (Mon.) Last Day to add/drop a class**

** **10/2 (Thurs.) Wellness Day**

*** **11/10 (Mon) Last Day to Withdraw from Classes**

**** **11/25 (Tue) Thursday classes meet**

**** **11/26 (Wed) Friday classes meet**

**** **11/27 (Thurs.) and 11/28 (Fri.) Thanksgiving Recess Begins. No classes**

***** **12/11 (Thurs.) Lab experiment in Week 5 (which was skipped on Wellness Day) will be performed.**

12/22 (M) Final Grades Due

Physics Laboratory Safety

1. Food and drink are not permitted during class in the lab at any time.
2. Wear safety glasses all the time during lab experiments.
3. Do not come into the lab room early unless the instructor is present.
4. Do not wear loose hair or clothing around moving equipment.
5. Do not set equipment too close to the edge of the table.
6. Do not activate any electric circuit or apparatus until the instructor inspects it.
7. Never touch a possibly live circuit and do not touch electrical equipment with wet hands.
8. Only use laboratory equipment for the instructional purpose for which it was intended.
9. Never look directly at the beam of a laser and light from a lamp used for experiment.
10. All trash and waste materials should be disposed of in the proper container. Do not pour chemicals into the laboratory sink.
11. Do not shorten the electrical leads on any equipment.
12. Any equipment except computers not in use should be turned off.
13. Do not take apart any apparatus or piece of equipment.
14. All damaged equipment and chemical spills should be immediately reported to a laboratory instructor or laboratory staff.
15. Accidents and emergencies must be immediately reported to the laboratory instructor. (NJIT Emergency call number: 911)

16. Be aware that fire extinguishers are in Rooms 406T and 407T.