

Spring 2019

PHYS 203A-004: Earth in Space Lab

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COURSE SYLLABUS

PHYSICS 203A – All sections

SPRING 2019

INSTRUCTOR	Name: Aneer Lamichhane and E-mail: al593@njit.edu
OFFICE HOURS	Hours and Location: Tiernan 463
TEXTBOOK	Earth Science Laboratory Manual (Physics 203A), sold by NJIT bookstore.
DESCRIPTION	PHYS 203A is a laboratory course associated with The Earth in Space course (PHYS 203).
HELP	<ul style="list-style-type: none"> - Visit or email your instructor if you are having trouble with the lab course; - If you need accommodations due to a disability, please contact Ms. Lyles (Chantonette.Lyles@njit.edu), Associate Director of Disability Support Services, to discuss your specific needs.
ATTENDANCE	<ul style="list-style-type: none"> - Attendance policy is very strict. It is a student’s responsibility to confirm his/her attendance with 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 considered to be 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 dean of student office to email an official excuse to his/her lab instructor.
GENERAL INFORMATION	<ul style="list-style-type: none"> - There is no exam in the lab course. - No make-ups for missing labs is allowed. - No eating or drinking during laboratory room - Experiments are a group effort. - Laboratory report should be individual one submitted by each student
LEARNING OBJECTIVES	<ul style="list-style-type: none"> - Students will master basic physics concepts by performing an experiment relevant to a 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	<ul style="list-style-type: none"> - Students will demonstrate basic experimental skills by the practice of 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.
GRADING POLICY	<ol style="list-style-type: none"> 1. The grading guidelines are as follows: Attendance (20%); Participation (20%); Laboratory Report (60%) 2. A grade of zero (0) will be given for any missed experiment with no excuse. 3. Submission of lab report is due the following week class begins – penalty for lateness is 10 % per day. 4. Laboratory Report Grading: <ul style="list-style-type: none"> - Objective – 10% - Theoretical background (sketch) – 10% - Results; Data sheet – 20 % - Results; Calculation – 20 % - Discussion and analysis of results; Answers to questions – 40 %

GRADING SCALE	90 - 100 % = A, 85 - 89 % = B+, 80 - 84 % = B, 75 - 79 % = C+, 70 - 74 % = C, 50 - 64 % = D, 0 - 49 % = F
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LAB COURSE SCHEDULE

Week	Period	Experiment
1	1/22 - 1/28	Introduction
2	1/29 - 2/4	Earth's Geography I
3	2/5 - 2/11	Earth's Geography II
4	2/12 - 2/18	Rock Identification
5	2/19 - 2/25	Properties of Water: Latent Heat of Fusion
6	2/26 - 3/4	Earthquakes: Locating the Epicenter
7	3/5 - 3/11	Understanding Density
8*	3/12 - 3/25	The Archimedes Principle
9	3/26 - 4/1	The Acceleration due to Gravity
10	4/2 - 4/8	Properties of Water: Specific Heat
11	4/9 - 4/15	Properties of Water: Dissolved Oxygen
12	4/16 - 4/22	Properties of Water: Salinity
13	4/23 - 4/29	The Ideal Gas Law: Determining the Absolute Zero of Temperature
14**	4/30 - 5/7	None

*: 3/17 (Sun) thru 3/24 (Sat.) NJIT Spring Recess. No Classes.

** : 5/7 (Tues.) Friday classes meet. Lab experiment in Week 12 will be performed.

Physics Laboratory Safety

1. Food and drink are not permitted during class in the lab at any time.
2. Wear safety glasses all the times during lab experiment.
3. Do not come in the lab 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 inspect 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 they were intended.
9. Never look directly in the beam of a laser and light from lamp used for experiment.
10. All trash and waste materials should be disposed in the proper container. Do not pour chemicals into the laboratory sink.
11. Do not short the electrical leads on any equipment.
12. Any equipment except computer 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 a 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 located in Rooms of 406T and 407T.