



PHS 101: Introduction to Physical Science
Department of Physics and Computer Science

COURSE SYLLABUS

Instructor:	Dr. Danjie Zhu	Term:	Spring 2016
Email:	dzhu@sci.brooklyn.cuny.edu	Class Meeting Days:	Saturday
Mailbox:	A1 / 506 (PECS Dept. Office)	Class Meeting Hours:	10:00 am – 1:30 pm
Website:	http://www.sci.brooklyn.cuny.edu/~dzhu/phs101/	Class Location:	A1 / 402
		Office Hours:	Sat. 1:30 pm – 2:30 pm

I. University Course Catalog Description

This course is designed to study the basic laws that govern the universe and how these laws are revealed to us. The topics covered include motion, atoms energy, forces, the interaction of atoms, the physical properties of substances, and the study of objects in the universe.

II. Course Overview

The aim of this course is to present, as simply and clearly as possible, the essentials of physics, chemistry, earth science, and astronomy to students whose main interests may lie elsewhere.

III. Course Prerequisites

Completion Math and Language Basic Skills

IV. Course Credits

4 credits; 4 class hours

V. Required Texts and Materials

The Physical Universe, 15th Edition, by Konrad B. Krauskopf and Arthur Beiser, McGraw Hill Publisher, ISBN: 978-0073513928.

VI. Exams

There will be about four (4) written quizzes. The missed quiz cannot be made-up unless it is due to an emergency. The lowest score from all written quizzes will be dropped, before calculating the final average, provided all quizzes are taken. There will be a cumulative final exam which will be on **Saturday, May 28**. All the quiz and exam grades will be curved.

VII. Basis for Final Grade

The final grade will be determined using a weighted average based on exams, assignments, quizzes, and labs.

Assessment	Percent of Final Grade
Homework	15%
Labs	15%
Final Exam	25%
Quizzes	45%
	100%

VIII. Grade Dissemination

Grades for all exams and quizzes will be published on the course website. A mid-term average will be calculated and posted on the course website before **4/11/2016**.

IX. Course Policies: Grades

Late Work Policy: There are no make-ups for missed assignments, quizzes, or exams. Late work submissions will be assessed a penalty for each day after the deadline.

Grades of Incomplete (INC): INC grades are at the discretion of the instructor and only given in very specific circumstances. An “INC” grade is given when the student is doing passing work during a semester and who for some justifiable reason has not been able to complete a particular assignment or misses a final exam.

X. Course Policies: Technology and Media

Computers and other electronic devices can only be used to access lecture materials. Students are not to work on other materials in class.

Students are required to check email and the course website with regularity to check for class information and announcements.

XI. Course Policies: Student Expectations

Attendance Policy: All students have the responsibility to arrive on time, attend class regularly, and to participate fully in the work of the course. Additionally, students are not to work on other materials in class. Students who miss class are responsible to find out what was discussed and learn the material that was covered on the missed day(s). The instructor is not responsible for teaching missed material under any circumstances.

Assigned readings and problems should be completed before class. Several homework assignments will be assigned to reinforce the concepts presented in class.

Honor Code and Plagiarism (Cheating): Students are required to sign and adhere to the departmental honor pledge. Check with the department for a copy of the pledge.

EXAMS AND QUIZZES

Cell phones or any other electronic devices cannot be used during exams and quizzes. Any form of cheating during an exam or quiz will cause immediate removal from the exam and a grade of zero.

HOMEWORK ASSIGNMENTS

Unless otherwise specified, homework assignments are to be completed individually. Discussions with other people about how to solve the problem, strategies, or problems that might arise are permitted. However, each person should write his/her own work independently.

Do not, under any circumstances, copy another person's work. Incorporating someone else's work into your own in any form will be considered plagiarism and therefore a violation of academic regulations. You must be prepared to explain any work you submit. When a student is unable to explain the work that he/she submitted, no credit will be given for the homework. At the discretion of the professor, the action might be reported to the Department and the Office of Student Affairs.

Disability Access: Any student who may require accommodations due to a disability must be registered with the Office of Services for the Differently-Abled and notify the instructor at the start of the semester.

XII. Important Dates to Remember

Check the official academic calendar from the Office of the Registrar for special dates such as last day to add/drop classes, withdrawal deadline, closings, breaks, and examinations. Notice that the exam dates can be changed at the discretion of the professor.

XIII. Schedule

The schedule, together with assignments, is subject to change in the progress of the course. Some topics might take longer than one week. Announcements made in the class and on the website/blackboard/email override the schedule in case of conflicts.

Schedule for PHS 101

Lecture #	Topics
1	The Scientific Method Chp. 1.1 – 1.5 (focusing on Chp. 1.1) <i>Lab1a: Survey of Mathematics (Appendix A)</i>
2	The Scientific Method Chp. 1.6 – 1.12 (focusing on Chp. 1.12) <i>Lab1b: Survey of Mathematics (Cont. Appendix B)</i>
3	Motion Chp. 2.1 – 2.5 <i>Exam 1</i>
4	Motion (cont.) Chp. 2.7 – 2.14 <i>HW #1</i>
5	Energy Chp. 3.1 – 3.5
6	Matter and Heat Chp. 5.1 – 5.6 <i>Exam 2</i>
7	Matter and Heat Chp. 5.7 – 5.8 <i>HW #2</i> Electricity and Magnetism Chp. 6.1 – 6.9 (Electric Charge; Electricity and Matter; Electric Current)
8	Electricity and Magnetism Chp. 6.10– 6.19 (Electric Current; Magnetism)
9	Atmosphere, Weather and Climate Chp. 14.1 – 14.5 <i>Exam 3</i>
10	Atmosphere, Weather and Climate Chp. 14.6 – 14.11
11	The Solar System Chp. 17.1 – 17.5 <i>Lab2: Drawing the Solar System to Scale</i>
12	The Solar System Chp. 17.6 – 17.16
13	The Sun Chp. 18.4 – 18.7 <i>Exam 4</i>
14	The Stars Chp. 18.8 – 18.9; 18.10 – 18.16 Final Exam Review
15	Final Exam