

COURSE SYLLABUS

Course Title: Earth and Space Science Laboratory

Course Section Number: PHY-150L-60-2

Start Date: January 15, 2015

End Date: March 28, 2015

Meeting Information:

Laboratory: Tuesdays and Thursdays, 07:50 PM - 09:55 PM, Pearl Harbor, Room: to be Arranged

Instructor Information:

Dr. Louis Primavera (call me "Louie" or "Dr. Lou")

Cell Phone: (808) 489-1204

Instructor Education:

BS in Biology

MA and PhD in Microbiology

Instructor E-mail Information:

Louis.primavera@adjunct.chaminade.edu

Students: Please include course section and your name in any emails or voicemails sent to the instructor.

Office Hours:

Please consult with me before or after the lecture or before, during, or after the laboratory.

Textbook:

Pearson Custom Library

"PHY 150L Earth and Space Sciences Laboratory"

ISBN = 9781269801515 (This ISBN number will be live on Monday 1/12/15 and it will take two weeks for Pearson to print the manual. The laboratory manual (hard copy) should be available in the Bookstore hopefully before 1/26/15.)

Course Description:

PHY 150 laboratory is an introduction to the practical application of the physical sciences. Students will learn about the realms of Astronomy, Physics, and Chemistry, and how the physical sciences impact our daily lives. To begin the laboratory instruction, we will interact indirectly with Mars, and directly with the moon and the sun. In the Physics section of the course, we will study Newton's laws of motion. In the Chemistry lessons, the class will cover titrations, pH, and paper chromatography of compounds.

Lecture Assignments:

Attendance is expected in laboratory sessions. A sign in sheet will be passed around during each laboratory class, and unexcused absences (more than 3) may result in a decrease in grade by one grade level. If you know that you will be unable to attend a class then please let me know by e-mail. Unexcused absence for two consecutive weeks may result in the student being withdrawn from the course without notice. The student is responsible to catch-up on all topics/material covered during their absence.

Evaluation of Student Performance

1. Separate grades are given for lecture and laboratory. It is possible to receive different grades for lecture and laboratory.

2. There is no curve for quizzes or final scores. The scale used is given below.
3. There will be eight laboratory quizzes for this course. The quiz schedule is attached in the course outline.
4. Students should purchase a three-ring binder to house their laboratory write-ups. Instructions on how to write up each laboratory report are attached to this syllabus.
5. Extra credit work is NOT available.
6. Missed quizzes can only be made up for valid excuses (to be determined by the instructor). In cases of illness, a physician's note is necessary.
7. The laboratory grade will be determined in the following manner:

		Final Scale:	
Quizzes (6)	20 percent		90% - 100% = A
Laboratory Reports (14)	<u>80 percent</u>		80% - 89% = B
	100 percent		70% - 79% = C
			60% - 69% = D
			Below 60% = F

Class standing:

The instructor, prior to the withdrawal deadline, will notify students with grades of D or lower. Students receiving deficiency notices are required to arrange a conference with the instructor.

Music Devices and Cellphones

Use of music devices and cell phones is prohibited during all Natural Science and Mathematics classes at Chaminade, unless specifically permitted by your instructor. Use of cellphones and music devices in laboratories is a safety issue. In addition, use of cellphones and music devices in any class is discourteous and may lead to suspicion of academic misconduct. Students who cannot comply with this rule will be asked to leave class and may be subject to laboratory safety violation fines. Please refer any questions to the Dean of Natural Sciences and Mathematics.

ADA Accommodations

Students with special needs who meet criteria for the Americans with Disabilities Act (ADA) provisions must provide written documentation of the need for accommodations from the CUH Counseling Center (Dr. June Yasuhara; phone 735 - 4845) by the end of week three of the class, in order for the instructor to plan accordingly. Failure to provide written documentation will prevent your instructor from making the necessary accommodations. Please refer any questions to the Dean of Students and review the procedures at http://www.chaminade.edu/student_life/sss/counseling_services.php.

Academic Honesty

We expect you to behave with integrity and hold both yourself and your peers to the highest standards of ethical behavior. Academic dishonesty encompasses, but is not limited to: (1) plagiarism (i.e., copying another individual's words or ideas without appropriately citing the source); (2) turning in assignments that somebody else has completed; (3) referring to notes or other written/electronic materials, collaborating with others, copying someone else's work, or providing answers to others in any fashion during an examination. Please note that knowledge of others' cheating and failure to report this can also be construed as complicitness in academic dishonesty. Should we have reason to suspect that academic dishonesty has occurred; we will conduct a thorough investigation or may refer the matter to the Dean of Students for investigation. Possible sanctions should you be found responsible for academic dishonesty could include a failing grade for the course, suspension or even expulsion from the University. Such consequences could negatively affect your candidacy for graduate/professional programs or for some jobs.

PHY 150L / Winter 2015

Week	Date	Laboratory	Chapt.; pgs
1	1/15	Safety Agreements, Lab Syllabus, Course overview Quantitative Reasoning: A Trip to Mars	- 1 / 1 - 8
2	1/20	Quantitative Reasoning: A Trip to Mars (cont.) Tracking Mars – Planetary Motion	2 / 9 - 12
2	1/22	Tracking Mars – Planetary Motion (cont.) + QUIZ Phases of the Moon	3 / 13 - 22
3	1/27	Phases of the Moon (cont.) What Causes the Seasons: Earth's Tilted Axis	4 / 23 - 30
3	1/29	What Causes the Seasons: Earth's Tilted Axis (cont.) Image of the Sun – Pinhole Sun Viewer + QUIZ	5 / 31 - 32
4	2/3	Image of the Sun – Pinhole Sun Viewer (cont.) Rotation of the Sun	6 / 33 - 42
4	2/5	Rotation of the Sun (cont.) Sunballs (Moonballs?) – Size of the Sun (Moon?) + QUIZ	7 / 43 - 44
5	2/10	Sunballs (Moonballs?) – Size of the Sun (Moon?) (cont.) Reaction Time – Free Fall	8 / 45 - 46
5	2/12	Reaction Time – Free Fall (cont.) The Fountain of Fizz – Physics in the Soda Pop Geyser + QUIZ	9 / 47 - 48
6	2/17	The Fountain of Fizz – Physics in the Soda Pop Geyser (cont.) Bull's Eye – Projectile Motion	10 / 49 - 50
7	2/26	Bull's Eye – Projectile Motion (cont.) Acids, Bases, and PH + QUIZ	11 / 51 - 56
8	3/3	Acids, Bases, and PH (cont.) Percentage of Acetic Acid in Vinegar	12 / 57 - 60
8	3/5	Percentage of Acetic Acid in Vinegar (cont.) Paper Chromatography + QUIZ	13 / 61 - 66
9	3/10	Paper Chromatography (cont.)	
9	3/12	Work on Laboratory Notebooks / Fieldtrip	
10	3/17	Work on Laboratory Notebooks / Fieldtrip	
10	3/19	Work on Laboratory Notebooks / Fieldtrip	
11	3/24	Work on Laboratory Notebooks / Fieldtrip	