PS 300 - Course Syllabus
Introduction to Physical Science, Spring 2019
American River College

Lecture Instructor: Dr. Ruben T. Almaraz
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Office Hours: TTh 3:25 → 4:00P, room 312
Course website: https://ic.arc.losrios.edu/~almarazr/S19-PS300/

Course Content:

This course covers the fundamental concepts of physics, chemistry, astronomy, geology, and meteorology. It is designed for the student with little or no science background. It is not recommended for science, mathematics, or engineering majors.

Learning Outcomes and Objectives:

Upon completion of this course, the student will be able to:

- Test the validity of a hypothesis using the scientific method.
- Identify the basic physical principles that apply in a particular situation (such as Newton's Laws, energy conservation, or momentum conservation).
- Analyze conceptual problems that require the application of basic physical science concepts.
- Solve simple mathematical problems that require the application of basic physical science concepts.
- Define common scientific terms and physical laws.
- Evaluate the pros and cons of topics such as nuclear power, the release of greenhouse gasses, and humanity's impact on the environment.

Textbook: "Conceptual Physical Science 6th Edition" by Paul G. Hewitt; John A. Suchocki; Leslie A. Hewitt. ISBN: 9780134082295.

Prerequisites: None

Advisory: MATH 100, 104 or 132 with a grade of "C" or better, AND ENGWR 102 and ENGRD 116 with a grade of "C" or better OR ESLL 320 and ESLR 320 and ESLW 320 with a grade of "C" or better. Dictionaries or any other language translating devices will not be allowed during a test or the final exam.

Class Website:

I will be using the following website, https://ic.arc.losrios.edu/~almarazr/S19-PS300/, to disseminate information to the class. It is here that you will find class announcements, HW assignments, and course documents. I encourage you to check this site on a daily basis to keep up to date with the class.

Homework:

The class is divided into four units. At the beginning of each unit, a set of problems will be given to you during the lecture. Sees Schedule for due dates. Also, there will be reading assignments posted on the

class website for each chapter. I suggest you do the reading assignment and print the lecture ppt file before class.

HW Format

- I highly advise for assignments to be printed out. If you chose to handwrite your assignments, make sure it is readable. You may work with classmates, but you must type and print out your own assignment. You may not work together and print out two copies of the same file
- Staple multiple pages together.
- Answer each problem in complete sentences. Single word answers and/or incomplete sentences are not acceptable.

Worksheets:

There will be an in-class worksheet for you to work during each class period. After a lecture, you will break up into groups of no more than four to work together on a worksheet. The worksheets will test your understanding of the assigned reading and what was covered in the lecture. You will turn in *ONE* worksheet per group and it will be graded for credit.

Tests, Quizzes and Final Exam:

There will be four tests and a final. The exact dates are shown on the Tentative Schedule (see below). Any changes to these dates will be given well in advance. Quizzes will cover pertinent material currently being covered in the text or lectures. The Final exam will be comprehensive, and it will take place on Tuesday, May 21, 3:00-5:00 p.m.

Assessment:		**Grading Policy:**
• Participation	**4 %**	• A = 90% -100%
• Homework	**8 %**	• B = 80% - 89%
• 4 Quizzes	**5 %** (0.33% each, will drop lowest one)	• C = 70% - 79%
• 24 Worksheets	**8 %** (0.33% each, will drop lowest two)	• D = 60% - 69%
• 4 Tests	**60 %** (15 % each)	• F = below 60%
• Final	**15 %**	
	100%	

Note: If your overall percentage is 90% or greater after taking the 4th test, you will have the option to omit the final exam. The final exam will take place on Tuesday, May 21 3:00-5:00 p.m.

Extra Credit:

Limited extra credit will be available throughout the semester. Extra credit cannot be used to raise a grade from a “D” to a “C” but will be applied in all other situations.

Make-up, Late Work and Dropping Scores:

- Homework – no late homework will be accepted, no exceptions; your lowest homework score will be dropped
- In-class assignments – there are no make-ups for these, no exceptions;
- Tests - make-up tests are not generally given unless there are extreme circumstances.
- Final Exam - make-up final exams are not generally given unless there are extreme circumstances.
- Note: Exceptions may be made on an individual basis in cases of emergency.

Attendance

A critical component of this course derives from your active participation in class, your reading, and your participation on group's worksheets. I reserve the right to employ the College's policy on attendance. Students are responsible for validating excused absences in writing within one week of the absence. "Excused" absences include the following:

- Illness or injury that is documented by a letter from a physician or health professional.
- "Mental duress" (divorce, the death of friend or family member) that is documented in writing.
- Officially sanctioned and sponsored university athletic, music, theater travel that is documented by a letter by the appropriate university official.
- Required court appearances that are documented by a letter from the clerk of the court.

Classroom Conduct:

While extremely uncommon, every once in a while a student who is abusive and/or disruptive enrolls. I expect all my students to behave appropriately in a college classroom. This means that one must at all times show respect for fellow classmates and the instructor. Abusive and/or disruptive behavior may include willful disobedience, habitual profanity or vulgarity, personal attacks, disruption of instruction or class activity, dishonesty, cheating plagiarism, or any other violation of the official “Student Rights and Responsibilities“ as established by the college. At my discretion, students who are abusive or disruptive may be excused for the remainder of the class period and for the following class period.

In addition to these academic sanctions, disciplinary action may be taken in any case of academic misconduct. Such action will be conducted by referral to the college Disciplinary Officer.
You may:

- Receive a warning that continued misconduct will result in further disciplinary action.
- Be placed on disciplinary probation for a specific period.
- Be removed from the class.
- Be suspended from the college for a specific period.
- Be expelled from the college permanently.

Please turn off all beepers, cell phones, and watch alarms that make noise before coming into class. They are a serious distraction in college classes and cannot be tolerated. The lecture and lab periods are

"phone-free" zones. Please instruct relatives or friends to call campus security in case of an emergency. Security will look up the class in the system and then send someone to the class.

Hate and Bias in the Classroom

American River College values the many diverse members of our community. Hate and bias incidents within the classroom greatly affect students' ability to learn by distracting from learning and making students feel unwelcome or unsafe. ARC is committed to addressing reports of hate and bias seriously, promptly, confidentially, and with sensitivity.

Incidents of hate, bias, and discrimination should be reported to the campus equity officer, Kate Jaques at (916) 484-8406 or jaquesk@arc.losrios.edu. If there is an emergency or crime, please contact 911 or the Los Rios Police Department at (916)-558-2221.

We urge you to intervene when you can – you can start by reporting situations that adversely affect learning environments. If you become aware of any incident that compromises the values of our community, please seek assistance from the campus equity officer immediately.

Academic Campus resources

There are several resources on campus available to you.

- LRC: The ARC Learning Resource Center (LRC) is a well-equipped, professionally staffed facility that offers students a personal approach to academic success through independent study, individualized tutoring and alternative modes of instruction. (http://www.arc.losrios.edu/lrc.html)
- Science Success Center: Work at your own pace on modules designed to help you improve your skills in note taking, paraphrasing, graph reading, concept mapping, test preparation, and test-taking for science classes.(http://www.arc.losrios.edu/ScienceSuccessCenter)
- DSPS: The goal of Disabled Students Programs and Services is to promote equal access to programs and facilities at American River College, thereby ensuring that students with disabilities experience the opportunity to participate fully in campus activities. The philosophy of DSPS is to encourage maximum independence and personal empowerment through a successful educational experience. (http://www.arc.losrios.edu/Support_Services/DSPS.htm)

Note: If you require accommodations through DSPS, you must contact me during the first few weeks of class to ensure there is sufficient time to make the necessary arrangements.

Calendar of Assignments and activities

Note: While I carefully planned the activities and assignments for each class, there are times when changes will need to be made. I reserved the right to change activities and assignments as I deem necessary and without notice. If you miss the class, it is your responsibility to make sure you find out what you missed and what it is expected of you for the next class.

Tentative Schedule:

Number	Class Meeting	Topic	Exams/quizzes
	01/21/2019	**Martin Luther King, Jr.'s Birthday**	
1	01/22/2019	Introduction, Scientific Method	
2	01/24/2019	Measurements	
3	01/29/2019	Velocity & Acc	
4	01/31/2019	Newtown's Laws	
5	02/05/2019	Newtown's Laws	**Quiz_1**
6	02/07/2019	Momentum & Energy	
7	02/12/2019	Gravity & projectiles	**HW1 due**
8	**02/14/2019**		**Exam1**
	02/15/2019	**Lincoln's Birthday**	
	02/18/2019	**Washington's Birthday**	
9	02/19/2019	Fluid Mechanics	
10	02/21/2019	Fluid Mechanics	
11	02/26/2019	Heat Transfer	
12	02/28/2019	Electricity	**Quiz_2**
13	03/05/2019	Electricity	
14	03/07/2019	Magnetism	**HW2 due**
15	**03/12/2019**		**Exam2**
16	03/14/2019	Atom	
17	03/19/2019	Nuclear Chemistry	
18	03/21/2019	Nuclear Chemistry	
19	03/26/2019	Nuclear Chemistry	
20	03/28/2019	Elements	**Quiz_3**
21	04/02/2019	Nomenclature	
22	04/04/2019	Atoms bonding	**HW3 due**
23	**04/09/2019**		**Exam3**
24	04/11/2019	Mixtures	
	04/15/2019	**to 4/21/2019**	**Spring Recess**
25	04/23/2019	Reactions	
26	04/25/2019	Reactions	
27	04/30/2019	O-chem	
28	05/02/2019	Solar System	**Quiz_4**
29	05/07/2019	Stars	
30	05/09/2019	Stars	**HW4 due**
31	**05/14/2019**		**Exam4**
32	05/16/2019	Review	
33	**Tuesday, May 21, 3:00-5:00 p.m.**		**Final**