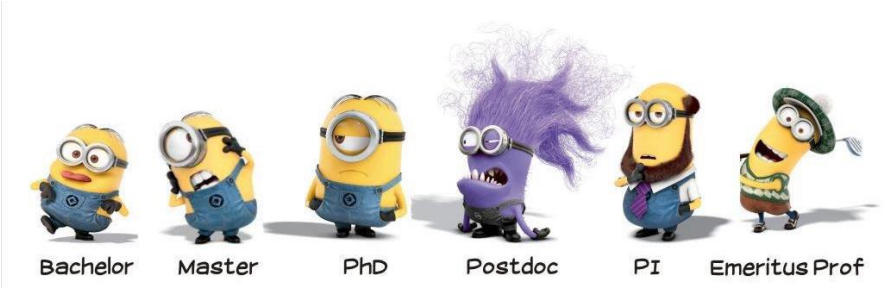
Upward Bound Summer Program 2019

Ruben T. Almaraz

Welcome



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Summer 2019

- Instructor: Ruben T. Almaraz
- Lecture:
  10:00PM-12:00PM LEC Tech Ed 307
- Text books:
  Physics: https://openstax.org/details/books/college-physics
  Chemistry: https://openstax.org/details/books/chemistry
- Website:
  https://ic.arc.losrios.edu/~almarazr/S19-UBSP
- Office hours: TBD
- Emails: Almarar@arc.losrios.edu or rtalmaraz@ucdavis.edu

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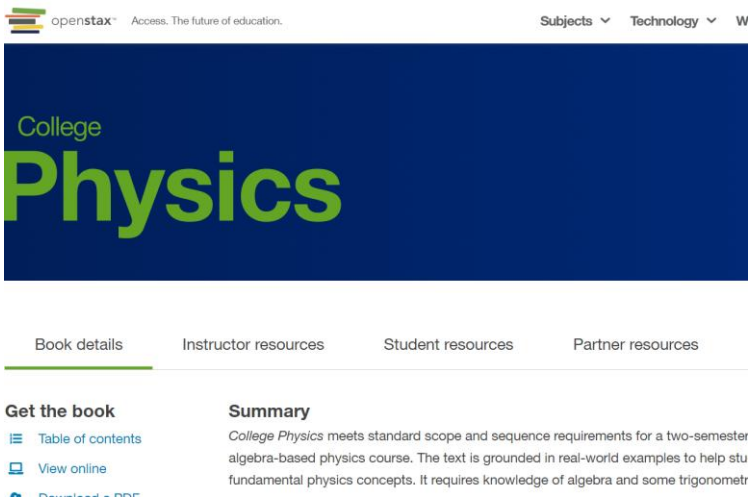
***College Physics* by Paul Peter Urone, California State University, Sacramento, Roger Hinrichs, State University of New York, College at Oswego**



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What is OER?

Open Educational Resources (OER) are teaching, learning or research materials that are in the public domain or released with intellectual property licenses that facilitate the free use, adaptation and distribution of resources.

2017 - United Nations 2nd World Open Educational Resources Congress

Why OER for this Course?

Open Educational Resources are designed to provide you with universal access and affordable options to ensure all students have equal access.

Find out more… creativecommons.org/about/program-areas/education-oer

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Why an Intellus Open Course?

Vetted - Academic Expertise
Quality - Editorial Expertise
Principled - Respectful of OER Community Values
Time Saving - Finding the Signal in the Noise
Supported - For both Faculty and Students
Data - Engagement Analytics

The added value of scaffolded materials so students can continuously assess and progress through the content. - Educator from Pikes Peak CC

Learn more:
www.intelluslearning.com/opencourses

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Objectives

College Physics** by **Paul Peter Urone, California State University, Sacramento, Roger Hinrichs, State University of New York, College at Oswego

1 Introduction: The Nature of Science and Physics

Introduction to Science and the Realm of Physics, Physical Quantities, and Units

1.1 Physics: An Introduction
1.2 Physical Quantities and Units
1.3 Accuracy, Precision, and Significant Figures
1.4 Approximation
Glossary
Section Summary
Conceptual Questions
Problems & Exercises

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Grading

- **Participation** 5 %
- **Homework** 7.5 % (1.25% **each, will drop lowest one**)
- **4 Quizzes** 5 % (1.25% **each, will drop lowest one**)
- **20 Worksheets** 7.5 % (0.4 % **each, will drop lowest two**)
- **2 Tests** 35 % (17.5 % **each**)
- **Laboratory** 40 % (**lab reports**)

100%

Your grade will be based on the following scale:

Pass ≥ (70%) > No pass

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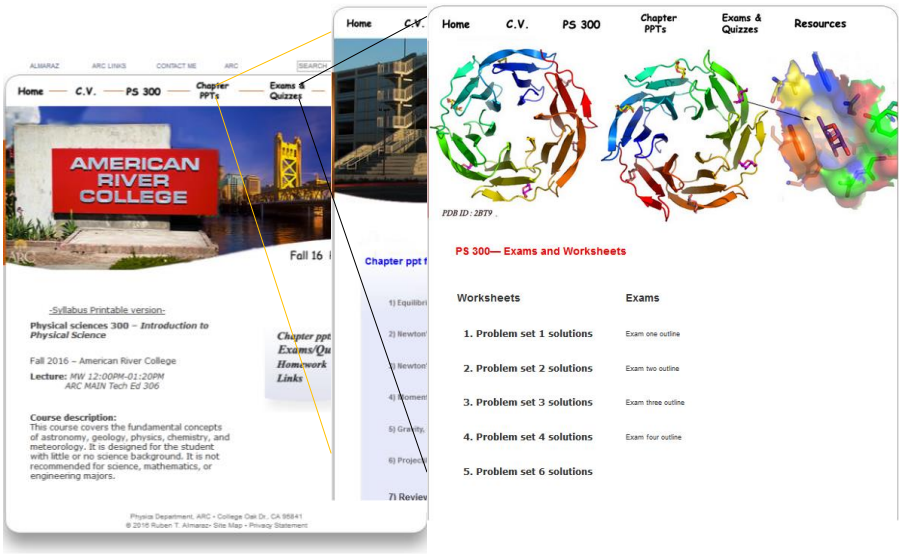
Class Website

https://ic.arc.losrios.edu/~almarazr/F18-UBSP/



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Extra credit & attendance

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.

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Class Conduct

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.

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.

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Study Tips

- Read the syllabus or schedule of assignments regularly.
- Understand key terms; look up and define all unfamiliar words and terms.
- Take notes on your readings, assigned media, and lectures.
- As appropriate, work all questions and/or problems assigned and as many additional questions and/or problems as possible.
- Discuss topics with classmates.
- Frequently review your notes. Make flow charts and outlines from your notes to help you study for assessments.
- Complete all course assessments.

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Ask
Top10
AMERICAN RIVER COLLEGE
SUPPORT SERVICES
ARC HOME
ABOUT US
MAJORS
STUDENT RESOURCES
ATHLETICS
CENTERS
CALENDARS
TRIO Home
Meet Your TRIO Team
Services
SSS STEM
SSS Journey
SSS Veterans
Summer Bridge
TRIO Forms
Frequently Asked Questions (FAQs)
ARC TRIO SSS Programs
Located in the HUB inside the Student Center (across from Starbucks)
(916) 484-8487 | anderst@arc.losrios.edu | Hours: M-Th 8am-7pm, F 8am-5pm
What is TRIO/SSS?
The Student Support Services Program (SSS) is a TRIO program funded by the U.S. Department of Education that works with first generation, low-income and/or disabled students by providing them with academic advisement, financial aid information, transfer information, tutoring, cultural and educational field trips in preparation for successful graduation and/or transfer to a four-year college or university.
TRIO Science Technology Engineering Math
TRIO SSS STEM is a program for students interested in pursuing a career in the Science, Technology, Engineering or Math fields. These students will have access to faculty that will mentor them toward the direction of scholarships, internships and academic support!
TRiO
SSS VETERANS
TRIO SSS Veterans' mission is to provide full academic assistance and resources in the goal of helping all eligible veterans achieve academic success. These students will receive one-on-one counseling, transfer and financial aid support among others!
JOURNEY
A TRIO PROGRAM
AMERICAN RIVER COLLEGE
TRIO SSS Journey is a program that offers students a rich variety of services designed to provide academic, personal, and social support. These students will have peer mentoring, financial aid support and workshops to assist in college retention!

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Ask
Top10
AMERICAN RIVER COLLEGE
MESA - Mathematics, Engineering, Science, Achievement
ARC HOME
ABOUT US
MAJORS
STUDENT RESOURCES
ATHLETICS
CENTERS
CALENDARS
Mathematics Home
Home > ARC Majors > Mathematics > MESA
STEM Center Home
Joining the STEM Center
APPLICATION
MESA Program
Women in STEM
Student STEM Clubs
PDP Program
GEO Program
Leadership Council
Activities & Support
Testimonials
MESA Facebook Page
Welcome to the STEM Center
Are you studying for a career in science? Want to be a mathematician or computer scientist? Plan on being an engineer or a doctor? The STEM Center can help.
The STEM Center is a learning community for students pursuing four-year degrees in the fields of mathematics, science or engineering. The STEM Center helps students achieve in the classroom, progress academically, and develop professionally.
Students who have on-campus friends with similar interests and career goals, and who support and motivate each other toward learning, are more likely to succeed in college. The STEM Center can connect you with just such a group of friends. In addition, tutoring, study groups, and academic advising provide program participants the academic support to ensure success.
Field trips, networking, and professional development activities are all part of the STEM Center experience that connect you to a community of learners, on campus and off.
STEM
CENTER
SCIENCE • TECHNOLOGY
ENGINEERING • MATHEMATICS
AMERICAN RIVER COLLEGE

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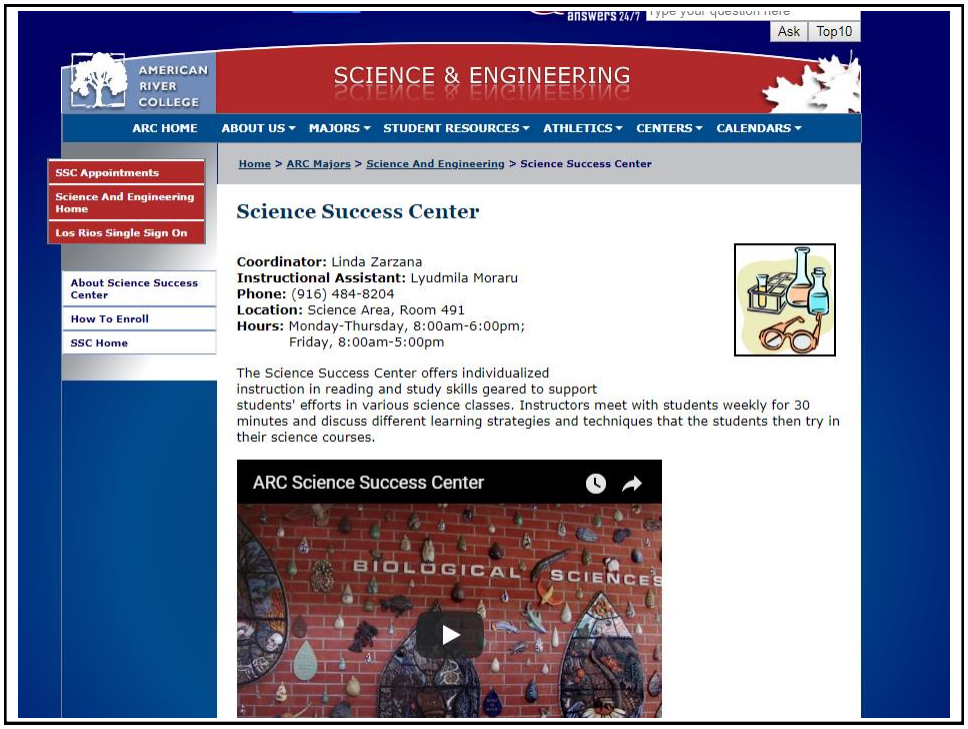

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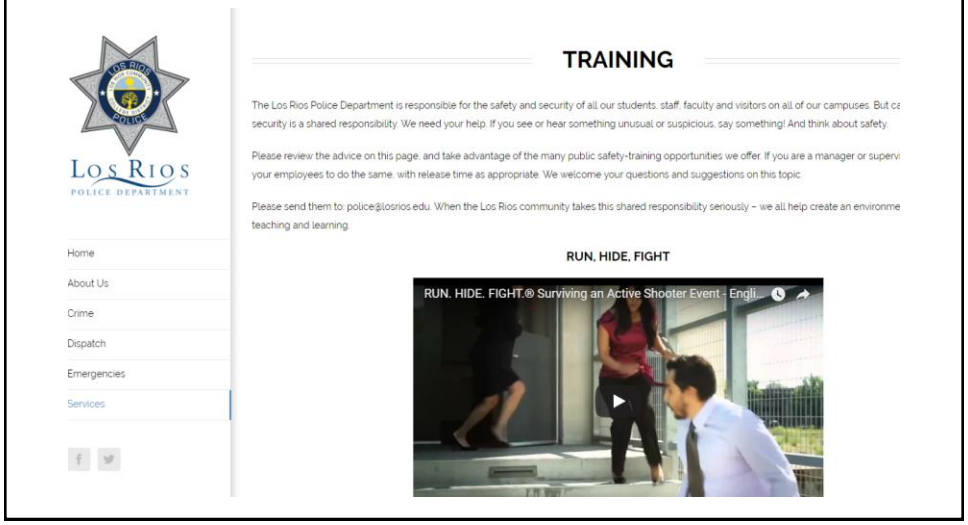
Active Shooter Training : "*Run, Hide, Fight*"

https://police.losrios.edu/training/



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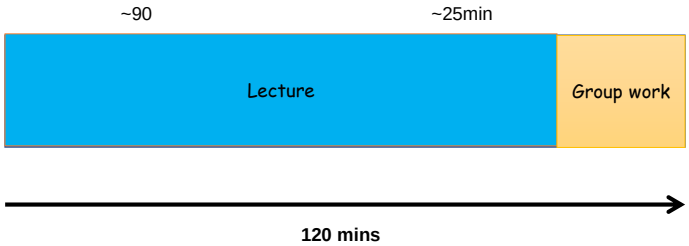
Tentative schedule for each class

10:00-11:30PM Lecture
11:30 -12:00PM Worksheet and Discussion



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College Physics

Course Overview

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The Nature of Science

- Plato
- Aristotle
- Dark ages
- Galileo

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Science and technology

Science has to do with discovering facts and relationships between observable phenomena in nature.

And with establishing theories that organize and make sense of these facts and relationships.

Technology has to do with **tools, techniques, and procedures** for putting the findings of science to use.

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Scientific Methods

1. *Observe* — **Observation**
2. *Questions* — **Make an educated guess—a hypothesis — about the answer.**
3. *Predict*— **Predict the consequences of the hypothesis.**
4. *Test prediction* — **Perform experiments to test predictions.**
5. *Draw a conclusion* — **Formulate the simplest general rule that organizes the main ingredients: hypothesis, prediction, and experimental outcome.**

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