

SYLLABUS for PHYS 100-01
California State University Channel Islands
Fall 2017
M/W 6:00 PM - 7:15 PM – Sierra 2422

Dr. David Nelson

Email: david.nelson@csuci.edu

Office Hours: Monday /Wednesday 7:30 AM – 9:00 AM, 1:30 PM – 3:00 PM : BTE 2808

Or By Appointment

Website: <http://faculty.csuci.edu/david.nelson/>

Course Title: Introduction to Physics I

Course Description: This course fulfills a lower-division requirement for Biology majors including those who are considering medical school. It will form part of the Science concentration within the Teaching and Learning Option of the Liberal Studies major. It requires a mathematical background in high-school algebra and trigonometry only, and does not use calculus. Upon completing this course, students should be able to:

- explain the basic concepts and principles of physics
- apply problem-solving skills to practical problems of everyday life
- demonstrate the role of physics in other disciplines, and apply their understanding to these disciplines
- search and retrieve practical information
- use excel to analyze and graph experimental data evaluating physical theories
- organize and express ideas clearly and convincingly in oral and written forms.

Required Text: Wilson, J.D.; Buffa, A.J.; Lou, B. "College Physics", Addison Wesley, San Francisco, CA 2010, 7th ed. ISBN-10: 0321601807, e-text with Mastering Physics. Mastering Physics Course ID: PHYS100FAL2017CSUCIDAVIDNELSON.

Grading: The course grade will be assigned using the following table:

Total %	100-98	97-92	91-90	89-88	87-82	81-80	79-78	77-72	71-70	69-68	67-62	61-60	59-0
Grade	A+	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	F

The course grade will be based on examinations, attendance, positive participation in classroom discussions, homework, and laboratory activities. Opportunities for extra credit will be provided.

	Points
14 Reading Quizzes (5 points)	70
14 Problem Assignments (10 points)	140
In Class Participation	70
3 Exams (80 points)	240
Final Exam	130
14 Lab Reports (25 points)	350
In Lab Participation	70
Total	1070

Expectations

Class meetings will combine lecture, discussions, and problem solving activities. Laboratory activities will be in separate sessions. You will be asked to work collaboratively with your peers for laboratory assignments. The classroom is a special environment in which students and faculty come together to promote learning and growth. It is essential to this learning environment that respect for the rights of others seeking to learn, respect for the professionalism of the instructor, and the general goals of academic freedom are maintained. Differences of viewpoint or concerns should be expressed in terms which are supportive of the learning process, creating an environment in which students and faculty may learn to reason with clarity and compassion, to share of themselves without losing their identities, and to develop an understanding of the community in which they live. Student conduct which disrupts the learning process shall not be tolerated and may lead to disciplinary action and/or removal from the class.

All reading assignments must be completed before the corresponding lecture. A reading assignment on Mastering Physics must be completed by midnight of the day before the first lecture on the chapter (except for chapter 1.) All of the exam material is in the book; the in-class activities are designed to illuminate and not replace it. Students are encouraged to raise questions during the discussions when concepts are unclear or need more elaboration. Furthermore, the discussions will be much more fun if you are already familiar with the material. This is a math intensive course, including most algebra skills and trigonometry. Calculators are necessary and stand alone calculators will be permitted during exams. A basic scientific calculator with trigonometric functions is required. I will be using a TI-30XIIS, but any similar calculator will suffice. The lab activities are designed to provide additional support for the curriculum and provide practical experience. Make the most of this opportunity. Since 40% of your grade is determined by activities you participate in during the class or lab, it is imperative that you attend all of the classes/labs and remain for the entire class (leaving early and arriving late could result in loss of points). Allowance is made for a reasonable number of lecture absences (3). There will be limited opportunities to make up missed labs. All labs count towards final grade.

Students with Disabilities

Upon identifying themselves to the instructor and the University, students with disabilities will receive reasonable accommodation for learning and evaluation. If this applies to you, please contact me as early as possible. You may also contact: terri.goldstein@csuci.edu or (805) 437-8528.

Academic Dishonesty

In accordance with the CSU Channel Islands policy on academic dishonesty, students in this course who submit the work of others as their own (plagiarism), cheat on tests and examinations, help others to cheat or plagiarize, or commit other acts of academic dishonesty may receive appropriate academic penalties, up to and including failing the course. Plagiarism or cheating on exams or written assignments will result in an "F" on that assignment and will likely affect the final grade for the course.

PHYS 100-01**Tentative Course Content and Schedule for Lectures**

Date	Topic	Book Chapter
M 8/28	Measurement & Problem Solving	Ch 1
W 8/30	Measurement & Problem Solving	Appendix 1
M 9/4	Labor Day	
W 9/6	Kinematics	Ch 2
M 9/11	Kinematics	Ch 2
W 9/13	Kinematics in 2D	Ch 3
M 9/18	Kinematics in 2D	Ch 3
W 9/20	Force & Newton's Laws	Ch 4
M 9/25	Force & Newton's Laws	Ch 4
W 9/27	Work & Energy	Ch 5
M 10/2	Examination I	Ch 1-4
W 10/4	Work & Energy	Ch 5
M 10/9	Collisions	Ch 6
W 10/11	Collisions	Ch 6
M 10/16	Circular Motion	Ch 7
W 10/18	Circular Motion	Ch 7
M 10/23	Rotational Motion	Ch 8
W 10/25	Rotational Motion	Ch 8
M 10/30	Solids & Fluids	Ch 9
W 11/1	Examination II	Ch 5-8
M 11/6	Solids & Fluids	Ch 9
W 11/8	Temperature & Kinetic Theory	Ch 10
F 11/10	Veteran's Day	
M 11/13	Temperature & Kinetic Theory/Heat	Ch 10/11
W 11/15	Heat	Ch 11
M 11/20	Thermodynamics	Ch 12
W 11/22	Thermodynamics	Ch 12
R 11/23	Thanksgiving	
F 11/14	Thanksgiving	
M 11/27	Examination III	Ch 9-12
W 11/29	Waves	Ch 13
M 12/4	Waves/Sound	Ch 13/14
W 12/6	Sound	Ch 14
W 12/13	Final 7:00 PM - 9:00 PM	Ch 1-14

Lab Section 1L Schedule - Sierra 2111 – Monday 3:00PM – 5:50PM

Date	Labs
M 8/28	Pendulums and Periodic Motion
M 9/11	Motion with Constant Acceleration
M 9/18	Projectile Motion
M 9/25	Forces & Friction
M 10/2	Conservation of Energy
M 10/9	Conservation of Momentum
M 10/16	Circular Motion & Centripetal Force
M 10/23	Rigid Body Rotation & Moment of Inertia
M 10/30	Density & Buoyancy
M 11/6	Ideal Gas & Avagadro's Law
M 11/13	Measurement of Absolute Zero
M 11/20	Thermal Expansion
W 11/22	Make-Up Lab Day
M 11/27	Standing Waves
M 12/4	Resonance & the Speed of Sound

Lab Sections 2L Schedule - Sierra 2111 – Wednesday 3:00PM – 5:50PM

Date	Labs
W 8/30	Pendulums and Periodic Motion
W 9/6	Motion with Constant Acceleration
W 9/13	Projectile Motion
W 9/20	Forces & Friction
W 9/27	Conservation of Energy
W 10/4	Conservation of Momentum
W 10/11	Circular Motion & Centripetal Force
W 10/18	Rigid Body Rotation & Moment of Inertia
W 10/25	Density & Buoyancy
W 11/1	Ideal Gas & Avagadro's Law
W 11/8	Measurement of Absolute Zero
W 11/15	Thermal Expansion
W 11/22	Make-Up Lab Day
W 11/29	Standing Waves
W 12/6	Resonance & the Speed of Sound