

Physics 201 Fall 2004
Department of Physical Sciences
Nicholls State University

SYLLABUS
Physics 201- General Physics
Section 1M , 7:30 - 8:25 am MWF
Fall Semester , 2004

INSTRUCTOR: Dr. Jesus Urrechaga-Altuna
Office: 121 Beauregard Hall
Office Hours: 8:35 - 10:40 am & 11:50 - 12:55 pm MWF; 10:30 – 12:55 pm TR
Phone: (985)-448-4879 (work) ; (225)-766-9554 (home)
Email: phsc-jua@nicholls.edu
Fax: (225)-766-9554

CATALOG DESCRIPTION: PHYS 201. General Physics. 3-3-0. Prerequisite: Credit or registration in MATH 165 and PHYS 203. A technical study of mechanics, heat, and sound. Credit toward graduation will not be given for both PHYS 101 and 201. Fa only.

PREREQUISITE: Credit or registration in MATH 165 and PHYS 203.

REQUIRED TEXT: “ FUNDAMENTALS OF PHYSICS” by D. Halliday, Robert Resnick, and Jearl Walker. John Wiley & Sons, 2005 (Seventh Edition).

REQUIRED SUPPLEMENTARY READINGS: None.

COURSE GOALS AND OBJECTIVES: To present basic concepts in a progressive and logical manner, so that the students may develop a total understanding of the principles of mechanics, heat, and sound. The students should be able upon completion of the course to use these concepts in their own lives and professions. The course uses algebra, trigonometry, and calculus in problem solving.

EDUCATIONAL COMPETENCIES COVERED: At the completion of the course the students should be able to explain and demonstrate the benchmarks related to:

1. the abilities necessary to do scientific inquiry (SI-E-A4 to A7, SI-M-A3 to A8, SI-H-A1 to A7)
2. understanding scientific inquiry (SI-E-B3 to B6, SI-M-B3 to B6, SI-H-B1 to B5)
3. position and motion of objects (PS-E-B1 to B4, PS-M-B1 to B5, PS-H-E1 to E4)
4. energy and its transformations (PS-E-C1 to C7, PS-M-C1 to C6, PS-H-F1 to F2, PS-H-G1 to G3)
5. the structure of matter (PS-H-C1 to C6)
6. atomic structure (PS-H-B1 to B3)

COURSE CONTENT:

OUTLINE OF TOPICS

Exam # 1 - September 15, 2004

- Chapters: 1 – Measurement
2 - Motion Along a Straight Line.
3 - Vectors.
4 - Motion in Two and Three Dimensions.
5 - Force and Motion I.

Exam #2 - October 6, 2004

- Chapters: 6 – Force and Motion II.
7 - Kinetic Energy and Work.
8 - Potential Energy and Conservation of Energy.
9 - Center of Mass and Linear Momentum.
10 - Rotation.

Exam # 3 - October 29, 2004

- Chapters: 11 - Rolling, Torque, and Angular Momentum.
12 - Equilibrium and Elasticity.
13 - Gravitation.
14 - Fluids.
15 - Oscillations

Exam # 4 - November 19, 2004

- Chapters: 16 - Waves I.
17 - Waves II.
18 - Temperature, Heat and the First Law of Thermodynamics.
19 - The Kinetic Theory of Gases.
20 - Entropy and the Second Law of Thermodynamics.

FINAL EXAM - TBA (Comprehensive-Charters 1 through 20).

TESTING: All examinations will be closed book exams. Data and constants will be provided to the students as needed. There will be four (4) exams during the semester and a final exam. Each hour exam counts 100 points and the final 200 points. The possible number of points for the semester is 600 (100%), with a % grading scale of: A (90-100%) ; B (80-89%) ; C (70-79%) ; D (60-69%); and F (0-59%).

HOMEWORK: Odd numbered problems are generally assigned each semester. This homework is not to be turned in. After covering each topic, the Instructor will work textbook problems in class and answer questions.

MAKE-UP POLICY: Make-up will be determined by the Instructor on a case-by-case basis.

ACADEMIC HONESTY POLICY: Dishonesty in taking examinations will follow the guidelines set in the “Code of Student Conduct” manual.

ATTENDANCE POLICY: Regular class attendance is essential and mandatory. Class roll is taken everyday and absences recorded. All work missed due to absence is the responsibility of the student to make-up. A total of four unexcused absences will result in the student being dropped from the class with a grade of “F”

DROP DATE: Friday, October 29, 2004 is the final date to receive an automatic “W” when dropping a course or resigning from Nicholls State University.

DISABLED STUDENTS: Under Section 504 of the Rehabilitation Act and the Americans with Disabilities Act, any disabled student has the legal right to special accommodations in attending classes and taking examinations. If you are disabled, please check with the Office of Disabled Student Services at (985)-448-4430 located in Peltier Hall, Room 100-A, and I will provide you with the means to receive appropriate accommodations in this course.