

Physics 101 Fall 2004  
Department of Physical Sciences  
Nicholls State University

**SYLLABUS**  
Physics 101- Basic Physics  
Section 4M, 10:45 - 11:40 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  
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**CATALOG DESCRIPTION:** PHYS 101. Basic Physics. 3-3-0. Prerequisite: MATH or placement in MATH 165. A study of mechanics, heat, and sound; course designed primarily for students not majoring in chemistry or physics. Credit toward graduation may be earned in this course or in PHYS 201 but not in both. Students enrolled in this course should schedule PHYS 103. (40.0801)

**PREREQUISITE:** MATH 102 or placement in MATH 165.

**REQUIRED TEXT:** “PHYSICS” by Douglas Giancoli, Prentice Hall, 2004 (Sixth 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 and trigonometry in problem solving but not calculus.

**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-F-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 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- Introduction, Measurement, Estimating.  
2 - Describing Motion: Kinematics in One Dimension.  
3 - Kinematics in Two Dimensions; Vectors.  
4 – Dynamics: Newton’s Laws of Motion

Exam # 2 - October 6, 2004

Chapters: 5 - Circular Motion; Gravitation.  
6 - Work and Energy.  
7 - Linear Momentum.  
8 - Rotational Motion.  
9 - Static Equilibrium: Elasticity and Fracture.

Exam # 3 - October 29, 2004

Chapters: 10 - Fluids.  
11 - Vibrations and Waves.  
12 - Sound.

Exam # 4 - November 19, 2004

Chapters: 13 - Temperature and Kinetic Energy.  
14 - Heat.  
15 - The Laws of Thermodynamics.

FINAL EXAM –TBA (Comprehensive - Chapters 1 through 15)

**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 problem in class and answer questions.

**MAKE-UP POLICY:** Examination 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 every day 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.