

**COURSE OUTLINE OF RECORD FOR**  
**DEGREE CREDIT COURSE**

X Transfer Course X A.A. Degree applicable course  
(check all that apply)

**COURSE NUMBER AND TITLE:** PHYS 102 - Introduction to Physics (Lecture)

**UNIT VALUE:** 3

**MINIMUM NUMBER OF SEMESTER HOURS:** 48

**BASIC SKILLS REQUIREMENTS:** Appropriate language and computational skills.

**ENTRANCE REQUIREMENTS**

**PREREQUISITE:** MATH 50 or one year of high school Algebra

**COREQUISITE:** None

**RECOMMENDED PREPARATION:** None

**SCOPE OF COURSE:**

An introductory survey course in classical and modern physics. Not intended for science majors.

**SPECIFIC COURSE OBJECTIVES:**

The successful student will be able to:

1. Demonstrate a general conceptual understanding of introductory physics which is intended for students who are not majoring in science, engineering, or related fields.
2. Identify, analyze, and explain various physics concepts and principles and apply these concepts and principles.
3. Analyze and solve selected physics problems.

**CONTENT IN TERMS OF SPECIFIC BODY OF KNOWLEDGE:**

**LECTURE:**

1. Science, physics, and measurements.
2. Linear and nonlinear motion.
3. Newton's laws, momentum, and energy.
4. Rotational motion.
5. Gravity and satellite motion.
6. Atomic nature of matter.
7. Solids, liquids, and gases.
8. Heat transfer and change of state.
9. Thermodynamics.
10. Vibrations, waves, and sound.
11. Electrostatics and electric current.
12. Magnetism and electromagnetic induction.
13. Properties of light, reflection, and refraction.

14. Atomic physics.
15. Nuclear physics.

**REQUIRED READING:**

Giancoli, Douglas C. The Ideas of Physics. 3<sup>rd</sup> edition. New York: Saunders College Publishing, 1986.

**SUGGESTED READING:**

Articles from science periodicals or other sources as recommended by the instructor.

**REQUIRED WRITING:**

Written and/or quantitative answers for assigned work and/or examinations may be required.

**OUTSIDE ASSIGNMENTS:**

**Students are expected to spend a minimum of three hours per unit per week in class and on outside assignments, prorated for short-term classes.**

Preparation may include such activities as readings in assigned text, review of lecture material, solving assigned problems, and answering assigned questions.

**INSTRUCTIONAL METHODOLOGY:**

**Check all that apply:**

- lecture
- laboratory
- lecture-laboratory combination
- directed study

**DISTANCE LEARNING:**

**This course may be offered as a distance learning course and meets Title 5 regulations 55370, 55372, 55374, 55376, 55378, and 55380.**

Yes  No

**If yes, check all that apply:**

- Television Course (Video one-way, e.g. ITV, video cassette, etc.)
- Online Course (Text one-way, e.g. newspaper, correspondence, electronic file, etc.)
- Two-Way Video Conferencing (Two-way interactive video and audio)
- One-Way Video Conferencing (One-way interactive video and two-way interactive audio)
- Computer Assisted Instruction (A specialized form of mediated instruction relying primarily on student access to information and prepared lessons or teaching materials through a computer terminal, but not under immediate supervision of a qualified instructor.)

**GRADING POLICY AND STANDARDS (include methods of determining whether the stated objectives have been met by students):**

Homework assignments	0 - 20%
Exams	50 - 75%
Final exam	20 - 40%

**IS COURSE REPEATABLE FOR REASON(S) OTHER THAN DEFICIENT GRADE?**

Yes \_\_\_ No X Number of times course may be taken for credit: 1

If yes, identify specific provision of Title 5 Division 2 section(s), 55761-55763 and 58161 which qualifies course as repeatable:

**CONTACT PERSON:** Takashi Nakajima

**SIGNATURES:**

SIGNATURES ON FILE