*Master Syllabus Template*

*All courses require a syllabus. Syllabi may be photocopied and/or posted on the class Blackboard Companion site. Faculty must review the course syllabus with students on the first day of class.*

# Keiser University
# General Education

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|---|---|
| Course Prefix & Number: | PHY 2001C |
| Course Title: | General Physics I with lab |
| Course Format: | Online |
| Credit Hours: | 4.0 |
| Course Schedule: | 4 weeks |
| Prerequisites: | MAT1033 |
| Co-requisites: | None |
| Faculty: | |
| Office Hours: | |
| Course Description: | Presents basic concepts and principles of physics, including practical examples that demonstrate the role of physics in other disciplines. Topics include motion, gravity, vectors, momentum, energy, vibrations, waves, and heat and thermodynamics. |
| Program Goal(s): | Understand the major concepts and applications of physics and their relationship to the physical and social sciences. |
| Course Objectives: | Upon Completion of the course, the student will be able to: |

1. Describe the basic physical quantities, units, vectors and scalar quantities and reference frames
2. Understand motion and velocity
3. Explain and calculate acceleration

4. Explain inertia, force, mass, and weight
5. Explain and calculate acceleration
6. Explain circular and projectile motions
7. Describe the universal law of gravity, the field concept and the motion of satellites
8. Describe linear momentum, conservation of linear momentum, and collisions
9. Describe work and power
10. Describe work and power
11. Understand and be able to use kinetic and potential energies, and conservation of mechanical energy
12. Describe masses and sizes of atoms, pressure and temperature
13. Use the ideal gas law
14. Explain the states of matter and Bernoulli's Principle, Pascal's Principle, Archimedes' Principle, and hydrostatic pressure
15. Describe the nature of heat, internal energy, absolute zero, specific heat and change of state
16. Understand and apply the First Law of Thermodynamics
17. Understand conduction, convection, radiation, and thermal expansion
18. Describe specific heat capacity and phase transitions
19. Understand the Second Law of Thermodynamics, and apply it to heat engines
20. Understand frequency and period
21. Describe simple vibrations, simple pendulum, waves, superposition of waves, standing waves, interference, reflection, refraction, and diffraction
22. Describe sound, some musical instruments, beats, Doppler effect, and supersonics

Grading and Evaluation Methods:

| **Item** | **Percent Total Grade** |
|---|---|
| Exams | 60 |
| Laboratory Reports | 20 |
| Instructor Designated | 15 |
| Post test | 5 |
| | **100** |

Grading Scale

| Letter Grade | Numeric Grade |
|---|---|
| A | 90.00-100.00% |
| B | 80.00-89.99% |
| C | 70.00-79.99% |
| D | 65.00-69.99% |
| F | Up to 64.99% |

Required Textbook:

Ostdiek and Bord. *Inquiry Into Physics (8th ed.).* Brooks/Cole
Labster online access

Course Guidelines and Policies*

**Faculty course guidelines must not contradict standard University or Program policies as stated in the University Catalog, Program Student Handbook and/or Program Manual.*

*Additional guidelines and pre-approved policies may be included, examples appear below. The University Department Chair (UDC) should be consulted prior to making changes in the verbiage or adding additional policies. Any policies included in the syllabus should fit with the "students first" philosophy, and compliment the mission of the University and the program.*

Academic Integrity

Students are expected to maintain the highest standards of academic conduct, professional honesty, and personal integrity. Plagiarism, cheating and other misconduct are serious violations and will not be tolerated, and may result in academic penalties, including suspension or dismissal.

Participation

Participation is a basic requirement for an effective learning community. Class participation is based on the following criteria: attendance at KeiserLive! Session (or listening to the recording), discussion rubric; respectful listening when someone else is speaking; being engaged in the class and in your learning without distractions.

Homework

We are training you to become professionals. With this in mind, your work should be the work of a professional. **Your homework should be neat and well organized**. Solutions will be graded on the basis of their quality as instructional material. With this in mind, for each homework question you must:

- Write out the statement of the question—ideally you will paraphrase the given question, highlighting key points while removing any irrelevant details.
- Explain your solution with a complete and logical succession of ideas. All reasoning needs to be included.
- Include all laws and formulas you have used.

## Missed Tests/Quizzes/Assignments

Late assignments will be accepted only in cases of documented emergency, and only with pre-approval of the instructor. Acceptable reasons for makeup exams include severe illness, family emergency or other unavoidable events. Exam format for makeup exams may be different than the original exam but the content for the exam will not change. Late assignments other than exams are up to instructor's discretion.

## Civility/Professionalism

This class is a community of learners, which means we will depend upon each other for support and information. In order to learn, we must be open to the views of people different than ourselves. Please honor the uniqueness of your classmates and appreciate the opportunity we have to learn from one another. Please respect each other's opinions and refrain from personal attacks or demeaning comments of any kind.

It is of the utmost importance to communicate with courtesy and professionalism. Professional courtesy includes respecting other's opinions, being courteous and respectful, and working together in the spirit of cooperation.

## University and Program Policies

Students are expected to abide by the policies set forth in the University Catalog and the Student Program Handbook/Manual. The University Catalog is available electronically at http://www.keiseruniversity.edu/catalog/. The Program Student Handbook/Manual is available electronically at the direction of your instructor.

## Disability Accommodations:

In compliance with the Americans with Disabilities Act (ADA), students who require reasonable accommodations due to a disability to properly execute coursework must complete the application process and receive approval from the review committee. The first step is to consult with the Campus President or Dean of Academic Affairs.