

Eastern Kentucky University
**Department of Physics and
Astronomy**
PHY 201, Concepts of the Physical World, CRN XXXXX 5
Credit Hours
Spring XXXX

Instructor:

Office:

Phone:

Email address:

Catalog description:

PHY 201 University Physics I. (5) I, II. Prerequisite: MAT 211, 234 or 234H, or departmental approval. Composition and resolution of forces, laws of equilibrium, Newton's laws of motion, work and energy, momentum, simple harmonic motion, hydrodynamics, heat phenomena. Credit will not be awarded to students who have credit for PHY 131. 6 Lec/Lab. Gen. Ed. E-4 [NS].

Required text:

Physics for Scientists and Engineers w/ Technology Update, Serway/Jewett, ISBN: 9781305116399. IMPORTANT: You may choose to purchase the e-book with online homework access, which may cost less; see "Required materials item 1".

Required materials:

1. Access to the WebAssign homework system

To register for the course you will need the following information:

Class Key: eku 1027 9490

Enhanced WebAssign is an interactive online homework system. It is accessed through the website:

<http://www.webassign.net>

Enhanced WebAssign includes a **14-day Grace Period** so that you have immediate access to your homework, even if you have not yet purchased the course textbook and materials. You may register and use it until without paying the course fee. You will need to pay the full amount before the end of the grace period to continue using this site. You may pay online with a credit card, via PayPal or a WebAssign Access Card available in the bookstore. There is a 3-minute video to help you get started with Enhanced WebAssign:

http://www.wadsworthmedia.com/tlc/EWA_StudentVideos/Self_Enrollment/EWA_Student_SelfEnrollment.html

You may also get a quick start guide from: http://www.webassign.net/manual/WA_Student_Quick_Start.pdf.

2. i>clicker 2 Remote OR App for Mobile Device

Students are required to EITHER:

#1: Purchase an "i>clicker2" remote (NEW or USED) OR

#2: Purchase the "REEF Polling" app for mobile devices (REEF Polling is available on any device

with a
browser and for download as an iOS or Android app.)

i>clicker2 is a response system that allows students to answer questions that are posed during class, and students may be graded on that feedback and/or on participation. Each clicker remote has a unique serial number printed on the back. It is recommended that students place a piece of scotch tape over the bar code and ID to preserve it if they choose the remote option. In order for students to receive credit for all future attendance and class participation, they **MUST REGISTER** their clicker remotes or set-up the app on their device online **before the class on Jan. 30th, 2017.**

For the remote activation, go to <https://www1.iclicker.com/register-clicker/>. Complete the fields with your first name, last name, student ID, and remote ID. The student ID should be your ECU ID number (900-XXX-XXX). The remote ID is the series of numbers and/or letters found on the bottom and back of your clicker remote.

Click “Yes” if you are asked the question about your school using a learning Management System (EKU uses Blackboard).

“REEF Polling” app offers a free 14-day trial. At the end of the trial, should you decide to purchase “REEF Polling” app, you can purchase the subscription in a variety of lengths using your credit card online or through in-app purchase with your smartphone.

The i>clicker response system will be used nearly every day in class, so students are responsible for bringing their remote or mobile device w/ app daily. Bringing a fellow student’s i>clicker to class is considered cheating and a violation of the University Honor Code. Anyone using a remote other than your own or voting in a class that you did not attend will forfeit all clicker points and may face additional disciplinary action.

~~**The frequency of this course is set as “AB”. Please read the instruction on the back of your remote to change the default frequency.**~~

Student Learning Outcomes:

Upon completion of the course the student will be able to:

1. Recognize the physical laws governing motion,
2. Qualitatively predict the outcome of physical situations from those laws,
3. Apply general physical laws to specific problems,
4. Apply mathematical skills to determine numerical answers to problems,
5. Investigate physical phenomena using appropriate laboratory skills,
6. Employ the scientific method to gain insight into the physical world, and
7. Develop laboratory skills used to investigate physical phenomena and gain understanding of the scientific method and how it is used to gain insight into the physical world.

Please note: This physics course is NOT taught in what is generally considered a standard lecture/lab format. The design of the course includes activity-based instructional methods developed by physics education researchers during the last three decades. This course does not separate participation into lecture and laboratory sections. Instead, hands on activities are built into the framework and are integrated into the course on a day-to-day basis. Many familiar traditional approaches such as homework, examinations, and some lectures (actually, a fair amount) will be retained, but much modern activity-based pedagogy will be used. In this class, it is more obvious that we ask you to be responsible for your own learning, but this is truly the case in all university level physics courses. In this course, however, you will be expected to participate in a manner that is not usually required in the traditional lecture courses. The benefit is that you will more readily become an active learner rather than a passive one. Nonetheless, your instructors are here to provide assistance and support, and you should feel free to utilize them as much or more than you would in a traditional physics class.

Evaluation Methods:

Homework 20%

| | |
|----------------------------|-----|
| Activity summary | 14% |
| Attendance / participation | 6% |
| Four in-class exams | 44% |

| | |
|--------------------------|------|
| Comprehensive final exam | 16% |
| Total | 100% |

Your final letter grade will be determined by the following:

| | |
|---|---------|
| A | 90%- |
| B | 80%-89% |
| C | 70%-79% |
| D | 60%-69% |
| F | 0-59% |

Student progress:

Students are responsible for monitoring their progress in the course as papers are passed back and grades are posted on Blackboard throughout the semester. To access Blackboard, you can go to <http://learn.eku.edu/webapps/login>. The login instructions can be found on that page by clicking the link "Student Guide for ECU Blackboard".

Activities:

You will be assigned to a group of three or four students and will be asked to turn in assignments based on group activities. Group Activity Sheets will be available on BlackBoard under Course Documents. You need to print the appropriate activities out and bring them to class. Repeatedly coming to class without these will cost you participation points.

Lab Safety:

It is important that we remain safe while in the studio classroom. While our classroom is not technically a laboratory, we will be doing experiments in this space, and it is therefore important that you adhere to certain safety measures. Always wear closed-toe shoes in the classroom, read the information regarding laser safety and take the laser safety quiz posted on Blackboard (if lasers are used in this course), and keep your bookbags off the floor (they pose a tripping hazard). There are cubbies near the room entrance where bookbags may be stored.

Attendance policy:

Missing 6 or more class meetings (including 6) will result in a failure of the course. Your on-time attendance is expected at every class meeting and for the entire class period. Group work, as stated above, requires your active, positive participation. As such, 6% of your overall grade will be based on your attendance (you will sign in everyday) and the degree to which you are contributing to your group.

You will lose 1% of the TOTAL grade for each unexcused absence. You must notify the instructor **in advance** if you are unable to attend class and provide proper documents for excuse. Excused absences will be given with appropriate documentation (including University issued excuses and doctor's excuses).

Barring extreme circumstances, **make-up exams will not be given.** If you miss an in-class exam for an excused absence, the missing grade will be replaced by the average of the other three in-class exams; otherwise, you will retain a zero for that exam grade.

Last Date To Drop The Course:

Check the *Colonel's Compass* for the various dates. The following website will describe the fee policy related to withdrawing from classes: <http://colonelscompass.eku.edu/fall-2016-deadlines-adddrop-refunds> .

Disability Statement:

The University strives to make all learning experiences as accessible as possible. If you are registered with the ECU Center for Student Accessibility (CSA), please obtain your accommodation letters from the CSA, present them to the course instructor, and discuss the accommodations needed. If you believe you need an accommodation and are not registered with the CSA, please contact the office in 361 Whitlock Building by email at disserv@ecu.edu or by telephone at (859) 622-2933. Upon individual request, this syllabus can be made available in an alternative format. A student with a "disability" may be an individual with a physical or psychological impairment that substantially limits one or more major life activities, to include, but not limited to: seeing, hearing, communicating, interacting with others, learning, thinking, concentrating, sitting, standing, lifting, performing manual tasks, working. Additionally, pregnancy accompanied by a medical condition(s), which causes a similar substantial limitation, may also be considered under the Americans with Disabilities Amendments Act (ADAAA).

Academic Integrity Statement:

Students are advised that ECU's Academic Integrity policy will strictly be enforced in this course. The Academic Integrity policy is available at www.academicintegrity.ecu.edu. This statement is applicable to all ECU students in all courses regardless of whether it appears in the class syllabus. Questions regarding the policy may be directed to the Office of Academic Integrity.

Official E-mail:

An official ECU e-mail is established for each registered student. All university communications sent via e-mail will be sent to this ECU e-mail address. Students should access their ECU student email account at least once before each class period. Information that applies to one or a small group of students (rather than the entire class) will occasionally be sent to a student's ECU email account.

Course requirements:

1. There will be four unit exams throughout the semester. There are NO make-up exams. Test dates will be announced in class at least one week prior to the test day.
2. There will be homework given on WebAssign throughout the semester. Due date will be given when homework is assigned. **Late homework will not be accepted.**
3. There will be in-class group work done in the form of both lab activities and group problem solving.
4. There will be a comprehensive final exam given at the end of the semester. All exams are close-book, close- notes. You may use your final exam grade to replace your lowest unit exam grade, given the former is higher.