This course syllabus is intended as a set of guidelines for PHYS 1405. Both North Lake College and your instructor reserve the right to make modifications in content, schedule, and requirements as necessary to promote the best education possible within prevailing conditions affecting this course.

Instructor Information:

Neda Zargar
nzargar@deccd.edu
972-273-3244
Office Location: C303B
Office Hours: MW 4:30 - 5:30PM

Course Information

Course title: Elementary Physics
Course number: PHYS 1407
Section number: 73426
Credit hours: 4
Class meeting time: INET M T W R F S
LAB MW 5:45PM-8:35PM

Course description: Conceptual level survey of topics in Physics intended for liberal arts and other non-science majors. Topics include mechanics, energy conservation, atomic nature of matter and thermodynamics. The history of scientific developments and their impact on daily life are discussed. Also included are laboratory experiments that emphasize a conceptual understanding of Physics.

Course prerequisites: College level ready in Reading
Required or Recommended Textbooks and Materials


PROGRAM-LEVEL OBJECTIVES FOR PHYSICS 1407

Physics 1407 develops the following objectives from the Texas Higher Education Coordinating Board:

- Communication Skills
- Critical Thinking Skill
- Empirical and Quantitative Skills
- Teamwork

Course Objectives

Physics 1407 supports the following learning outcomes from the Texas Higher Education Coordinating Board. At the end of the course students will be able to:

1. Solve problems involving the inter-relationship of fundamental charged particles, and electrical forces, fields and currents.
2. Apply Kirchhoff's Rules to analysis of circuits with potential sources, capacitance, inductance, and resistance, including parallel and series capacitance and resistance.
3. Solve problems in the electrostatic interaction of point charges through the application of Coulomb's Law.
4. Solve problems involving the effects of magnetic fields on moving charges or currents, and the relationship of magnetic fields to the currents which produce them.
5. Use Faraday's and Lenz's laws to determine electromotive forces and solve problems involving electromagnetic induction.
6. Articulate the principles of reflection, refraction, diffraction, interference, and superposition of waves.
7. Describe the characteristics of light and the electromagnetic spectrum.

Laboratory objectives:

1. Develop techniques to set up and perform experiments, collect data from those experiments, and formulate conclusions from an experiment.
2. Demonstrate the collections, analysis, and reporting of data using the scientific method.
3. Record experimental work completely and accurately in laboratory notebooks, and communicate experimental results clearly in written reports.
4. Solve problems involving the inter-relationship of fundamental charged particles, and electrical forces, fields and currents.
5. Apply Kirchhoff's Rules to analysis of circuits with potential sources, capacitance, inductance, and resistance, including parallel and series capacitance and resistance.
6. Solve problems in the electrostatic interaction of point charges through the application of Coulomb's Law.
7. Solve problems involving the effects of magnetic fields on moving charges or currents, and the relationship of magnetic fields to the currents which produce them.
8. Use Faraday's and Lenz's laws to determine electromotive forces and solve problems involving electromagnetic induction.
9. Solve problems applying the principles of reflection, refraction, diffraction, interference, and superposition of waves.
10. Solve practical problems involving optics, lenses, mirrors, and optical instruments.

**Course Outline**

Posted on ecampus

**Means of Assessment of Course Learning Outcomes**

Group solving problems, multiple choice and free response questions exams, individual presentations.

**Evaluation Procedures**

**EXAMS**

There will be 3 exams *(Include final)* in this course. The tests will be a combination of multiple choices and free response problems.

**HOMEWORK**

All Homewors assigned at mastering Physics.

**Exams and Assignments**

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<td>Homework</td>
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**Service Learning**

**What is Service Learning?** Service Learning (SL) is a program in which you will learn and develop through thoughtfully organized service experiences by participating in meeting real community needs. The program combines academic instruction along with active community service that utilizes both critical and reflective thinking skills that assist you in examining your civic responsibilities in the world in which you live.

See your eCampus classroom for enrollment instructions.

For questions or concerns, contact the Service Learning Coordinator, Katherine Villarreal, at kvillarreal@dcccd.edu or nlcsl@dcccd.edu.
Grading Scale

Your final grade will be determined as follows. Quizzes will count as extra credit.

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<tr>
<th>Final Average</th>
<th>Letter Grade</th>
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<tr>
<td>90-100</td>
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<td>0-59</td>
<td>F</td>
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Discipline/ Course/ Department/Policies

Classroom Etiquette:
No cell phones or beeping devices allowed.
Please be courteous to others, collegiate attitude is expected from all students.

Attendance Policy
Attendance to lectures and labs is mandatory in order to succeed in this course. You are encouraged to ask questions and to participate in class discussions. You are expected to be active in the laboratory.

The Science Learning Center (SLC) provides student services in the following subjects (majors and non majors): Biology, Botany, Microbiology, Anatomy and Physiology, Chemistry, Geology, Physics and Ecology.
The center is located in P-333 & P-334 and offers various resources all of which are free to the students. The SLC features tutors, software, videos, CDROM’s, internet, models, places to study quietly, places for group work, and other materials to assist in science classes. In order to access resources of the SLC a North Lake College ID Card is required. The subject specific schedule of tutors is updated every semester.

Contact information
Center Phone: 972-273-3273 Lab
Assistant: Tara Arrington
www.northlakebiology.com

INSTITUTIONAL POLICIES

NOTIFICATION OF ABSENCE DUE TO RELIGIOUS HOLY DAY(S)
Students who will be absent from class for the observance of a religious holiday must notify the instructor in advance. Please refer to the Student Obligations section of the college catalog for more explanation. You are required to complete any assignments or take any examinations missed as a result of the absence within the time frame specified by your instructor.
REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT (A430)
North Lake College provides academic accommodations to students with disabilities, as defined under ADA law. It is the student’s choice and responsibility to initiate any request for accommodations. If you are a student with a disability who requires such ADA accommodations, please contact North Lake College’s Disability Services Office in person (A430) or by phone at 972-273-3165.
http://www.northlakecollege.edu/resources/disability.html

ADMINISTRATIVE WITHDRAWAL
Students with valid extenuating circumstances may be eligible for an administrative withdrawal by the Dean of the Division in which the course or courses are taught. An administrative withdrawal will not be awarded to students who simply fail to withdraw prior to the last day to receive a “W.” The request for an administrative withdrawal must be made in writing to the Dean of the Division with any supporting documentation attached. This must occur before the last official day of the semester.

DROP POLICY
If you are unable to complete this course, you must officially withdraw by December 2. Withdrawing is a formal procedure which you must initiate; your instructor cannot do it for you. All Dallas County Community Colleges charge a higher tuition rate to students registering the third time for a course. This rule applies to the majority of credit and Continuing Education / Workforce Training courses. Developmental Studies and some other courses are not charged a higher tuition rate. Third attempts include courses taken at any DCCCD college since the fall 2002 semester. For further information, go online to:
http://www.DCCCD.edu/thirdcourseattempt

STOP BEFORE YOU DROP
For students who enrolled in college level courses for the first time in the fall of 2007, Texas Education Code 51.907 limits the number of courses a student may drop. You may drop no more than 6 courses during your entire undergraduate career unless the drop qualifies as an exception. Your campus counseling/advising center will give you more information on the allowable exceptions. Remember that once you have accumulated 6 non-exempt drops, you cannot drop any other courses with a “W”. Therefore, please exercise caution when dropping courses in any Texas public institution of higher learning, including all seven of the Dallas County Community Colleges. For more information, you may access:
https://www1.dcccd.edu/coursedrops

FINANCIAL AID STATEMENT
Students who are receiving any form of financial aid should check with the Financial Aid Office prior to withdrawing from classes. Withdrawals may affect your eligibility to receive further aid and could cause you to be in a position of repayment for the current semester. Students who fail to attend or participate are also subject to this policy.
To apply for financial aid in the DCCCD, students must complete FAFSA (Free Application for Federal Student Aid) on the web at:
http://www.fafsa.ed.gov

Financial Aid Certification of Attendance:
You must attend and participate in your on-campus or online course(s) in order to receive federal financial aid. Your instructor is required by law to validate your attendance in your on-campus or online course in order for you to receive financial aid. You must participate in an academic related activity pertaining to the course such as but not limited to the following examples:
initiating contact with your instructor to ask a question about the academic subject studied in the course;
submitting an academic assignment;
taking an exam;
completing an interactive tutorial;
participating in computer-assisted instruction;
attending a study group that is assigned by the instructor;
or participating in an online discussion about academic matters relating to the course.
In an online class, simply logging in is not sufficient by itself to demonstrate academic attendance. You must demonstrate that you are participating in your online class and are engaged in an academically related activity such as in the examples described above.

COUNSELING SERVICES (A430)
Counseling services for personal issues are provided to all students currently enrolled at North Lake College. These services are provided by licensed professionals who are bound by confidentiality (within ethical parameters) at no charge. With the assistance of a counselor, students are able to identify, understand, resolve issues and develop appropriate skills. To make an appointment call 972-273-3333 or visit A 430.

THE ACADEMIC SKILLS CENTER (A332)
The Academic Skills Center (ASC) is designed to provide assistance to students in the following areas:

- Labs for students enrolled in foreign language, Developmental Reading, and ESOL courses. One-on-one tutoring is available.
- The Writing Center can help students clarify writing tasks, understand instructors’ requirements, develop and organize papers, explore revision options, detect grammar and punctuation errors, and properly use and document sources. Rather than merely editing or “fixing” papers, tutors focus on helping students develop and improve their writing skills.
- The Online Writing Lab (OWL) allows students to submit papers to our writing tutors electronically and get feedback within 24-72 hours. The OWL can be accessed through eCampus. After logging on to eCampus, click on the Community Tab at the top. Type “Owl” in the search field and
“Go.” Next, click on the double drop-down arrows next to “NLC-OWL2,” and then click on “Enroll.” Once enrolled, students can receive services from the OWL.

For more information or to schedule a tutoring appointment, come by A-332 or call 972-273-3089.

**TESTING CENTER (A 425)**

Monday-Thursday: 8:30 a.m. – 8:00 p.m.

No tests will be issued after 7:00 p.m. Other cut-off times may be in effect for specific exams by the instructor’s direction. All exams collected at 8:00 p.m.

Friday-Saturday: 8:30 a.m.-3:30 p.m.

No tests will be issued after 2:30 p.m. Other cut-off times may be in effect for specific exams by the instructor’s direction. All exams collected at 3:30 p.m.

Sunday – CLOSED

If you instructor requires you to complete an exam in the Testing Center, be sure to have the following information when you request you test:

1. Instructor’s name
2. Subject, course number, and section number (exp: Speech 1311.7011)
3. Exam number (1st, 2nd, 3rd, etc.)
4. Exam deadline (Get this information from your instructor. The testing staff cannot look up this information on computers).

You should also bring the following supplies:

1. Pencil
2. Scantron answer sheet
3. A Test Request Form must be completed before entering the Testing Center.
5. Government or school issued photo identification is required & enforced.

You may not bring personal items into the Testing Center. This includes bags, cell phones, and pagers.

Please show courteous and cooperative behavior while using the services provided by the Testing Center.

DO NOT bring children to the Testing Center. You must make arrangements for the care of your children prior to your exam date. The police department will be notified of any unattended children.

DO NOT take any testing materials with you when you leave the Testing Center. This includes the test, answers, charts, scratch paper. These items will be attached to your test.

Questions? Please visit the Testing Center (A 425) or call 972-273-3160.

**Learning Activities, Outcomes, and Assessment**

1. Learning Activity: Solving problems
   
   a. **Learning Outcomes**: Students will apply Ohm’s to determine the energy dissipated by a resistor in a DC circuit
   
   b. **Assessment**: test problem
2. **Learning Activity:** Lab activity in which the students will investigate the magnetic field of a solenoid
   - **Learning Outcomes:** Students will calculate magnetic permeability of the air using the experimental data for a solenoid.
   - **Assessment:** lab report

3. **Learning Activity:** Solving problems
   - **Learning Outcomes:** The students will calculate the image location formed by a converging lens.
   - **Assessment:** test problem

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*The instructor reserves the right to amend the syllabus as necessary.*

**Course Schedule:**

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