Course Content
Physics 231N/226N/261N is the first semester of a two semester, calculus-based introductory physics course. In this course you will be introduced to some core topics in physics - the study of motion, or mechanics, and the propagation of waves in different media. The key objectives of the course include developing problem-solving skills, as well as preparing university students for professional careers in science and engineering.

Course Description
Through in-class activities, mini-lectures, laboratories, reading and homework assignments you will learn how to use critical thinking combined with mathematics to describe simple physical processes and develop basic problem solving skills. In addition to covering both theory and experiment, we will also use computer simulations to visualize simple physical systems in order to gain insight into the underlying physics. There will be both individual and group activities. Group activities will stress teamwork and communication skills. Unlike the traditional lecture format, in this class we will rely on interactive instruction and cooperative learning.

Prerequisite / Corequisite
Prerequisite: Math 211 (Calculus I) or equivalent with a grade of C or better. Pre- or co-requisite: Math 212 (Calculus II) or permission of instructor. Math proficiency is essential in the following areas: algebra, trigonometry, vectors, and introductory calculus.

Required Material:
• “University Physics with Modern Physics” by Young and Freedman.  
  You get an eText copy via Blackboard.
• Bound notebook for your Homework Journal (recommended).

Course Website
We will be using Blackboard for our course website.
Physics 226N/231N/261N - University Physics
Fall 2019
Old Dominion University

Instructor
Professor Raúl A. Briceño
Office: 325 OCNPS
Office Telephone: (757) 683-5813
e-mail: rbriceno@odu.edu
Office Hours: Thursdays at 4pm in the Physics Learning Center. Please consult Blackboard, Staff section, for current office hour information.

Class Meeting Times and Location
Tuesday and Thursday, 8:30am-10:20pm in OCNPS Room 142-144.
You must also enroll in a one lab session. Each class period will consist of lectures, interactive discussion, and problem solving. If you have to miss a class, it is your responsibility to find out what you missed.

Reading Assignments
You will be given a reading assignment each week. You may be given a few reading assignment questions on occasion. It is essential that you complete your reading assignments.

Homework
Physics is best learned by attempting to solve problems. This will allow you to become familiar with the concepts and comfortable with the mathematical methods required. A good portion of in-class time will be spent working on problems. In addition, you will be given one Homework Assignment each week. You will submit your homework solutions online using MasteringPhysics. This will be accessed through the Blackboard Physics 226N/231N/261N website.

MasteringPhysics
You will find a MasterPhysics in your blackboard website.

Homework Journal - Extra credit
You should also keep a "homework journal" which shows how you solved the problems from the homework assignments. Written work must show labeled diagrams, defined variables, the appropriate physics equation(s), the mathematical solution and units. If you turn in the homework journal before each exam with all of the questions from the homework worked out, you will receive extra credit in the exam.
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Group Work
Many class activities will require you to work in a group of 2-3 students. Formal group member assignments may be made, if needed, and groups may be periodically changed throughout the semester.

Laboratory
There are possible laboratory sessions meet on Wednesday, Thursday, and Fridays. You only need to attend one. Your Laboratory Instructor will provide you with complete details and expectations regarding labs and lab reports. You are allowed only one unexcused lab absence. If you have more than one unexcused lab absence, you will fail the course.

Examinations
This course will contain three in-class examinations and a comprehensive final exam. If you must miss an exam, contact Dr. Briceño as soon as possible. Make-up exams may be given on a case-by-case basis, but you must have a legitimate reason for missing an exam or you will receive a zero for the exam. All examinations are closed book.
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Exam Dates
Exam 1: Tuesday, September 19, 2019
Exam 2: Tuesday, October 22, 2019
Exam 3: Thursday, November 14, 2019
Final Exam: Tuesday, December 10, 2019: 8:30am – 11:30am.

Final Course Grade
A letter grade will be assigned at the end of the course on the basis of numerical scores obtained from the three in-class exams, the final exam, homework assignments, lab reports, and trend. Your score will be calculated two ways. The higher of the two will be used to assign your letter grade.

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<th>Formula Two</th>
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<td>In-class exams 45%</td>
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<td>Final Exam 30%</td>
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<td>Labs 15%</td>
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<tr>
<td>Homework Assignments 10%</td>
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If you already took the lab in Phys111 and you passed the class with a C or better, your grade will obtained from the higher of the two formulas below.

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<td>Homework Assignments 15%</td>
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Attendance
Attendance is mandatory. If you know that you are going to be absent, please inform me and your group members so they are prepared to be short-handed that day. Tardiness is never accepted. If you are more than 10 minutes late on exam days, you will receive an automatic 0% on the exam.
The Physics Learning Center
Help with any aspect of physics is available in the Physics Learning Center (2nd floor PSB), Monday-Friday 9am - 5pm.

The Physics Learning Center is a place where students can get together to work on their homework and get assistance, if needed, from physics faculty and grad students. No appointment is necessary. Students in all introductory classes are encouraged to drop by the Learning Center for help on homework, lab, lecture, other course material, or just for a place to work while in the physics building. Note: staffing of the Physics Learning Center starts the second week of classes. More info, including a detailed staffing schedule, can be found at the following link: http://www.odu.edu/physics/resources/learning-center

University Honor Code
You are expected to conform to the University Honor Code in all aspects of your conduct in this course. You may work with others on the homework assignments, however, what you submit must represent your own understanding of the problem. Submitting answers online for problems that you have not worked out is cheating. Misconduct of any form will not be tolerated. If you are ever unsure of what is permissible, please consult with Dr. Briceño for clarification.

Accommodation
Students are encouraged to self-disclose disabilities that have been verified by the Office of Educational Accessibility by providing Accommodation Letters to their instructors early in the semester in order to start receiving accommodations. Accommodations will not be made until the Accommodation Letters are provided to instructors each semester.