



Danville Community College

General College Physics

PHYS 201 & 202

SYLLABUS: 2025/2026

Piedmont Governor's School for Mathematics, Science, and Technology

Danville Community College

Instructor: Lisa Nelson-Fain

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Office: Room 222 (IALR)

Hours: 11:30 – 3:00 Monday-Friday

Website: www.pgsmst.com

Course Description:

This physics course includes investigations into the fundamental laws, theories, and mathematical concepts of physics. Students will meet challenging course standards through varied learning experiences designed to develop their computational skills and conceptual understanding of physics. Students will also acquire skills in problem-solving, mathematical reasoning, communication, and technology. This course is designed primarily for science and engineering majors.

DCC Catalogue Course Description:

Physics 201: “Covers classical mechanics and thermodynamics. Includes kinematics, Newton's laws of motion, work, energy, momentum, rotational kinematics, dynamic and static equilibrium, elasticity, gravitation, fluids, simple harmonic motion, calorimetry, ideal gas law, and the laws of thermodynamics. Part I of II. This is a UCGS transfer course. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week. Prerequisite: MTH 161 or MTH 167 with a grade of C or better. 4 credits.”

Physics 202: “Covers waves, electromagnetism, optics, and modern physics. Includes mechanical waves, sound, electrostatics, Ohm's law and DC circuits, magnetic forces and magnetic fields, electromagnetic induction, ray optics, wave optics, and selected topics of modern physics. Part II of II. This is a UCGS transfer course.

Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week. Prerequisite: PHY 201 with a grade of C or better and MTH 162 or MTH 167 with a grade of C or better. 4 credits”

Course Outcome:

Upon completion of this course, the student should:

- A mastery of the basic measurement principles and mathematical techniques that are important in problem solving.
- The use of the basic learning principle of proceeding from familiar or known information to the unknown.
- The use of scientific tools for data processing, evaluation, and presentation, such as calculators, spreadsheets, and other computer software.
- An understanding and the ability to predict the behavior of matter and energy under various conditions, rather than memorization of facts.
- An ability to recognize the investigative nature of science by observing the physical world, striving to interpret observations, and integrating ideas into a total understanding of physics.
- An appreciation of the interrelationship between physics and other disciplines.
- Students must have a C or better at the end of PHYS 201. If a student earns a grade below a C, conditions may not allow for the student to continue to the second semester course PHYS 202.

Course Textbook:

Textbook – Physics, 7th Edition, Giancoli

Course Materials:

Calculator, pens, and pencils.

2-inch 3-ring binder

Course Topics:

- Measurements, Units, and Vectors
- Kinematics: Motion in One and Two Dimensions
- Newton's Laws of Motion
- Work and Energy
- Collision and Linear Momentum
- Kinematics and Dynamics of an Extended Body Undergoing Rotation, Static Equilibrium, and Elasticity
- Gravitation
- Oscillations
- Fluid Mechanics
- Thermodynamics
- Mechanical Waves and Sound
- Electrostatics
- Circuits
- Magnetism
- Electromagnetic Induction
- Electromagnetic Waves
- Optics
- Modern Physics (Nuclear, Atomic)
- Laboratory Skills
- **NOTE:** The order of the content is subject to change at the instructor's discretion.

Course Guidelines: In addition to my classroom guidelines, all students are expected to follow the policies outlined in the PGSMST handbook.

1. **ATTENDANCE:** All students are expected to report to class each day. The PGSMST attendance policy will be strictly followed. All students must arrive to class on time to avoid interruption and missed instruction. Material is covered within a limited amount of time. All students must be present to obtain information during class time. Should a student miss class, it is the responsibility of the STUDENT to acquire any information that was given that day. **All students are expected to be prepared for each day, regardless of previous class absences. (This means if you are absent the day of a test or quiz, you will make up that test or quiz on the day of your return.)** All efforts will be made to accommodate special circumstances should the need arise.
2. **COMMUNICATION:** Email is the primary form of communication for the classroom. Students are encouraged to visit the classroom when needed. Emails sent outside of the school day (after 3 pm) are not guaranteed a response until the next school day. I make strong efforts to reply to emails within a 24-hour window (no including weekends).
3. **ASSIGNMENTS:** Students are expected to meet all deadlines for ALL assignments, labs included. It is recommended that students maintain a calendar/planner to keep up with due dates. In the event of an absence or inclement weather, students are still expected to submit their due assignments unless instructed otherwise. Accommodations will be made as needed based on requests and/or weather delays.
 - **Labs:** Laboratory exercises are vital to understanding the field of physics. Laboratory partners will be assigned by the instructor on the first day of lab and will be rotated with each new six weeks. Laboratory safety rules and procedures will be followed at all times. Any deliberate disregard for the laboratory safety rules and procedures will cost you of your lab privilege and a grade of zero will be assigned for the lab in which the event occurred. If warranted, other disciplinary action will be determined by the instructor and the director.
 - Lab partners will share duties in the lab, such as gathering materials, performing the actual steps of the experiment, recording data and cleanup. Lab data obtained during the experiment can be shared among your lab partner and/or assigned group. Any lab area not cleaned sufficiently before the students leave for the day will result in a 10-point penalty on that lab experiment for that lab group.

- Post-lab analysis/conclusions can be a collaborative effort but all students will be expected to contribute to the discussion. Each student must write their analysis and conclusion in his or her own words. Some lab experiments will require a formal post-lab report. The format and style of these will be covered before those particular labs. Unusually extensive labs will count as two lab grades, but these will be determined on a case-by-case basis.
- Lab safety is of the highest priority! Safety issues for each lab will be covered before the lab and must be included in the pre-lab assignment.
- Any missed labs due to illness or other absence will not be repeated due to time constraints. Therefore, if a student's absence is for a lab, they will receive a grade of zero. However, a student may be exempted from one (1) missed lab per semester as long as the absence is excused. There will be no carryovers. Whenever possible, please make your instructor aware of any known absences ahead of time.
- *Tests & Quizzes:* A quiz will be given at the end of each topic to assess the overall understanding of the material. Tests will be given at the end of the unit and will be announced at least one class session in advance. You will only be permitted to use a calculator when allowed by the instructor. Unexcused absences during a test or quiz will result in a grade of zero. You must have a written excuse for the absence to be considered excused. If the absence is excused, a makeup test or quiz will be given the day the student returns to class; students who refuse to make up the test or quiz upon returning will receive a zero. Whenever possible, please inform the instructor of known absences.
- **Extra Credit: There will be NO additional points for a final grade average offered. Bonus points will be offered through review activities before a test if time allows.**

Classroom Guidelines:

1. **BE PREPARED.** It is better to be proactive instead of reactive. Always be aware of your due dates. Due dates are announced in class and posted on the Calendar in Google Classroom.
2. **PARTICIPATE!** Ask questions. Interact with your peers. Don't go to sleep! Unless granted permission, work for Mrs. Fain is to be completed during Mrs. Fain's class.
3. **Electronic Devices. No phones in class!** Phones are to be placed in the phone holder as you come into class. If it is not there, then you will be marked absent from class. During formal assessments, smartwatches must also be kept in the holder. If you go to the restroom, the phone stays in here!
4. **Restroom/Water:** One person out of the room at a time to go to the restroom or to get water. Ask permission beforehand so that Mrs. Fain knows where you are going.
5. **Be Respectful of yourself and others!**

Course Grading: All assignments are graded on a point scale. The point value varies based on the type and length of the assignment.

Tests	50%
Quizzes	20%
Labs	30%

Grading Scale: 100-90 = A; 89-80 = B; 79-70 = C; 69-60 = D; 59-0 = F

Semester Grades will be determined by the two nine-week grades (40% each) and the semester exam, weighted 20%.

Policy on Academic Dishonesty:

Plagiarism WILL NOT be tolerated!! This includes but is not limited to giving/receiving answers on tests, quizzes, and labs; informing students in other classes of the content of a quiz or test; and copying information from another person's paper or research and passing it on as your own work. The internet is a useful tool, but information received from sources on the web must be cited properly. Any student who plagiarizes on any assignment will receive a **zero** for that assignment and be referred for a conference with the director and his/her parents/guardians.

Statement on Generative AI: AI can be a useful tool in the classroom setting, helping students improve their language and written communication skills and providing personalized feedback. However, the consequences of using AI as a replacement tool for writing processes and producing work include the potential for plagiarism and the lack of originality in the assignments. Additionally, AI-generated work may not account for the nuances of the topic or the specific requirements of the assignment.

I reserve the right to thoroughly investigate instances of plagiarism and potential AI-generated work. Methods of investigation can include student conferences, utility and analysis of Google history, and Internet reading assistant comparisons.

Campus Policies and Resources

Additional Academic Resources

- Online Learning Resources: <https://danville.libguides.com/canvas>
- Library Resources: <https://danville.edu/library>
- Assistance with Distance Learning: canvas@danville.edu
- Help & Support Link within Canvas Course site: <https://help.instructure.com>
- Help with my DCC Login/Multi-Factor Authentication (MFA): helpdesk@danville.edu or (434) 797-8500

Disability Accommodation Policy

Danville Community College is committed to insuring that students with documented disabilities have the opportunity to take part in educational programs and services in accordance with the requirements of the Americans with Disabilities Act (ADA) of 1990 and Section 504 of the Rehabilitation Act of 1973. Section 508 of the Rehabilitation Act (29 U.S.C. 794d), as amended in 1998, is a federal law that requires agencies to provide individuals with disabilities equal access to electronic information and data comparable to those who do not have disabilities, unless an undue burden would be imposed on the agency. Canvas is compliant with Section 508.

Students seeking accommodations must make an appointment with the ADA Coordinator in the Accessibility Services Office. Accommodations will be made in accordance with the Accommodation Letter from the ADA Coordinator. This letter should be presented to the instructor during the first week of class. For more information, go to

<https://danville.edu/accessibility-services>.

For more information on ADA Services:

- o Phone: (434) 797-8490
- o Email: ada@danville.edu

Testing Center

The Testing Center proctors both make-up tests and distance learning exams. It can also facilitate testing for distance learning students at off-campus locations. The Testing Center is located on the upper level of the Learning Resources Center. Exams can be administered as paper & pencil, Internet, or secure browser-based exams. Tests are proctored during regular LRC hours (<https://danville.libguides.com/hours>).

For additional information, contact the Testing Center:

- Phone: (434) 797-8404
- Email: testingcenter@danville.edu

Tutoring

1. **Face-to-Face:** DCC Tutoring Center. Trained peer and professional tutors are available to tutor specific subject areas and to assist students in developing effective learning strategies. Tutoring is designed to support and enhance your classroom learning. DCC's tutorial services are nationally certified by the College Reading and Learning Association. The Tutoring Center is located in the upper level of the Learning Resources Center.

For more information on tutoring services:

- Phone: (434) 797-6432
 - Email: tutoring@danville.edu.
2. **Online:** Brainfuse is a 24/7 online tutoring service provided free to students at Danville Community College. Students can get help in Math, Biology, Chemistry, Physics, Economics, Accounting, Statistics, Spanish, Writing and more. Access to Brain-fuse is provided through Canvas.

If you have any questions about Brainfuse please contact the Tutoring Center:

- Phone: (434) 797-6432
- Email: tutoring@danville.edu

DCC Title IX (Sexual Harassment and Misconduct): Your Rights and How to Make a Report

Consistent with its mission, Danville Community College is committed to providing a learning and working environment that emphasizes the dignity and worth of every member of its community. Sexual misconduct, which encompasses a range of behavior used to obtain sexual gratification against another's will or at the expense of another in any form will not be tolerated. Sexual misconduct includes sexual harassment, sexual assault, sexual exploitation, and sexual violence. Sexual harassment is unwelcome conduct of a sexual nature, which can include unwelcome sexual advances, requests for sexual favors, or other verbal, nonverbal, or physical conduct of a sexual nature. Thus, sexual harassment prohibited by Title IX can include conduct such as touching of a sexual nature; making sexual comments, jokes, or gestures; writing graffiti or displaying or distributing sexually explicit drawings, pictures, or written materials; calling students sexually charged names; spreading sexual rumors; rating students on sexual activity or performance; gender-based stalking or bullying; conditioning a benefit on submitting to sexual advances; or circulating, showing, or creating e-mails or websites of a sexual nature. Under Title IX, this constitutes sexual misconduct and includes rape or sexual assault. If you have been the victim of sexual harassment or other sexual misconduct, you have certain rights under Title IX. For additional information regarding your rights, please consult the DCC Title IX website at <https://danville.edu/titleix>.

For college Title IX officials to investigate cases, all faculty, staff members, and students are required to report incidents of sexual harassment including sexual violence in accordance with college policy and federal law. To file a complaint at Danville Community College go to the following link: https://cm.maxient.com/reportingform.php?DanvilleCC&layout_id=1

DCC Student Initiated Grievance Procedure: [DCC Handbook](#)

Emergency Response Procedures:

- Refer to DCC's resource page: [DCC Emergency Response Preparedness](#)
- Sign up for DCC Alert System to receive notification by phone and/or other devices [DCC Alert System](#)

TimelyMD (not applicable to currently enrolled high school students)

Danville Community College students have FREE, 24/7 access to virtual care services with TimelyCare — the virtual health and well-being platform from TimelyMD, designed for college students. Students do not need insurance to access TimelyCare services.

It can be accessed in the following ways:

- o In the Canvas course on the left hand menu under “TimelyCare”
- o By visiting <https://app.timelycare.com/auth/login>

Office of Veterans’ Affairs

DCC Campus is a “Military Friendly Campus,” and this office is dedicated to helping eligible veterans, dependents, reservists, guardsmen, and disabled veterans (service connected) in the pursuit of education, be it higher education, retraining, vocational skills or just lifelong learning. We will assist veterans in using their earned Veterans benefits through the Department of Veteran Affairs.

Please contact Mr. Sam Lowery:

- Phone: 434 797-8506
- Email: sam.lowery@danville.edu

Single Stop Program for Enhanced Student Access to Public Benefits

Single Stop, a one-stop shop for meeting the basic needs of families, is partnering with the Virginia Community College System (VCCS) and Danville Community College (DCC) to help students access public benefits without the hassle of applying through each individual public benefit agency. This resource will confidentially screen candidates for public benefits and provide them with specialized staff follow-up.

When a student works with Single Stop to apply for public benefits like the Supplemental Nutrition Assistance Program (SNAP), Women, Infants, and Children Nutrition Program (WIC), and Medicaid, there are no language barriers or waiting in line. The Single Stop screening tool determines eligibility for a wide variety of public benefit programs and dedicated Single Stop staff to help applicants navigate the process, as well as assistance with filing tax returns at no cost.

For more information about DCC’s collaboration with the Single Stop program:

- Email: singlestop@danville.edu
- Visit <https://danville.edu/single-stop>

FERPA: The Family Educational Rights and Privacy Act of 1974, Sec.438, PUB.L. 90-247, as amended, sets forth requirements governing the protection of students’ right to privacy in their education records and affords them a right to inspect such records. Visit: [DCC Catalog - Admissions Information](#)

**Danville Community College and Piedmont Governor's School
Syllabus Acknowledgment and Signature Page**

Course Title: _____

Course Number: _____

Instructor Name: _____

Semester: _____

By signing below, I acknowledge that I have received, read, and understand the syllabus for the course listed above. I understand the course policies, expectations, grading procedures, attendance requirements, academic integrity policies, and any other guidelines provided in the syllabus. I agree to abide by the policies set forth and will seek clarification from the instructor if I have any questions.

I also understand that the syllabus is subject to change, and any updates will be communicated by the instructor.

Student Name (Printed): _____

Student Signature: _____

Date: _____

Parent's Name (Printed): _____

Parent's Signature: _____

Date: _____