

Brazosport College

Syllabus for Physics 2326 – University Physics II - Electricity, Magnetism, and Light

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I. COURSE DESCRIPTION336

PHYS 2326 – University Physics II - Electricity, Magnetism, and Light CIP 4008015403

The second of a two-semester sequence of calculus-based physics. Topics include the principles of electricity, magnetism, light and modern physics. **Credit Hours: 3** (3 lecture, 0 lab)

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Gary Hicks

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PHYS 2326 – University Physics II - Electricity, Magnetism, and Light

A. Prerequisite: PHYS 2325 or the equivalent.

Required skill level: College-level reading, writing and math.

II. COURSE OBJECTIVES

The general objectives of this physics course are twofold: to provide the student with a clear and logical presentation of the basic concepts and principles of physics, and to strengthen an understanding of these concepts and principles through a broad range of interesting applications. In order to meet these objectives, emphasis is placed on sound physical arguments and discussions of everyday experiences. At the same time, an attempt is made to motivate the student through practical examples that demonstrate the role of physics in other disciplines. Additionally, Physics 2426 is a problem-solving course, and a student's progress is demonstrated by the ability to solve problems mathematically (using algebra, trigonometry, and calculus), and not just to quote facts, laws, or formulas.

III. STUDENT LEARNING OUTCOMES

1. Make calculations involving electric force and electric field due to given charge distributions (either finite or infinite). Solve problems involving capacitance and related capacitor factors (energy, potential difference, series and parallel combinations).
2. Solve problems involving electrical resistance (Ohm's law), including series and parallel combinations. Apply Kirchhoff's Rules to solve electric circuits.
3. Solve problems involving the effects of magnetic fields on moving charges, and the magnetic fields produced by electric currents (Faraday's law and Lenz's law).
4. Solve problems involving characteristics of light (geometric optics and wave nature).

IV. TEXTBOOK OR COURSE MATERIAL INFORMATION

A. Textbook

1. No textbook required material provided by instructor.

Required course materials are available at the Brazosport College bookstore, on campus or online at <http://brazosport.edu/bookstore/home.html>. Students are not under any obligation to purchase a textbook from the college bookstore. The same textbook is/may also be available from an independent retailer, including an online retailer.

For Distance Education Courses include the following: Contact the Brazosport College Bookstore with a credit card for course materials. Phone: 979-230-3651. Fax: 979-230-3653. Email: bookstore@brazosport.edu. Website: <http://brazosport.edu/bookstore/home.html>

B. Course Outline

This is a sample outline which may vary with individual instructors. It will also vary based on whether the course is a summer course or a fall/spring course. Students should contact their instructor for the outline of the course they are taking.

Date	Chapter	Date	Chapter
Jan. 15	19	Mar. 07	24
17	19	19	Test 2
22	19	21	25

24	20	26	26
29	20	28	26
31	20	Apr. 02	27
Feb. 05	21	04	27
07	21	19	27
12	Test 1	11	Test 3
14	22	16	28
19	22	18	28
21	22	23	29
26	23	25	30
28	23	30	30
Mar. 05	23	May 02	Final Exam (Test 4)

Important Semester Dates:

Last Day to Withdraw from Classes– Check BC Academic Calendar at
<http://catalog.brazosport.edu/index.php>

V. STUDENTS WITH DISABILITIES

Brazosport College is committed to providing equal education opportunities to every student. BC offers services for individuals with special needs and capabilities including counseling, tutoring, equipment, and software to assist students with special needs. For student to receive any accommodation, documentation must be completed in the Office of Disability Services. Please contact Phil Robertson, Special Populations Counselor at 979-230-3236 for further information.

VI. TITLE IX STATEMENT

Brazosport College faculty and staff are committed to supporting students and upholding the College District's non-discrimination policy. Under Title IX and Brazosport College's policy FFDA (Local), discrimination based on sex, gender, sexual orientation, gender identity, and gender expression is prohibited. If you experience an incident of discrimination, we encourage you to report it.

While you may talk to a faculty or staff member at BC, please understand that they are "Responsible Employees" and must report what you tell them to college officials. You can also contact the Title IX Coordinators directly by using the contact information below. Additional information is found on the Sexual Misconduct webpage at www.brazosport.edu/sexualmisconduct.

VII. ACADEMIC HONESTY

Brazosport College assumes that students eligible to perform on the college level are familiar with the ordinary rules governing proper conduct including academic honesty. The principle of academic honesty is that all work presented by you is yours alone. Academic dishonesty including, but not limited to, cheating, plagiarism, and collusion shall be treated appropriately. Please refer to the Brazosport College Student Guide for more information. This is available online at <http://brazosport.edu/students/for-students/student-services/>.

Academic dishonesty violates both the policies of this course and the Student Code of Conduct. In this class, any occurrence of academic dishonesty will be referred to the Dean of Student Services for prompt adjudication. Sanctions may be imposed beyond your grade in this course by the Dean of Student Services.

VIII. ATTENDANCE AND WITHDRAWAL POLICIES

Class attendance contributes to your final grade, but you must attend class to successfully complete the course. If you are unable to complete this course, you must complete and submit a withdrawal form with the registrar's office. If the student decides to drop out of the class it is the responsibility of the student to initiate a withdrawal before the withdrawal deadline in order to get a "W" on their transcript. If this is not done the student will receive a grade based on test grades and class grades earned during their attendance and absence (i.e. zeros on all missed materials, exams, skills tests, and final exam).

IX. COURSE REQUIREMENTS AND GRADING POLICY TESTING MAKE-UP POLICY

There will be four tests, the average of which will count 50% of the course grade. (The final exam is not comprehensive; it is simply test 5.) Homework is assigned for each chapter, and your average homework grade will count 50% of the course grade. Your grade is determined according to the following scale: $90\% \leq A \leq 100\%$; $80\% \leq B < 90\%$; $70\% \leq C < 80\%$; $60\% \leq D < 70\%$; $0 \leq F < 60\%$.

Grades are assigned as follows:

Grade	Final Average
A	90-100
B	80-89
C	70-79
D	60-69
F	Below 60

X. STUDENT CONDUCT STATEMENT

Students are expected to be aware of and follow the Brazosport College Student Code of Conduct. Students have violated the Code if they "fail to comply with any lawful directions, verbal or written, of any official at BC." Lawful directions include precautions and requirements taken to prevent the spread of COVID-19 at Brazosport College. Students who do not follow safety requirements, including the wearing of a mask, may be removed from class by their instructor and referred to the Dean of Student Services.

XI. CAMPUS CLOSURE STATEMENT

Brazosport College is committed to the health and safety of all students, staff, and faculty and adheres to all federal and state guidelines. The College intends to stay open for the duration of the semester, and provide access to classes and support services on campus in the safest way possible. The College will also comply with lawful orders given by applicable authorities, including the Governor of Texas, up to and including campus closure. It is possible that on campus activities may be moved online and/or postpone if such orders are given.

XII. STUDENT RESPONSIBILITIES

Students are expected to fully participate in this course. The following criteria are intended to assist you in being successful in this course:

1. Understand the syllabus requirements
2. Use appropriate time management skills
3. Communicate with the instructor
4. Complete course work on time, and
5. Utilize online components (such as Desire2Learn) as required.

XIII. OTHER STUDENT SERVICES INFORMATION

Brazosport College's main phone number is 979-230-3000 and the main web page is www.brazosport.edu.

Information about the Library is available at <http://brazosport.edu/students/for-students/places-services/library/about-the-library>.

For assistance with online courses, an open computer lab, online and make-up testing, audio/visual services, and study skills, visit Learning Services next to the Library, call 979-230-3253, or visit <http://brazosport.edu/students/for-students/places-services/learning-services/>.

For drop-in math tutoring, the writing center, supplemental instruction and other tutoring including e-tutoring, visit the Student Success Center, call 979-230-3527, or visit <http://brazosport.edu/students/for-students/student-success-center/math-center/>

To contact the Physical Sciences and Process Technologies Department call 979-230-3618.

The Student Services provides assistance in the following:

Counseling and Advising	979-230-3040
Financial Aid	979-230-3294
Student Life	979-230-3355

To reach the Information Technology Department for computer, email, or other technical assistance call the Helpdesk at 979-230-3266.



Get the information you need – when you need it. Click <http://geni.us/BRAZO> to install **BC Connect** on your mobile device to receive reminders, explore careers, map your educational plan, be in the know about events, find out about scholarships, achieve your goals and much more.