

## Midland College Syllabus

2021 - 2022

PHYS 2426 L

University Physics II Lab

3 Semester Credit Hours

(3 Lecture/3 Lab)

*Core Curriculum Course*

### Instructor Information:

Instructor: [Click here to enter text.](#)

Phone: [Click here to enter text.](#)

Office Hours: [Click here to enter text.](#)

Office: [Click here to enter text.](#)

Email: [Click here to enter text.](#)

**Notice:** Students MUST actively participate by completing an academic assignment required by the instructor by the official census date. Students who do not actively participate in an academically-related activity may be reported as never attended and dropped from the course.

### Course Description:

Laboratory experiments supporting theoretical principles presented in lecture involving the principles of electricity and magnetism, including circuits, electromagnetism, waves, sound, light, and optics; experimental design, data collection and analysis, and preparation of laboratory reports. Prerequisites: PHYS 2425 and MATH 2414.

### Core Objectives:

This course fulfills four hours of the Life and Physical Science requirement in the Midland College **Core Curriculum**. The Core Curriculum is a set of courses that provide students with a foundation of knowledge, skills and educational experiences that are essential for all learning. The URL for the Core Curriculum is available in the [Midland College Catalog](#). As part of the core, this course addresses the following four objectives:

Critical Thinking Skills – Students will demonstrate critical thinking skills by analyzing problems and applying the principles and concepts listed in the learning outcomes. They will do this in course assignments and exams including a departmental final exam. They will perform at least one lab related to each subject area listed in the first 11 learning outcomes.

Communication Skills – Students will demonstrate communication skills in written, oral, and visual form within the classroom setting through instructor posed questions, collaborative peer assignments, exams and individual and group lab reports.

Empirical and Quantitative Skills – Students will demonstrate empirical and quantitative skills by analyzing problems and applying the principles and concepts listed in the learning outcomes. They will do this in course assignments and exams including a departmental final exam. They will perform at least one lab in each of the areas listed in the first 11 learning outcomes.

Teamwork – Students will demonstrate their ability to perform in teams during the laboratories as they work effectively to perform experiments, manipulate equipment, take and record data, and analyze that data toward drawing conclusions relevant to the subject of each lab. They will perform at least one lab in each of the areas listed in the first 11 learning outcomes performing these labs in small groups of two, three or four members.

### **Text, References and Supplies:**

- Lecture Textbook: Knight, Physics for Scientists and Engineers with Modern Physics – A Strategic Approach, 4<sup>th</sup> ed; Pearson.
  - ISBN: 978-0-13-394265-1
- Laboratory Textbook: No Lab Manual Required

### **Student Learning Outcomes:**

Upon successful completion of this course, students will:

1. Prepare laboratory reports that clearly communicate experimental information in a logical and scientific manner.
2. Conduct basic laboratory experiments involving electricity and magnetism.
3. Relate physical observations and measurements involving electricity and magnetism to theoretical principles.
4. Evaluate the accuracy of physical measurements and the potential sources of error in the measurements.
5. Design fundamental experiments involving principles of electricity and magnetism.
6. Identify appropriate sources of information for conducting laboratory experiments involving electricity and magnetism.

### **Student Contributions, Responsibilities and Class Policies:**

Students will be expected to comply with the policies outlined in the [Midland College Catalog](#). Instructor policies concerning attendance and academic behavior are consistent with the policies in the catalog. Regular attendance is required to do well in this class.

Students will be evaluated based on the results of assessments outlined in the syllabus and Instructor Handout.

### **Attendance Policy:**

It is the responsibility of the students to know the policies and procedures associated with absences. These policies are set by instructors. Excused absences

may include, but are not limited to, illness, severe weather, and death in the family. Instructors will determine whether or not an absence is excused. Please visit the [Midland College Catalog](#)

**Withdrawal Policy:**

Students who have enrolled in a Texas public institution of higher education as a first-time freshman in fall 2007 or later are permitted to drop no more than six courses during the entire undergraduate career. This limit includes all transfer work taken at a Texas institution of higher education and to second baccalaureate degrees. This statute was enacted by the State of Texas in spring 2007 (Texas Education Code 51.907). Any course that a student drops after Census Day is counted toward the six-course limit if “(1) the student was able to drop the course without receiving a grade or incurring an academic penalty; (2) the student’s transcript indicates or will indicate that the student was enrolled in the course; and (3) the student is not dropping the course in order to withdraw from the institution.” Please visit the [Midland College Catalog](#)

**Scholastic Dishonesty:**

Midland College does not tolerate scholastic dishonesty or academic misconduct in any form. Please read the Student Rights & Responsibilities section in the [Midland College Catalog](#) for more information.

**Evaluation of Students:**

The course grade will be determined as follows:

Assessments	Percentage of Grade	Grade Range
Lab Reports	90%	90-100 A
Participation	10%	80-89 B
		70-79 C
		60-69 D
		0-59 F

**Course Schedule:**

This class meets for 3 lecture hours per week and 3 lab hours per week. For a tentative schedule of the class meetings and material to be covered during those meetings, please refer to the schedule distributed to each student on the first class meeting (See Instructor Handout).

**Non-Discrimination Statement**

Midland College does not discriminate on the basis of race, color, national origin, sex, disability or age in its programs and activities. The following individual has been designated to handle inquiries regarding the non-discrimination policies:

**Tana Baker**

Title IX Coordinator/Compliance Officer

3600 N. Garfield, SSC 131

Midland, Texas 79705

(432) 685-4781

[tbaker@midland.edu](mailto:tbaker@midland.edu)

For further information on notice of non-discrimination, visit the ED.gov Office of Civil Rights website, or call 1 (800) 421-3481.

**Americans with Disabilities Act (ADA) Statement:**

Midland College provides services for students with disabilities through Student Services. In order to receive accommodations, students must visit [www.midland.edu/accommodation](http://www.midland.edu/accommodation) and complete the Application for Accommodation Services located under the Apply for Accommodations tab. Services or accommodations are not automatic, each student must apply and be approved to receive them. All documentation submitted will be reviewed and a "Notice of Accommodations" letter will be sent to instructors outlining any reasonable accommodations.

**Math & Science Division Information:**

Division Office: AHSF 124

(432) 685-4561

Division E-Mail: [mns@midland.edu](mailto:mns@midland.edu)

Department Chair: Dr. Brian Flowers

(432) 685-4586

Dean: Dr. Miranda Poage

Secretary: Sarah Anderson

Clerk: Liliana Orcutt

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