

# Physics 2425 - University Physics I

## Faculty Information

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**Name:** Professor Name Here  
**E-Mail:** [Professor@odessa.edu](mailto:Professor@odessa.edu)  
**Phone:** 432-###-####  
**Office:** ####

### Office Hours

**Campus Office Hours:**

(Office Hours Here)

**Online Office Hours:**

(Online Office Hours Here)

### About Your Instructor

*(Enter information about yourself here.)*

### Preferred Method of Communication:

*(Use this section to define what method of communication you would prefer to get from students. If you want them to email you, tell them to use the email address given above. If you want them to call you, tell them to call you on your office phone during the hours you will be in your office, or your cell phone, etc.)*

### Expectations for Engagement for Instructor:

As an instructor, I understand the importance of clear, timely communication with my students. In order to maintain sufficient communication, I will

- provide my contact information at the beginning of the syllabus;
- respond to all messages within 24 hours if received Monday through Thursday, and within 48 hours if received Friday through Sunday; and,
- notify students of any extended times that I will be unavailable and provide them with alternative contact information (for me or for my supervisor) in case of during the time I am unavailable.

As an instructor, I understand that my students will work to the best of their abilities to fulfill the course requirements. In order to help them in this area, I will

- provide clear information about grading policies and assignment requirements in the course syllabus, and
- communicate any changes to assignments and/or to the course calendar to students as quickly as possible.

As an instructor, I understand that I need to provide regular, timely feedback to students about their performance in the course. To keep students informed about their progress, I will

- post grades for discussion postings within one week of the discussion thread closing.
- provide grades for major assignments within 2 weeks of the due date or at least 3 days before the next major assignment is due, whichever comes first.

# Textbook Information and Required Hardware/Software

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**Textbook(s):**

*Essential University Physics, Vol 1. By R. Wolfson, Addison-Wesley Publishing.*

**Hardware:**

Scientific Calculator

## Information About the Course

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**Course Description**

PHYS 2425 University Physics I

(40.0801.5403) (3-3) 4 hours

A study of classical mechanics, and thermodynamics for students aspiring to professional academic degrees in the fields of physical science, various engineering specialties, and mathematics. The student will be involved in reading information or problems and using critical thinking skills and mathematics to organize the information or to arrive at an answer; also requires student writing skills in order to communicate the information acquired in a written format. Lab fee required. (COs 1, 2, 3, 4)

**Course Prerequisites:**

Prerequisite or Corequisite: MATH 2413.

**Course Topics:**

Kinematics  
Newton's Laws  
Work and Energy  
Gravity  
Momentum  
Rotary Motion  
Angular Momentum  
Thermodynamics

## Grading

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Type of Assignment	Percentage/Points	Learning Objective
Homework	25	1,2,3,4,5,6,7,8,9,10,11,13
Laboratory	20	1,2,3,4,5,6,7,8,9,11
Research	5	1,2,3,4,5,6,7,8,9,11
Exams	50	1,2,3,4,5,6,7,8,9,11
	100%	TOTAL

### **Grading Scale:**

**“A” = 90-100**

**“B” = 80-89**

**“C” = 70-79**

**“D” = 60-69**

**“F” = 0-59**

**Grading Policy:** While the laboratory constitutes only 20% of the course grade, it is important to understand that Physics is fundamentally a laboratory-based science. **Therefore, a failing grade in the lab will result in a failing grade in the course.** While you will never receive a score lower than that numerically earned, I do reserve the right to rescale the grades as I see fit at any time during the semester.

Please understand that this is a required course for the several programs at OC and provided in order to prepare you for both further academic and real-world work. Quality work and active participation is expected and not to be negotiated. As a general policy, grades will be taken in class. Any written assignments or tests will be graded outside of class. You can expect feedback on assignments within a week's time.

## Student Course Participation

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**As a student, I understand that I am responsible for keeping up with the course. To help with this, I will**

- identify alternative computer and internet access in case my primary computer crashes or my internet service is unavailable;
- recognize that the college provides free wi-fi and computer labs during regular campus hours to help me with accessing my course; and,
- understand that my instructor does not have to accept my technical issues as a legitimate reason for late or missing work if my equipment or service is unreliable.

**As a student, I understand that it is my responsibility to communicate quickly with the instructor any issue or emergency that will impact my involvement with or performance in the class. This includes, but is not limited to**

- getting “kicked off” of the system during tests or quizzes;
- having trouble submitting assignments; and
- dealing with a traumatic personal event.

**As a student, I understand that it is my responsibility to understand course material and requirements and to keep up with the course calendar. While my instructor is available for help and clarification, I will**

- seek out help from my instructor and/or from tutors;
- ask questions if I don't understand; and
- access my course several times during the week to keep up with assignments and announcements.

## Course Policies

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### **Disclaimer**

This syllabus is tentative and subject to change in any part at the discretion of the instructor. Any changes will be in accordance with Odessa College policies. Students will be notified of changes, if any, in timely manner.

### Original Effort

The work submitted for this course must be original work prepared by the student enrolled in this course. Efforts will be recognized and graded in terms of individual participation and in terms of ability to collaborate with other students in this course.

### Digital Protocol

Cell phones must be placed on either *vibrate* or *silent* mode and are to be accessed in emergency cases only. The use of laptops or any other digital device is permitted in order to facilitate note-taking relative to instruction. Any written assignments will be submitted electronically on Blackboard. **The electronic recording of the time on Blackboard will be considered the time of assignment submission. Take necessary steps to ensure that your assignments are submitted on "Blackboard" time.** Back-up and/or additional copies of all assignments submitted is encouraged. **Computers/printers are available to OC students in the LRC (301-303); therefore, not having access to a computer due to technical issues (crash; corrupted files) will not be considered as an acceptable reason for not completing assignments.** If there is a loss of server connection with Odessa College due to maintenance, then an email will be sent to student with pertinent information and status reports. Assignments submitted electronically need to be **WORD documents (doc or docx).**

### Attendance Policy

Students are expected to attend class regularly. Attendance will be recorded.—Excessive absences will be grounds for disciplinary action, and will be determined on a case-by-case basis. If you are more than 15 minutes late to class or leave class early without notifying the instructor, this will count as an absence. Students are permitted \_\_\_\_\_ absences before \_\_\_\_\_.

### Grade Inquiry Policy

It is the responsibility of the individual taking this course to maintain accurate track of assignment submissions and grades. There will be opportunities during the semester to meet with the instructor to discuss your academic progress. Contact the instructor to schedule an appointment. Class time will not be used for grade inquiries. All grades are final.

### General Course Requirements

1. Attend class and participate.
2. Contribute and cooperate with civility.
3. **Submit assignments on time. Late work will not be accepted. Medical and/or family circumstances that warrant an extension on assignments need to be presented to the instructor. Extensions will be allowed at the instructor's discretion.**

### Incomplete Policy

An 'Incomplete' grade may be given only if:

1. The student has passed all completed work
2. If he/she has completed a minimum of 75% of the required coursework. A grade of an "I" will only be assigned when the conditions for completions have been discussed and agreed upon by the instructor and the student.

## Core Objectives (COs)

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### Description of Core Objectives (CO's)

Given the rapid evolution of necessary knowledge and skills and the need to take into account global, national, state, and local cultures, the core curriculum must ensure that students will develop the essential knowledge and skills they need to be successful in college, in a career, in their communities, and in life. Therefore, with the assistance of the Undergraduate Education Advisory Committee, the Coordinating Board has approved guidelines for a core curriculum for all undergraduate students in Texas.

Through the application and assessment of objectives within the institution's core curriculum, students will gain a foundation of knowledge of human cultures and the physical and natural world; develop principles of personal and social responsibility for living in a diverse world; and advance intellectual and practical skills that are essential for all learning. Appropriate Odessa College faculty periodically evaluates all of the courses listed in the descriptions on the following pages of this catalog and keys them to Odessa College's Institutional Core Objectives (ICOs), as defined by the Texas Higher Education Coordinating Board (THECB). (Source: *Odessa College Catalog of Courses 2012-2013, page 73*)

**Odessa College's Core Objectives (COs):**

1. *Critical Thinking Skills (CT)* - to include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information
2. *Communication Skills (COM)* - to include effective development, interpretation and expression of ideas through written, oral and visual communication
3. *Empirical and Quantitative Skills (EQS)* - to include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions
4. *Teamwork (TW)* - to include the ability to consider different points of view and to work effectively with others to support a shared purpose or goal
5. *Social Responsibility (SR)* - to include intercultural competence, knowledge of civic responsibility, and the ability to engage effectively in regional, national, and global communities
6. *Personal Responsibility (PR)* - to include the ability to connect choices, actions and consequences to ethical decision-making

## Discipline Core Statement





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### Life and Physical Sciences

Each course included in the Core Curriculum for Life and Physical Sciences was selected based upon its ability to satisfy the requirements of this Foundational Component Area. Lab courses were selected to provide students with options that are likely to transfer in cases where the student does not complete the Core.

Core courses in the Life and Physical Sciences focus on describing, explaining, and predicting natural phenomena using the scientific method. These courses also involve the understanding of interactions among natural phenomena and the implications of scientific principles on the physical world and on human experiences.

 = Required Core Objectives

Foundational Component Area	SCH	CT	COM	EQS	TW	SR	PR
Life and Physical Sciences	6						

Courses in this category focus on describing, explaining, and predicting natural phenomena using the scientific method.  
 Courses involve the understanding of interactions among natural phenomena and the implications of scientific principles on the physical world and on human experiences.

# Course Objectives

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General objectives for this course include:

1. Determine the components of linear motion (displacement, velocity, and acceleration), and especially motion under conditions of constant acceleration.
2. Solve problems involving forces and work.
3. Apply Newton's laws to physical problems.
4. Identify the different types of energy.
5. Solve problems using the principles of conservation of energy.
6. Use the principles of impulse, momentum, and collisions.
7. Use the principles of impulse and momentum to solve problems.
8. Determine the location of the center of mass and center of rotation for rigid bodies in motion.
9. Discuss rotational kinematics and dynamics and the relationship between linear and rotational motion.
10. Solve problems involving rotation and linear motion.
11. Define equilibrium, involving the different types of equilibrium.
12. Solve problems involving the First and Second Laws of Thermodynamics.

# Learning Outcomes

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Outcome	CO
1,2,3,4,5,6,7,8,9,10,11,13	<i>Critical Thinking Skills</i> - to include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information
1,2,3,4,5,6,7,8,9,10,11,13	<i>Communication Skills</i> - to include effective development, interpretation and expression of ideas through written, oral and visual communication
1,2,3,4,5,6,7,8,9,10,11,13	<i>Empirical and Quantitative Skills</i> - to include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions
1-4, 6	<i>Teamwork</i> - to include the ability to consider different points of view and to work effectively with others to support a shared purpose or goal
	<i>Social Responsibility</i> - to include intercultural competence, knowledge of civic responsibility, and the ability to engage effectively in regional, national, and global communities
	<i>Personal Responsibility</i> - to include the ability to connect choices, actions and consequences to ethical decision-making

# Odessa College Policies

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## Tuition Discounts

The **"First Course is Free"** discount waives standard tuition and fees for the first 3 credit hours taken at Odessa College. The discount applies to high school graduates taking their first class at Odessa College as well as transfer students taking their first class at Odessa College.

The **"Academic Progress Discount"** provides a 10% tuition discount upon completion of 30 credit hours until reaching 45 credit hours. It provides a 20% discount upon completion of 45 credit hours until reaching 60 credit hours. Student must maintain a 2.0 GPA to remain eligible for the discount.

## Academic Policies

Note that the OC Student Handbook states (page 32) that "[i]n cases of academic dishonesty, the instructor has the authority to impose appropriate scholastic penalties. Complaints or appeals of disciplinary sanctions may be filed in accordance with the college due process procedure. Copies of the college due process procedure are available in the office of The Director of Student Life (CC104)."

For more information on your rights and responsibilities as a student at Odessa College, please refer to the following: *The 411 of OC: Student Handbook 2012-2013*; *Student Rights & Responsibilities* <http://www.odessa.edu/dept/studenthandbook/handbook.pdf>

## Scholastic Dishonesty

Scholastic dishonesty shall constitute a violation of these rules and regulations and is punishable as prescribed by board policies. Scholastic dishonesty shall include, but not be limited to, cheating on a test, plagiarism and collusion.

### "Cheating on a test" shall include:

- Copying from another student's test paper
- Using test materials not authorized by the person administering the test.
- Collaborating with or seeking aid from another student during a test without permission from the test administrator.
- Knowingly using, buying, selling, stealing or soliciting, in whole or in part, the contents of an unadministered test.
- The unauthorized transporting or removal, in whole or in part, of the contents of the unadministered test.
- Substituting for another student, or permitting another student to substitute for one's self, to take a test.
- Bribing another person to obtain an unadministered test or information about an unadministered test.
- "Plagiarism" shall be defined as the appropriating, buying, receiving as a gift, or obtaining by any means another's work and the unacknowledged submission or incorporation of it in one's own written work.
- "Collusion" shall be defined as the unauthorized collaboration with another person in preparing written work for fulfillment of course requirements. (Source: *Odessa College Student Handbook 2012-2013, page 29-30*)

## Special Populations/Disability Services/Learning Assistance

Odessa College complies with Section 504 of the Vocational Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990. If you have any special needs or issues pertaining to your access to and participation in this or any other class at Odessa College, please feel free to contact me to discuss your concerns. You may also call the Office of Disability services at 432-335-6861 to request assistance and accommodations.

Odessa College affirms that it will provide access to programs, services and activities to qualified individuals with known disabilities as required by **Section 504 of the Rehabilitation Act of 1973 and Title II of the Americans with Disabilities Act of 1990 (ADA)**, unless doing so poses an undue hardship or fundamentally alters the nature of the program or activity. Disabilities may include hearing, mobility or visual impairments as well as hidden disabilities such as chronic medical conditions (arthritis, cancer, diabetes, heart disease, kidney disorders, lupus, seizure disorders, etc.), learning disabilities or psychiatric or emotional disabilities. A student who comes to Odessa College with diagnosed disabilities which may interfere with learning may receive accommodations when the student requests them and submits proper documentation of the diagnosis. A Request for Accommodations form and guidelines for beginning the request process are available in the OC Help Center or on the Odessa College web site at <http://www.odessa.edu/dept/counseling/disabilities/index.htm>. The college strives to provide a complete and appropriate range of services for students with disabilities such as assistance with testing, registration, information on adaptive and assistive equipment, tutoring, assistance with access and accommodations for the classroom where appropriate. For information regarding services, students with disabilities should contact the Office of Disability Services in the OC Help Center located in Room 204 of the Student Union Building or call 432-335-6433. (Source: *Odessa College Catalog of Courses 2012-2013, page 52*)

### **Dropping a Course or Withdrawing from College**

Students wishing to drop a non-developmental course may do so online using WebAdvisor, at the Wrangler Express, or Registrar's Office. A student wishing to drop a developmental course or withdraw from college should obtain a drop or withdrawal form from the Wrangler Express or the Registrar's Office. Students are encouraged to consult with instructors prior to dropping a class. Students may not completely withdraw from the college by use of the Web. Students must drop a class or withdraw from college before the official withdrawal date stated in the class schedule. Students who are part of the Armed Forces Reserves may withdraw with a full refund if the withdrawal is due to their being ordered into active duty. A copy of the student's orders must be presented to the Registrar's Office at the time of the withdrawal. For details, please contact the Office of the Registrar. **No longer attending class does not automatically constitute withdrawal from that class, nor does a student's notification to an instructor that the student wishes to be dropped. Failure of a student to complete the drop/withdrawal process will result in a grade of "F."** (Source: *Odessa College Catalog of Courses 2012-2013, page 36*)

## Student Support Services and Technical Support

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### **Blackboard Support**

#### **I can't log into my Blackboard Course, who do I contact?**

Contact the Student Success Center: 432-335-6673 or online at [https://www.odessa.edu/dept/ssc/helpdesk\\_form.htm](https://www.odessa.edu/dept/ssc/helpdesk_form.htm). The SSC can provide you with your Blackboard login name. If you are not sure what your password is, they can reset your password.

#### **I'm having a problem in my Blackboard Course, who do I contact?**

For any problem that you have in your online course, always contact your Instructor first. Refer to the Instructor's Contact Information area of the Syllabus for their preferred method of contact and the expected response time.

#### **Additional Blackboard Help Resources:**

Service	Assistance Provided	Available
<b>Blackboard Help for Students</b>	Website with a searchable list of topics on how to navigate and use Blackboard for online courses.	Online <a href="#">Click here.</a>



<b>Blackboard On Demand Learning Center for Students</b>	This website provides an extensive list of short tutorial videos for student activities performed in Blackboard.	Online <a href="#">Click here.</a>
<b>Blackboard Collaborate: First Time Users</b>	If you have never used Blackboard Collaborate before, this website provides a system requirements check, configuration instructions, and training and resources area.	Online <a href="#">Click here.</a>
<b>Blackboard Collaborate: Essentials for Participants</b>	This website provides essential information for Participants of Collaborate sessions. Any Collaborate user, whether first-time or experienced, would benefit from reviewing the information here.	Online <a href="#">Click here.</a>

### Student E-mail Support

#### How do I set up, access, or update my Odessa College Student E-mail account?

Go to this website and follow the directions on the page: <http://www.odessa.edu/gmail/>.

#### I can't access my student email! I forgot my password!

Contact the Student Success Center: 432-335-6673 or online at [https://www.odessa.edu/dept/ssc/helpdesk\\_form.htm](https://www.odessa.edu/dept/ssc/helpdesk_form.htm). They can provide you with assistance in accessing your student email (created by OC) and can also assist with resetting your student email password. Make sure to have your student ID number available!

**Your Blackboard login name is associated with your OC created student email account. All Correspondence for this course will be submitted using your Odessa College student email address.**

### Support for Students with Disabilities

#### How do I contact the Office of Special Populations?

<b>Main Number</b>	432-335-6861
<b>Campus Location</b>	SUB 204N in the Student Union Building
<b>Email</b>	Becky Rivera-Weiss - <a href="mailto:brivera@odessa.edu">brivera@odessa.edu</a>
<b>Website</b>	To find out more about services provided by the Special Populations office, please visit: <a href="http://www.odessa.edu/dept/counseling/disabilities/index.htm">http://www.odessa.edu/dept/counseling/disabilities/index.htm</a>

### Learning Resources Center (LRC; Library)

#### How do I contact the Learning Resource Center?

<b>Main Number</b>	432-335-6640
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<b>FAQ Service</b>	LibAnswers: <a href="http://libanswers.odessa.edu">http://libanswers.odessa.edu</a>
<b>Contact a Specific OC Librarian</b>	Pat Quintero at 432/335-6350 or <a href="mailto:pquintero@odessa.edu">pquintero@odessa.edu</a> Donna Clark at 432/335-6645 or <a href="mailto:dclark@odessa.edu">dclark@odessa.edu</a> Carolyn Petersen at 432/335-6641 or <a href="mailto:cpetersen@odessa.edu">cpetersen@odessa.edu</a>
<b>LRC Services and Guidelines Website</b>	<a href="https://www.odessa.edu/dept/library/services/index.htm">https://www.odessa.edu/dept/library/services/index.htm</a>

**Equipment and Services Provided:**

The Murry H. Fly Learning Resources Center (LRC) supports the college's curriculum resulting in a primary emphasis on each student's individual study and research needs. The faculty and staff work with the LRC's Technical Services and Public Services Departments in choosing materials to support all college programs. More than 59,000 books, 50,000 electronic books, 350 current periodicals, 6,700 media holdings, eight newspapers, and 60 databases are available to enhance the educational process.

Equipment/Services Available	Used For	Available
Books, videos, CDs	Research	On Campus and Online
Specialized databases not available online for free	Research	On Campus and Online
Magazines, newspapers, & scholarly journals	Research	On Campus and Online
Computers	Research & word processing	On Campus
Selected textbooks for short-term use	Course work	On Campus
Trained staff	Answer "where do I find?"	On Campus and Online
Tutorials	Tips for research strategies	On Campus and Online
Photocopiers, VHS/DVD players, FAX service	For course work	On Campus
Quiet study areas	For course work	On Campus

**Student Success Center (SSC) / AVID Center**

**How do I contact the Student Success Center?**

*Appointments are preferred, but walk-ins will be served as soon as possible.*

<b>Main Number</b>	432-335-6673
<b>Campus Location</b>	1st floor of the Library
<b>Website with Additional Help and</b>	<a href="http://www.odessa.edu/dept/ssc/">http://www.odessa.edu/dept/ssc/</a>

<b>Information</b>	
<b>Live Online Assistance / Chat</b>	<a href="#">Click Here</a> <i>(If no one is currently available, please put your email and question(s) in the appropriate areas of the form and hit 'send.' Your question(s) will be addressed as soon as an SSC staff member becomes available.)</i>

**Equipment and Services Provided:**

The purpose of the Odessa College Student Success Center is to provide assistance to students in meeting their academic and career goals. The SSC strives to continually provide new and updated resources that will empower all Odessa College students to succeed at OC and beyond.

Equipment/Services Available	Used For	Available
Tutoring by CRLA & Avid trained tutors	Understanding course work and motivation	On Campus and Online <a href="#">Click here for more information.</a>
Student Information Seminars (SIS)	Demo email, Blackboard and SSC resources	On Campus and Online <a href="#">Click here for more information.</a>
Study Skills	Tools needed to succeed	On Campus and Online <a href="#">Click here for more information.</a>
Basic Technology	To navigate classes, email, etc.	On Campus and Online
Plato Web	Practice for TEAS test and basic math, science, etc.	On Campus and Online <a href="#">Click here for more information.</a>
Project T.I.E.	Practice for GED/COMPASS	On Campus and Online <a href="#">Click here for more information.</a>
Student Orientation/Tour	Show individual students where their classes will be. SIS presentation	On Campus
M.O.R.E. Mentoring Program	Networking, tips to navigate college life successfully	On Campus <a href="#">Click here for more information.</a>
Smart thinking	Online tutoring service. Connect with an e-structor and interact with a live tutor.	Online <a href="#">Click here for more information.</a>

## Veterans Support

### How do I contact the office for Veteran's Outreach?

<b>Main Number</b>	432-335-6833
<b>Campus Location</b>	204M (Help Center) in the Student Union Building
<b>Email</b>	Gloria Rangel - <a href="mailto:grangel@odessa.edu">grangel@odessa.edu</a>
<b>Website</b>	To find out more about services provided by the Veteran's Outreach office, please visit: <a href="http://www.odessa.edu/dept/counseling/veterans/index.htm">http://www.odessa.edu/dept/counseling/veterans/index.htm</a>