FLORIDA SOUTHWESTERN STATE COLLEGE

School of Pure and Applied Sciences

Physical Science

Instructor Information

Instructor: Marius Coman
Email: mcoman@fsw.edu

Course Information

Course: PHY 2049, GENERAL PHYSICS II (GENERAL PHYSICS II)
Section Number: 20B
Course Reference Number: 24632
Delivery Method: Blended On-Campus
Campus: Collier

Credit Hours: 4 Credits - 4 Lecture Hours

Course Description: This calculus-based physics course is the second part of a sequence of two courses. The sequence covers the underlying principles and laws of classical mechanics, oscillations, waves, fluids, sound, thermodynamics, electromagnetism, elements of optics, and modern physics.

Course Location

Tuesday, Thursday 12:00 pm - 1:45 pm SCIENCES BUILDING - E - 202

See Schedule

Blended courses combine online and in-person instruction, providing flexibility to complete your coursework and time to interact with your professor and peers in person.

We will meet 50% of the time in class.

FSW Blended-On Campus

In a Blended course the professor will mix required on campus class meetings with online coursework. The online portion of the course may be live in a virtual Zoom classroom or all asynchronous in Canvas. All required class meeting dates and times are posted in the course schedule for you to plan for.

Blended Courses Explained

Prerequisites/Co-requisites

Course Prerequisites: PHY 2048 and PHY 2048L with a minimum grade of "C" in each course

Course Co-requisites: PHY 2049L

Topic Outline

Topic Outline:

- Temperature and the kinetic theory of gases
- Heat and thermodynamics
- Thermal properties and processes
- Electric field of discrete and continuous charge distributions
- Electric potential
- Electrostatic energy and capacitance
- Electric current and direct-current circuits

- The magnetic field and sources of the magnetic field
- Magnetic induction
- Alternating-current circuits
- Maxwell's equations and electromagnetic waves
- Properties of light, optical images, interference and diffraction
- Aspects of modern physics

Student Learning Outcomes

All courses at Florida SouthWestern State College contribute to the General Education Program by meeting one or more of the following General Education Competencies:

Communicate clearly in a variety of modes and media.
Research and examine academic and non-academic information, resources, and evidence.
Evaluate and utilize mathematical principles, technology, scientific and quantitative data.
Analyze and create individual and collaborative works of art, literature, and performance.
Think critically about questions to yield meaning and value.
Investigate and engage in the transdisciplinary applications of research, learning, and knowledge.
Visualize and engage the world from different historical, social, religious, and cultural approaches.
Engage meanings of active citizenship in one’s community, nation, and the world.

A. General Education Competencies and Course Outcomes

1. Listed here are the course outcomes/objectives assessed in this course which play an integral part in contributing to the student's general education along with the general education competency it supports.

General Education Competency: Evaluate

Course Outcomes or Objectives Supporting the General Education Competency Selected:

- Use the kinetic theory of gases to distinguish between "heat" and "temperature" ; interpret and apply the concept of energy per degree of freedom.
- Interpret and apply the laws of thermodynamics to explain natural phenomena.
- Recognize thermal properties and processes and use them to explain and interpret thermal phenomena.
- Recognize the quantum nature of electric charge.
- Explain the interaction between electric charges and use Coulomb's law to solve problems involving charge distributions.
- Explain the concept of "field" and compare it to "action-at-a-distance" using forces.
- Explain and draw the electric field configuration due to various discrete and continuous charge distributions.
- Relate the theoretical interpretation of electric potential to everyday phenomena and use it to solve problems.
- Explain the meaning of electrostatic energy and apply it to solve problems involving capacitance.
- Identify the theoretical framework for electric current and apply it to solving problems on direct current circuits and alternating current circuits.
- Explain and draw the magnetic field configuration due to various current distributions.
- Explain the concept of electromagnetic induction and use it to explain everyday physical phenomena.
- Describe and use Maxwell's equations to solve problems in electricity and magnetism.
- Investigate the interaction of light with matter and light's properties.
- Compare and contrast the (special) relativistic view with the Newtonian view of nature.
- Compare and contrast the quantum mechanical view with the Newtonian view of nature.

Academic Integrity Policy

At FSW, we believe in the power of honesty and integrity as the pillars of academic excellence. As part of our college community, it's crucial that you understand the importance of these values in your academic journey. All work submitted by students for credit in this course is required to adhere to FSW's Academic Integrity Policy. This means cheating on coursework is unacceptable, will receive a "0" grade, and may be subject to disciplinary action. FSW faculty may use Turnitin, Packback, CheckGPT, or similar tools to evaluate coursework for plagiarism and/or artificial intelligence (AI) generated content.

Cheating or other academic misconduct can include, but is not limited to:

- Copying information from published or unpublished sources (online or in print) without citing those sources.
- Copying someone else's work or allowing someone else to copy yours.
- Submitting written work generated by AI as your own without direct authorization from your professor.
- Submitting work for credit that has already been submitted for credit in another class, even if you wrote it.
- Unethical distribution or use of exam content.

According to the Academic Policies and Procedures section of the College Catalog, "Those in charge of academic tasks have an obligation to make known the standards and expectations of acceptable academic conduct. Each student has an obligation to know and understand those standards and expectations." As such, each student should review the policies and procedures outlined in the Academic Integrity Policy and expect that any violation of these policies will be subject to disciplinary action.

If you have any questions about these principles, reach out to your professor. They are here to help you succeed. Let's work together to maintain an honest, vibrant learning environment at FSW!

Institution Policies

Programs for Students with Disabilities

Florida SouthWestern State College, in accordance with the Americans with Disabilities Act and the College's guiding principles, offers students with documented disabilities programs to equalize access to the educational process. Students needing to request an accommodation in this class due to a disability, or who suspect that their academic performance is affected by a disability should contact the Office of ADAptive Services at the nearest campus. The office locations and telephone numbers for each campus are located on the Office of ADAptive Services website.

Reporting Title IX Violations

Florida SouthWestern State College, in accordance with Title IX and the Violence Against Women Act, has established a set of procedures for reporting and investigating Title IX violations including sexual misconduct. Students who need to report an incident or need to receive support regarding an incident should contact the Equity Officer at equity@fsw.edu. Incoming students are encouraged to participate in the Sexual Violence Prevention training offered online. Additional information and resources can be found on the College's website.

Financial Aid and Attendance Verification

Florida SouthWestern State College, in accordance with Federal Regulations, is responsible for verifying student attendance and engagement in classes before federal financial aid funds are distributed. In order to demonstrate both your attendance and engagement in this class, you will need to complete the attendance verification assignment within the first week of class. To complete the assignment, click on the "Attendance Verification" link on the Canvas course menu. Additional information and resources can be found on the College's Financial Aid website.

School Policies

Extra Credit: All extra credit opportunities offered in any School of Pure and Applied Science course must be offered equally to all students in the class, and cannot account for more than 5% of the overall course grade.

Course Assessment

This course will be assessed by a combination of class participation, graded homework assignments, module/unit quizzes/exams, and/or a comprehensive final exam.

Requirements for Students

Assignments/Classroom Tasks

There will be weekly online assignments covering the material.

Classroom tasks consist of conceptual and/or calculated questions.

Classroom tasks account for 10 % of the grade. There will be no make-ups for classroom tasks.

Exams

During an exam formulas and constants will be provided, except for the final exam.

If you miss an exam you must contact the professor as soon as possible in order to schedule a make-up exam; however, you will receive zero points for that exam unless you have a substantiated unforeseen occurrence or a written excuse from a physician, the Dean, or an academic advisor.

The final exam is cumulative. All exams will include calculated/numerical questions, multiple choice questions and a few short answer questions, and a request to interpret some drawings/graphs or to construct them.

Proctoring Requirements for Testing with Proctorio

Selected exams and quizzes within this online course will require remote proctoring using a service within Canvas called Proctorio. This service is free to students and no scheduling is required. These exams, however, require very specific camera setup requirements and exams will be reviewed by your instructor before any grades are official.

Overall Guidance on How to Take an Exam:

1. Prepare your environment to meet the requirements as detailed in the exam requirements below.
2. Log in to your course in Canvas using Google Chrome.
3. Navigate to your quiz or exam.
4. You will be required to install the Proctorio extension if this is your first use of the service.
5. Read the instructions carefully to ensure you comply with the proctoring requirements, particularly those regarding external camera placement, and authorized materials.
6. Start your Exam and follow the prompts to verify your identity and complete a room and desk scan.
7. After the verification process proceed to take your exam in Canvas.
8. When you are done use the "Submit" button in Canvas to end the Proctorio session.

Visit FSW Online for additional resources and best practices for taking a successful online proctored exam.

Specific Guidance on How to Take an Exam:

Online testing requirements:

1. Students must display a valid government-issued ID or an FSW Student ID card.
2. Students must have access to an **external web camera**. **(The webcam built into your laptop computer is not acceptable)**. You have the option of purchasing your own camera or borrowing one from a friend.
3. You cannot take the practice proctored quiz or proctored exams without an external camera.
4. If you need a camera (or to sign out a laptop) request one here.

Setting up your workspace:

1. Find yourself a desk or tabletop to set up your computer (Do not take an exam in your bed).
2. Your desk/tabletop must be completely cleared off.

3. Nothing should be within two feet of your computer except for your mouse.
4. Make sure you have adequate lighting; you should be easily visible (not a dark shadow).
5. NO cell phones, smart watches, tablets, headphones, wireless earbuds, or any other electronic device allowed (other than the computer you are using to take the exam).
6. NO hats, head coverings, or other items that cover your ears are allowed during exams. Anyone with hair longer than their ears must pull it back for the duration of all exams.
7. NO talking, music, or other background sounds. You cannot read the questions out loud during a test! Pretend you are in a room with your classmates. Music and/or TV must not be playing in the background.

Setting up your external camera:

1. Your face from a front view must be visible at the start of the exam for identification, after that, the camera should focus on your workspace and will capture you from the side view (see images below).
2. Your camera must be set up so that your FACE, HANDS, KEYBOARD, COMPUTER SCREEN, & DESKTOP SURFACE are visible throughout the entire exam.
3. If you can’t see your face, hands, keyboard, and computer screen, then adjust your camera so that you can. To accommodate this, place your camera off to the side as if it is looking over your shoulder as you take the exam. (see photos below). Your complete working space must be visible as at all times.
4. You will be able to see yourself in the corner of your screen on your computer.
5. Do not have the camera set on zoom.

Side view of testing area with 3-4 ft. between computer and student

Computer Requirements:

1. First, make sure your computer is working well and the battery is fully charged or connected to power.
2. If you lose connection, you will not be able to re-enter the exam. Make sure you are located at a place where you have strong internet service.
3. Before starting your exam. Clear your cache and make sure you have enough memory for Proctorio to run.
4. Close down all other applications running on your computer and switch off all notifications such as messaging etc.
5. DO NOT hide your toolbar. It must be visible showing only CHROME as open (example in the pictures below).
6. The Proctorio agent checks your ID and a picture is taken showing your toolbar is visible and NO other APPS are open.

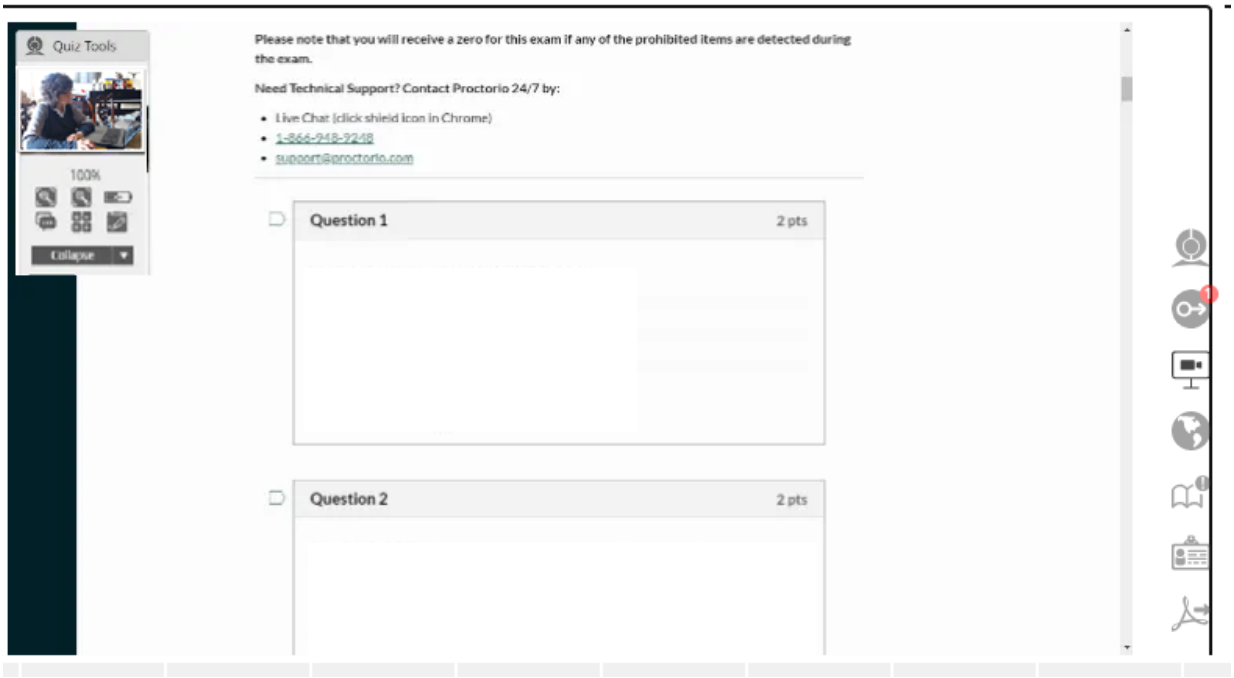
PC- chrome open is underlined in blue. Any other blue lines will indicate other apps are open.

Mac – Chrome open is indicated by a black dot under the icon.

Room scan checklist:

The room scan is prompted after you have been given permission to open your exam and the timer for your exam starts. When prompted to do a room scan. You will be prompted to complete a room scan at the start of each exam, and will often be asked to complete an additional room scan during the exam itself as well.

1. You must use an **external camera.**
2. Scan **slowly**, STOP, and count 5 sec when showing the FRONT SCREEN of your computer and behind your computer.
3. Scans must include all the way around the room (360 degrees). So, stop and count 5 seconds at each point.
4. The scan must include high and low areas of the room.
5. Your work area, where your computer is sitting, must show up clearly,
6. The professor MUST see everything that is on your desk.
7. If you must have a mouse pad, lift it so I can see that nothing is under it!
8. Nothing should be on your desk/tabletop except for your computer, and any other materials authorized by your instructor.
9. The computer may say scan DONE before you are done so ignore that command and complete your scan correctly.
10. It is up to you to show us there is NOTHING suspicious in your EXAM environment
11. Make sure to PLACE your camera back into the side view position as demonstrated in the image shown above.



During the Exam:

1. Do NOT scroll through the entire exam before beginning the test in case you have computer or camera issues.
2. If your external camera turns black – immediately contact Proctorio for guidance and reach out to your instructor. Do not continue to take the exam with a black camera or your score will be a zero.
3. Do NOT navigate to another tab or window in your browser. This may end your exam and you may not be able to reenter.
4. Do NOT leave the view of the webcam. This may end your exam and you may not be able to reenter.
5. The Proctorio video will flag you as suspicious for any of the following reasons:
    - If you have too much eye movement.
    - If there is any outside noise.
    - If you are typing excessively.
    - If you try to log into a different page on your screen, copy/paste,
    - If you try to change anything on your computer at any time, it will log you out of the exam.

6. Only use resources specifically authorized by your instructor for each exam. These should be clearly stated in the test instructions. If you have any questions, reach out to your instructor BEFORE you being the exam.

You MUST be able to see your setup in the corner of your screen on your computer during the entire test. If you lose this camera image at any time, immediately stop and ask Proctorio for assistance.

Other Testing Location Options:

Students that do not have access to the required technology or testing environment should visit FSW Online Proctoring Information for a list of recommended locations that offer a secure and private setting to take your exam. Each FSW campus has a limited number of laptops available for checking out OR Proctorio-ready computer stations. These resources are available for students to use on a first-come, first-serve basis. Availability is not guaranteed, so plan accordingly.

Need Technical Support? Contact Proctorio 24/7 by:

- Live Chat by clicking the Proctorio extension (shield icon in Chrome)
- Call 1-866-948-9248
- Email support@proctorio.edu

You will receive a zero for the exam if any of the prohibited items are detected during the exam or the conditions detailed above or in Canvas are not met, including the external camera requirement and the camera placement.

Proctoring Requirements for Testing with ProctorU

Selected exams and quizzes within this online course will require remote proctoring using a service within Canvas called **ProctorU Review+**. ProctorU is an online proctoring service that allows you to take your exam from the comfort of your home. ProctorU's automated service is available 24/7 but does require scheduling an exam session. This service is free to students as long as you schedule ahead of the exam. These exams, however, require very specific camera setup requirements and will be reviewed before any test grades are official.

Overall Guidance on How to Take an Exam:

1. You will need a ProctorU account and the **GUARDIAN Browser** installed for the program to work properly. Follow the ProctorU guidance within Canvas to start the process.
2. ProctorU recommends you check your computer equipment prior to your proctoring session to ensure you meet the technical requirements. You can do so via the “Test Your Equipment” icon within your ProctorU account.
3. When you are ready to take your exam, **navigate to the ProctorU account** and start your session. A live proctor will help you through the verification process.
4. Visit the Test Taker Resource Center to learn more.

Specific Guidance on How to Take an Exam:

Testing requirements:

1. Students must display a valid government-issued ID or an FSW Student ID card.
2. Students must have access to an external web camera. (The webcam built into your laptop computer is not acceptable). You have the option of purchasing your own camera or borrowing one from a friend.
3. You cannot take the practice proctored quiz or proctored exams without an external camera.
4. If you need a camera (or to sign out a laptop) request one here.

Setting up your workspace:

1. Find yourself a desk or tabletop to set up your computer (Do not take an exam in your bed).
2. Your desk/tabletop must be completely cleared off.
3. Nothing should be within two feet of your computer except for your mouse.
4. Make sure you have adequate lighting; you should be easily visible (not a dark shadow).
5. NO cell phones, smart watches, tablets, headphones, wireless earbuds, or any other electronic device allowed (other than the computer you are using to take the exam).

6. NO hats, head coverings, or other items that cover your ears are allowed during exams. Anyone with hair longer than their ears must pull it back for the duration of all exams.
7. NO talking, music, or other background sounds. You cannot read the questions out loud during a test! Pretend you are in a room with your classmates. Music and/or TV must not be playing in the background.

Setting up your external camera:

1. Your face from a front view must be visible at the start of the exam for identification, after that, the camera should focus on your workspace and will capture you from the side view (see images below).
2. Your camera must be set up so that your FACE, HANDS, KEYBOARD, COMPUTER SCREEN, & DESKTOP SURFACE are visible throughout the entire exam.
3. If you can't see your face, hands, keyboard, and computer screen, then adjust your camera so that you can. To accommodate this, place your camera off to the side as if it is looking over your shoulder as you take the exam. (see photos below). Your complete working space must be visible as at all times.
4. You will be able to see yourself in the corner of your screen on your computer.
5. Do not have the camera set on zoom.

Side view of testing area with 3-4 ft. between computer and student

Computer Requirements:

1. FIRST, make sure your computer is working well and the battery is fully charged or connected to power.
2. If you lose connection, you will not be able to re-enter the exam. Make sure you are located at a place where you have strong internet service.
3. Before starting your exam. Clear your cache and make sure you have enough memory for Guardian Browser to run.
4. Close down all other applications running on your computer and switch off all notifications such as messaging etc.

Room scan:

A room scan will be conducted by the Proctor as you begin your exam. Follow your proctor's instructions to complete the required room scan.

During the Exam:

1. Do NOT scroll through the entire exam before beginning the test in case you have computer or camera issues.

2. If your external camera turns black – immediately contact the Proctor for guidance and reach out to your instructor. Do not continue to take the exam with a black camera or your score will be a zero.
3. Do NOT navigate to another tab or window in your browser. This may end your exam and you may not be able to reenter.
4. Do NOT leave the view of the webcam.
5. Only use resources specifically authorized by your instructor for each exam. These should be clearly stated in the test instructions. If you have any questions, reach out to your instructor BEFORE you being the exam.

Other testing location options:

Students that do not have access to the required technology or testing environment should visit FSW Online Proctoring Information for a list of recommended locations that offer a secure and private setting to take your exam. Each FSW campus has a limited number of laptops available for checking out OR ProctorU-ready computer stations. These resources are available for students to use on a first-come, first-serve basis. Availability is not guaranteed, so plan accordingly.

You will receive a zero for the exam if any of the prohibited items are detected during the exam or the conditions detailed above or in Canvas are not met, including the external camera requirement and the camera placement.

Pearson MyLab and Mastering

All students are required to purchase access to MyLab.

Instructions for student MyLab registration through Canvas:

- Log in to Canvas and enter your Canvas course. Do one of the following:
    1. Select Access Pearson or MyLab and Mastering link in the Course Navigation.
    2. Select any Pearson link from any module.
- If prompted, select Open Pearson.

- Select Open MyLab & Mastering to go to the course home page or select a link under Student Links.
- If you have taken a Mathematics course at FSW in which you previously logged in to MyLabs Plus, do NOT use the same username/password to log in or to create your Pearson account.
- If you have ever used any MyLab product in any FSW course, you can log in with the username/password used for those Pearson products.
- If you do not have a Pearson account, select Create and follow the instructions. Be sure to use your FSW e-mail (@bucs.fsw.edu) for registration.
- Select an access option:
    1. Enter the access code that you purchased separately or with the textbook from the bookstore.
    2. Buy access using a credit card or PayPal.
    3. Obtain temporary access by selecting the link Get temporary access without payment for 14 days.

Temporary access begins on the day the student selects that option and expires 14 days later as shown on the student's receipt. When temporary access expires, the student will be prompted to input a purchased access code or buy an access code online. Work done prior to the temporary access expiration will be saved, but the student will not be able to do any additional work until the permanent access code has been submitted. Temporary access is for 14 days only and cannot be extended.

- From the You're Done page, select Go to My Courses.

Note: It is recommended you always enter your MyLab course through Canvas.

Additional Instructions: Video Instructions or Detailed Instructions

For the best experience, check the system requirements and get help with MyLab & Modified MasteringVideo Instructions with Canvas.

Attendance Policy

- Attendance in class is your responsibility. As mentioned, part of your grade is derived from participation in classroom's tasks/discussions. Physics is an interesting subject and previous studies showed classroom attendance and interaction has a great impact on understanding the concepts and thus influence the final grade.
- If a student has to miss a class for any reason, it is the responsibility of the student to make up the missed work promptly, using the companion web site or otherwise. All assignments are due at their assigned times, regardless of absence.

Grading Policy

Your final grade is calculated as a weighted average; the weight for exams and homework/assignments is specified in the following table:

Assessment tool	Weight in %
4 Exams	50.0
10 Classroom tasks/class participation	10.0
12 Assignments/ Quizzes	40.0
Total:	100

Your final grade is calculated as a weighted average:

$$\text{Final Grade} = \overline{\text{Exams}} + \overline{\text{Assignments}} \times \frac{40}{100} + \overline{\text{Tasks}} \times \frac{10}{100}$$

$$\overline{\text{Exams}} = (\text{Exam}_1 + \text{Exam}_2 + \text{Exam}_3) \times 0.3 + \text{Final Exam} \times 0.2$$

$$\overline{\text{Tasks}} = \sum_{i=1}^{10} \text{Task}_i$$

$$\overline{\text{Assignments}} = \sum_{j=1}^{12} \text{Assignment}_j$$

The following range will be used to determine your final course grade:

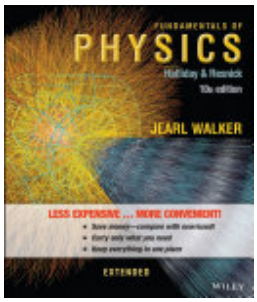
Grade Percent	Letter Grade
90-100	A
80-89	B
70-79	C
60-69	D
Below 60	F

Withdrawals: It is the student's responsibility to withdraw officially from any class that they cease to attend. Failure to do so will result in the recording of an "F" grade.

(Note: The "incomplete" grade ["I"] should be given only when unusual circumstances warrant. An "incomplete" is not a substitute for a "D," "F," or "W." Refer to the policy on "incomplete grades.)

LATE WORK POLICY:

Required Course Materials



Fundamentals of Physics, Extended
ISBN: 9781119798606
Authors: David Halliday, Robert Resnick, Jearl Walker
Publisher: John Wiley & Sons
Edition: 12

Visit the FSW Bookstore to find required course materials.

Additional Required Materials for FSW Online Courses

FSW Online courses (including online, live online, blended online, and flex modalities) also require the following materials:

- **External webcam** and microphone (to take proctored tests and/or final exams.)
- Laptop or desktop computer with an up-to-date operating system (see Semester Start-Up Check-List for details).
- Stable high-speed internet

As scrap paper is not authorized during online exams, it is recommended that students consider the following if authorized for use:

- Small, lap-sized, dry-erase board
- Dry erase marker(s)

Class Schedule

Jan 9 in class
Syllabus, Chapter 18 Temperature;
Used to assessing the General Education Competency listed on (IV) A.

Jan 11 zoom
Chapter 18 Temperature, Heat, and the First Law of Thermodynamics;

Jan 16 in class
Chapter 19 The Kinetic Theory of Gases;

Jan 18 zoom
Chapter 20 Entropy and the Second Law of Thermodynamics

Jan 23 in class
Chapter 21 Coulomb's Law

Jan 25 zoom
Chapter 22 Electric Fields, The Electric Field, Discrete Charge Distributions,

Jan 30 in class EXAM 1

Feb 1 zoom

Chapter 22 Electric Charge, Motion of Point Charges in Electric Fields;

Feb 6 in class
Chapter 23 Gauss' Law

Feb 8 zoom
Chapter 24 Electric Potential: Potential Difference, Potential Due to a System of Point Charges, Calculation of V for Charge Distributions;

Feb 13 in class
Chapter 25 Capacitance, Electrostatic Energy in capacitors;

Feb 15 zoom
Chapter 25 Electrostatic Energy in capacitors, Combinations of Capacitors;

Feb 20 in class
Chapter 26 Electric Current and Resistance

Feb 22 zoom
Chapter 27 Circuits, Direct-Current Circuits, Current and Motion of Charges, Resistance and Ohm's Law;
Combinations of Resistors, Kirchhoff's Rules;

Feb 27 in class
Chapter 27 Current and Motion of Charges, Resistance and Ohm's Law;

Feb 29 zoom
Chapter 27 Combinations of Resistors, Kirchhoff's Rules;

March 5 in class
Chapter 28 Magnetic Fields
Chapter 29 Magnetic Fields Due to Currents

March 7 in class EXAM 2

March 19 zoom

Chapter 30 Induction and Inductance

March 21 in class
Chapter 31 Electromagnetic Oscillations and Alternating Current

March 26 zoom
Chapter 32 Maxwell's Equations; Magnetism of Matter, Electro-Magnetic Induction;

March 28 zoom
Chapter 32 Magnetic Flux, Faraday's Law;

April 2 in class EXAM 3

April 4 zoom
Chapter 33 Electromagnetic Waves, Properties of Light, Reflection and Refraction;

April 9 in class
Chapter 35 Interference

April 11 zoom
Chapter 36 Diffraction

April 16 in class
Chapter 38 Photons and Matter Waves: Heisenberg's Uncertainty Principle

April 18 zoom
Chapter37 Relativity, selected topics
*Chapter 42 Nuclear Physics: Radioactive Decay

Final Exam Cumulative using proctorio:
Tuesday, April 23, 12 PM-1:50 PM

Tutoring and Support Services

Academic Tutoring

FSW provides professional in-person and online tutoring through its Tutoring Centers located inside the campus library. Tutoring Centers consist of the Math Center, the Writing Center, and the Peer-Tutoring Center. In addition to on-campus tutoring services, the College provides all students 24/7 access to Tutor.com.

For additional help with this course, the student may:

1. Meet with the Professor during posted office hours.
2. Seek On-Campus Assistance: Each Campus, as well as the Hendry/Glades Center, has at least one place where students can go for assistance with academics. All are available to each student, regardless of the location or type (on-campus, online, etc.) of the class.
3. Request a tutor from the Florida SouthWestern State College Peer Tutoring Center.
4. Use the Online 24/7 Tutoring Services (tutor.com). Look for the link in your Canvas course navigation menu.
5. Use the **FSW Math Tutorials** link located in Canvas for additional math resources (videos, links to resources, etc.) by topic.

BUCS Care Services

Bucs Care Services is focused on educating and informing the community through caring, advocacy, and supportive endeavors. FSW cares about our student's holistic development and wellness. We believe that for all students to be successful, support must be given on an emotional, social, physical, and intellectual basis.

Care Services include:

- Wellness Hub (Mindfullness@FSW)
- Care Pantry
- Mental Health Services
- Public Health Resources
- Active Minds
- Homeless Student Resources

If you feel you are struggling and need to speak with someone concerning personal issues, please do not hesitate to contact the Care Services office via email (bucscare@fsw.edu) or phone (239-489-9046) for community resources and group counseling.

All of these services are available to the student at no additional cost.

Canvas Schedule

Date	Assignment Name	Assignment Type	Points
	Atoms as Indistinguishable Particles Discussion	Discussion	0
	Discussion: Chapter X	Discussion	0
	Exams	Discussion	0
	PHY2048 Final Exam	Quiz	33
	Task -in class on paper p-V diagram convert to T-V, id iso processes on a p-V diagram	Assignment	100
10/4	Test your wiley account. 0 points	Assignment	0
1/16	!! First-Week Check-in: Confirm Attendance in This Course !!	Quiz	8
1/27	Task adiabatic versus isothermal, comparison	Assignment	100
1/27	Video comment	Assignment	100

Date	Assignment Name	Assignment Type	Points
2/8	Chapter 24 Electric Potential Quiz	Quiz	2
2/13	Task combination of capacitors	Assignment	20
2/20	Exam 1	Assignment	20
2/20	Chapter 18, Temperature, Heat, 1st Law of Thermodynamics	Assignment	14
2/20	Chapter 19: The Kinetic Theory of Gases, Chapter 20: Entropy 2nd Law of Thermodynamics	Assignment	16
2/22	Task Kirchoff's rules, 2 loops	Assignment	14
2/28	Task 2 Kirchoff's Rules	Assignment	14
3/5	Task B inside a hydrogen atom	Assignment	100
3/7	Task: Radius of electron entering with v in an external magnetic field B	Assignment	100
3/26	Task Electromagnetic induction	Assignment	14

Date	Assignment Name	Assignment Type	Points
3/30	Chapter 25: Capacitance, Chapter 26: Current and Resistance Spring 2023	Assignment	22
4/2	Task resistivity, magnetic flux	Assignment	0
4/2	Chapter 27: Circuits	Assignment	23
4/6	Chap. 21 Coulomb's Law, Chap. 22 Electric Fields	Assignment	19
4/6	Chapter 23: Gauss' Law, Chapter 24 Electric Potential Spring 2023	Assignment	14
4/6	Chapter 28 Magnetic Fields Spring 2023	Assignment	16
4/10	Tasks Refraction, Lenses	Assignment	100
4/11	Exam 2 Spring 2024	Assignment	100
4/17	Chapter 29: Magnetic Field due to currents; Chapter 30 Induction and Inductance, Spring 2023	Assignment	21
4/19	Chapter 33 Electromagnetic Waves, Chapter 34 Images/Lenses Spring 2023	Assignment	14

Date	Assignment Name	Assignment Type	Points
4/20	Chapter 31: Electromagnetic Oscillations and Alternating Current and Chapter 32: Maxwell's Equation Spring 2023	Assignment	25
4/23	Final Exam, Comprehensive/cumulative Tuesday, April 23 in class, E109, 12 PM; Exam 2 April 11th, Chap 21 to Chap 27, electricity, Coulombs law until and including circuits Chap 27 in zoom	Assignment	0

TECHNICAL DIFFICULTIES: Students who experience technical difficulties must contact the professor immediately and attach a screenshot of the issue. If technical problems continue with students' personal computers, it is their responsibility to contact technical support and/or use the computers available on Florida SouthWestern State College campuses to complete the assignments.

This Syllabus is subject to reasonable changes at the discretion of the professor. From time to time, this syllabus may need to be amended for pedagogical reasons, and the instructor will notify students via announcements or email of any changes, additions, and/or deletions to the syllabus.