



## Phys 101: Physics and Astronomy Seminar

COURSE SYLLABUS: FALL 2023

**Class Time & Location:** Tues 4:00-4:50PM, McFarland Science Building 135

### INSTRUCTOR INFORMATION

Instructor: Dr. Kurtis A. Williams, Associate Professor & Interim Department Head

Preferred Pronouns: He/him/his

Office Location: Room 106A, McFarland Science Building

In-person Office Hours:

Mon., Wed., Fri. 9:00AM–10:00AM

Tues., Thurs. 10:00AM–11:00AM

By Appointment (<http://kurtiswilliams.youcanbook.me>)

Virtual Office Hours:

By Appointment (<http://kurtiswilliams.youcanbook.me>)

University Email Address: [Kurtis.Williams@tamuc.edu](mailto:Kurtis.Williams@tamuc.edu)

Preferred Form of Communication: **email**

Office Phone: (903) 886-5488

Communication Response Time: Before the end of the following business day

### COURSE INFORMATION

#### Materials – Textbooks, Readings, Supplementary Readings

##### Required Books

*None*

##### Recommended Subscription

- 1 Year of Scientific American, <https://www.scientificamerican.com/getsciam>

### Course Description

*Hours: 1*

*Introduces some of the major contemporary problems and research areas in physics and astronomy.*

*The syllabus/schedule are subject to change.*

Welcome to Physics and Astronomy at Texas A&M University-Commerce! We are glad to have you in our physics degree program, and all of the faculty and staff sincerely want you to succeed in both your education and your career!

To be honest, physics is perhaps the most challenging undergraduate major, and there will be times you will wonder if the payoff is worth the effort and struggle. Will there be jobs for you at the end of this challenge? How can you succeed?

The goal of this class is to provide you with answers to these questions. We will discuss what it means to be a physicist and the myriad of opportunities you will have with your physics degree. We will alert you to the challenges that every physics major faces and provide you with coping mechanisms to weather those tough times. And we will plant the seeds of several crucial skills that every physicist needs but that rarely discussed in classroom settings.

### **Student Learning Outcomes**

1. You will be able to give multiple examples of career opportunities for physicists such as yourself.
2. You will be able to employ coping strategies for common challenges facing physics students.
3. You will develop crucial skills for success as a physicist, including scientific reading and writing, note taking, and problem solving.

## **COURSE REQUIREMENTS**

### **Minimal Technical Skills Needed**

You will need to be able to access myLeo Online, the new learning management system, and be able to learn how to use it. You should also be able to read PDF documents and to search the Internet for information. You should be able to create either Microsoft Word documents (.docx) or plain text files.

### **myLeo Online Access Information**

This course uses myLeo Online, the new learning management system at A&M-Commerce. All materials, assignments, and resources will be made available through this system. To access this course, go to: <http://myleoonline.tamuc.edu>. Log in with your myLEO account and password. Then click on the link to Fall 2023 – Physics and Astronomy Seminar to get to our course.

### **What Should You Do First?**

Attend the first class, read this syllabus, familiarize yourself with the resources. Next, order the course materials if you haven't yet.

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## Instructional Methods

### Attendance and Participation

The most crucial skill to any physicist and astronomer (and to every career, regardless of the field) is being present and active in community activities. This includes being in the classroom AND participating in class. A sizeable portion of your grade therefore will depend on your attendance and participation.

### Pre-class Assignments

You will have weekly assignments to complete prior to attending class each Tuesday. These are typically short readings paired with short written activities. These will be posted and should be submitted via myLeo Online.

### Homework Assignments

You will have weekly assignments to complete prior to the next class. These are will relate to the topics discussed in class and are typically short.

### Peer Presentations

On the date and time of the class final, you will be required to give a short (no more than 5 minutes) presentation on an assigned topic. We recognize that you may not be comfortable with public speaking, but speaking in front of groups is an important and learned skill in any career.

### Extra Credit

There is no extra credit in physics, so don't ask! But if you complete all assignments, you will not need extra credit to obtain a good grade.

## GRADING

Grading is on an absolute scale with no competition. If you all earn an A, you all get an A. I may "curve" grades for specific assignments at my discretion; your percentage earned will never go down if I apply such a curve. Your current grades are available through the gradebook on myLEO Online – look for "Total Calculated Grade."

Grades are based on a weighted system. The categories and weights are:

- Attendance and Participation: 50%
- Pre-class Assignments: 15%
- Homework Assignments: 15%
- Peer Presentation: 20%

Within each category, assignments are weighted equally. Your lowest reading reflection and writing assignment scores will be dropped automatically.

Letter grades in this course will be based on the following scale:

- A = 90%-100%
- B = 80%-89%

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C = 70%-79%  
D = 60%-69%  
F = 59% or Below

## **Student Responsibilities and Tips for Success in the Course**

Students who do well in this course share most of the following common habits:

- Arriving a couple minutes early for class and not leaving until class is dismissed.
- Not using phones, tablets, or computers during class
- Checking myLeo Online often for announcements and assignments
- Completing all assignments on time
- Asking for help and advice early in the semester
- Taking responsibility for their own grade.

## **COURSE OUTLINE / CALENDAR**

The course will cover many of the topics outlined below. Dates for topics are yet to be finalized, but they will be announced.

- Careers and career tools
- Coping with crappy days, weeks, months, and semesters
- Student ethics
- Getting good advice
- Good and bad habits
- Learning the lingo
- Literature searches and library tools
- Metacognition
- Networking
- Note taking
- Research – get involved early!
- Scientific reading and comprehension
- Scientific writing
- Scientific speaking
- Support services
- Teaching in the sciences
- Underrepresentation

**Final Exam:** Each student will be required to give a five minute talk on a physics-related topic during the scheduled final exam slot on Thursday, Dec 14, 1:15 PM

**Student Presentations: THURSDAY DEC 14<sup>TH</sup>, 1:15-3:15 PM**

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## TECHNOLOGY REQUIREMENTS

### LMS

All course sections offered by Texas A&M University-Commerce have a corresponding course shell in the myLeo Online Learning Management System (LMS). Below are technical requirements

LMS Requirements:

<https://community.brightspace.com/s/article/Brightspace-Platform-Requirements>

LMS Browser Support:

[https://documentation.brightspace.com/EN/brightspace/requirements/all/browser\\_support.htm](https://documentation.brightspace.com/EN/brightspace/requirements/all/browser_support.htm)

### ACCESS AND NAVIGATION

You will need your campus-wide ID (CWID) and password to log into the course. If you do not know your CWID or have forgotten your password, contact the Center for IT Excellence (CITE) at 903.468.6000 or [helpdesk@tamuc.edu](mailto:helpdesk@tamuc.edu).

**Note:** Personal computer and internet connection problems do not excuse the requirement to complete all course work in a timely and satisfactory manner. Each student needs to have a backup method to deal with these inevitable problems. These methods might include the availability of a backup PC at home or work, the temporary use of a computer at a friend's home, the local library, office service companies, Starbucks, a TAMUC campus open computer lab, etc.

### COMMUNICATION AND SUPPORT

If you have any questions or are having difficulties with the course material, please contact your Instructor.

#### Technical Support

If you are having technical difficulty with any part of Brightspace, please contact Brightspace Technical Support at 1-877-325-7778. Other support options can be found here:

<https://community.brightspace.com/support/s/contactsupport>

#### Interaction with Instructor Statement

##### Email:

I can be reached by email at [Kurtis.Williams@tamuc.edu](mailto:Kurtis.Williams@tamuc.edu). Please put "Honors Astro" in your email subject header. It may take me up to 24 hours to send you a response (48 hours on the weekend or holidays). If you don't hear back from me in that time, please send another email or give me a call.

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### **Student Hours:**

Student hours are available in both real-world and virtual formats. Office hours are times that I set aside when I promise to be in my office so that you can come by and talk to me. During office hours, you can ask questions about the course material, ask about homework, see your current grade, or ask other questions about the class or astronomy in general.

It's important to realize that office hours are *not* just for students who are having problems in the course. If you are uncertain about anything, please visit, email, phone or drop into virtual hours before your small problems grow into big ones. If you are worried about what might be on the test, stop in. If you are curious about astronomy jobs and research opportunities, come by.

Office hours work best if you have your textbook, notes, and homework sets with you.

If you want to talk but cannot come during office hours, please contact me by email in order to set up an individual appointment. By setting an appointment, you both guarantee that I will be in my office (or online) and that I will have plenty of time to talk with you. You may feel free to stop by my office any time my door is open, but if you do not have an appointment and if it is not my scheduled office hours, please understand if I'm not free to talk at that instant.

### **Social Media:**

Please don't follow me on social media until after you've graduated. You'll be disappointed anyway.

## **COURSE AND UNIVERSITY PROCEDURES/POLICIES**

### **Course Specific Procedures/Policies**

#### **Academic integrity**

A major goal of this and most every university course is for you to learn and appreciate subject material. Academic dishonesty ("cheating") actively prevents you from achieving this goal. Academic dishonesty is taken seriously by the University and by me, and **will not be tolerated.** (See the TAMU-C Code of Student Conduct and the TAMU-C Procedures A 13.04, 13.12, 13.31, and 13.32.)

This conduct is not only considered wrong in this course and at this University, but also in the real world. Engaging in these activities will get you fired from a job and prevent you from getting another job.

Unethical student conduct includes:

- **Plagiarism**, or copying the words of others with the intent of making it look like your own. Whether you use someone else's phrase word for word, or whether you try and change a few words, or even if you just borrow someone else's original idea and don't give them credit, that's unethical. Use your own words

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whenever possible, give credit to wherever you got an idea, and put direct quotes inside quotation marks.

- **Cheating** involves trying to trick me or others into thinking you did work that you really didn't do, or into thinking you know what you really don't know. This can include stealing exams, changing your answers on a graded exam or assignment and claiming it was graded wrongly, putting your name on someone else's homework, and so on.
- **Searching the Internet for homework solutions and entering answers you find.** Searching the Internet for help on a topic is okay. For example, suppose a question asks, "Describe the life cycle of a star that has the same mass as the sun." Typing that phrase into Google and cutting and pasting the text in the answer box is considered cheating. Typing "star life cycles" into Google, reading a few web pages, and summarizing the information in your own words is not cheating.
- **Borrowing a previous student's homework, exams, or solution sets.** "Borrowing" includes looking at someone's submitted homework, screen shots, stealing returned homeworks, and so on.
- **Collusion** is working with another person to cheat. This can include copying someone else's answers to an exam or assignment, doing work for another student, buying or otherwise obtaining homework/exam solutions from any source online or off-line, or any other instance of multiple people engaging in some form of cheating or dishonesty. Working with other students on an assignment is fine as long as everyone contributes and each student does their own work.
- **Unauthorized use of AI content generators.** This includes using ChatGPT or similar tools to create text or content, unless an assignment actually requests you to do so. Using such tools to correct grammar, spelling, or style is acceptable as long as you admit it and keep a log of all prompts and responses.
- **Any other activity that, to a reasonable person, looks wrong.** If you have any doubt whatsoever whether a certain action is considered dishonest, please ask me *before* engaging in the activity. There is no need to be embarrassed about asking, and I won't penalize you for asking! In this class, if you follow the maxim "it's easier to beg forgiveness than to ask permission", don't expect forgiveness to be forthcoming.

***If you engage in academic dishonesty during any graded activity, you will receive no credit for that activity. More than one instance of dishonesty by a student will result in automatic failure of the course and referral of the student for disciplinary action.***

For further information, search the A&M-Commerce website for "academic integrity policy".

myLEO Online provides me with tools that check for common forms of online cheating and collusion. These include, but aren't limited to: time stamps, location stamps, and automated comparison of essay answers. I will use these tools.

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### **Administrative Withdrawal**

Although I have the right to drop you for excessive absences, I won't do so. You have a right to get an F if you decide to quit working but don't withdraw.

### **Assignment Policy and Due Dates**

Assignments and due dates will be posted in the myLeo Online course calendar for each assignment. Submission requirements for each assignment will also be given on that page.

### **Dropping the Course**

You may drop this course by logging into your myLEO account and clicking on the hyperlink labeled 'Drop a class' from among the choices found under the myLEO section of the Web page.

### **Incompletes**

I only offer incompletes in extraordinary circumstances. Any student interested in an incomplete should contact me as soon as possible after the situation arises, and should keep in mind that I am not required to give you an incomplete and so may not offer you the opportunity. You should also know that you only have access to a myLEO Online course for two weeks following the final day of term.

### **Late Work**

Late assignments are penalized 20% if submitted late. After 7 days, late assignments will receive a zero. Exams may only be taken late by arrangement with the instructor, otherwise missed exams will receive a zero. The instructor has final discretion on whether to give a make-up exam. All work must be finished by the end of the day on the last day of classes.

### **Technical Issues**

Personal computer problems do not excuse the requirement to complete all course work in a timely and satisfactory manner. Each student needs to have a backup method to deal with these inevitable problems. These methods might include the availability of a backup PC at home or work, the temporary use of a computer at a friend's home, the local library, office service companies, many restaurants, Interstate Rest Areas, etc.

### **Syllabus Change Policy**

The syllabus is a guide. Circumstances and events, such as student progress, may make it necessary for the instructor to modify the syllabus during the semester. Any changes made to the syllabus will be announced in advance.

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## **University Specific Procedures**

### **Student Conduct**

All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment. The Code of Student Conduct is described in detail in the [Student Guidebook](https://www.tamuc.edu/student_guidebook/Student_Guidebook.pdf):  
[https://www.tamuc.edu/student\\_guidebook/Student\\_Guidebook.pdf](https://www.tamuc.edu/student_guidebook/Student_Guidebook.pdf)

Students should also consult the Rules of Netiquette for more information regarding how to interact with students in an online forum:  
<https://www.britannica.com/topic/netiquette>

### **Mental Health and Counseling**

The Counseling Center at A&M-Commerce, located in the Halladay Building, Room 203, offers counseling services, educational programming, and connection to community resources for students. Students have 24/7 access to the Counseling Center's crisis assessment services by calling 903-886-5145. For more information regarding Counseling Center events and confidential services, please visit [www.tamuc.edu/counseling-center](http://www.tamuc.edu/counseling-center)

### **TAMUC Attendance**

For more information about the attendance policy please visit the [Attendance](#) webpage and Procedure 13.99.99.R0.01.  
<http://www.tamuc.edu/admissions/registrar/generalInformation/attendance.aspx>

### **Academic Integrity**

Students at Texas A&M University-Commerce are expected to maintain high standards of integrity and honesty in all of their scholastic work. For more details and the definition of academic dishonesty see the following procedures:

#### [Undergraduate Academic Dishonesty 13.99.99.R0.03](#)

<https://inside.tamuc.edu/aboutus/policiesProceduresStandardsStatements/rulesProcedures/13students/undergraduates/13.99.99.R0.03UndergraduateAcademicDishonesty.pdf>

#### [Graduate Student Academic Dishonesty 13.99.99.R0.10](#)

<https://inside.tamuc.edu/aboutus/policiesProceduresStandardsStatements/rulesProcedures/13students/graduate/13.99.99.R0.10.pdf>

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## **Artificial Intelligence**

Texas A&M University-Commerce acknowledges that there are legitimate uses of Artificial Intelligence, ChatBots, or other software that has the capacity to generate text, or suggest replacements for text beyond individual words, as determined by the instructor of the course.

Any use of such software must be documented. Any undocumented use of such software constitutes an instance of academic dishonesty (plagiarism).

Individual instructors may disallow entirely the use of such software for individual assignments or for the entire course. Students should be aware of such requirements and follow their instructors' guidelines. If no instructions are provided the student should assume that the use of such software is disallowed.

In any case, students are fully responsible for the content of any assignment they submit, regardless of whether they used an AI, in any way. This specifically includes cases in which the AI plagiarized another text or misrepresented sources.

13.99.99.R0.03 Undergraduate Academic Dishonesty

13.99.99.R0.10 Graduate Student Academic Dishonesty

## **Students with Disabilities-- ADA Statement**

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact:

### **Office of Student Disability Resources and Services**

Texas A&M University-Commerce

Gee Library- Room 162

Phone (903) 886-5150 or (903) 886-5835

Fax (903) 468-8148

Email: [studentdisabilityservices@tamuc.edu](mailto:studentdisabilityservices@tamuc.edu)

Website: [Office of Student Disability Resources and Services](#)

<https://www.tamuc.edu/student-disability-services/>

## **Nondiscrimination Notice**

Texas A&M University-Commerce will comply in the classroom, and in online courses, with all federal and state laws prohibiting discrimination, sexual harassment, and retaliation against any individual on the basis of race, color, religion, sex, national origin, age, disability, genetic information, veteran status, sexual orientation, gender identity, or any other legally prohibited basis. Such discrimination, harassment, and retaliation are violations of A&M System policy and will not be tolerated. Further, an environment free

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from discrimination on the basis of sexual orientation, gender identity, or gender expression will be maintained.

### **Campus Concealed Carry Statement**

Texas Senate Bill - 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in Texas A&M University-Commerce buildings only by persons who have been issued and are in possession of a Texas License to Carry a Handgun. Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal Code (PC) 46.035 and A&M-Commerce Rule 34.06.02.R1, license holders may not carry a concealed handgun in restricted locations.

For a list of locations, please refer to the [Carrying Concealed Handguns On Campus](#) document and/or consult your event organizer.

Web url:

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/34SafetyOfEmployeesAndStudents/34.06.02.R1.pdf>

Pursuant to PC 46.035, the open carrying of handguns is prohibited on all A&M-Commerce campuses. Report violations to the University Police Department at 903-886-5868 or 9-1-1.

### **Sexual Harassment and Violence**

Violence and harassment based on sex and gender are Civil Rights offenses subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories such as race, national origin, etc.

If you or someone you know is a victim of harassment, stalking, domestic violence, sexual assault, or related crimes, has been harassed or assaulted, here are some resources for you:

#### **24/7 Resources**

- National Domestic Awareness Hotline: 1-800-799-SAFE (7223)
- National Sexual Assault Hotline: 1-800-656-4673
- National Suicide Prevention Lifeline: 988

#### **Campus Resources**

- **Call 911 in emergency situations**
- If you or someone you know has been impacted and needs support, email: [VictimSupport@tamuc.edu](mailto:VictimSupport@tamuc.edu) (monitored Monday-Friday, 8am-5pm)
- Victim Advocacy and Support: <https://www.tamuc.edu/student-advocacy-support/victim-support-services/>

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- How to Help and Report: <https://www.tamuc.edu/student-advocacy-support/victim-support-services/>
- How to Report Concerns About a Fellow Student: [https://cm.maxient.com/reportingform.php?TAMUCommerce&layout\\_id=20](https://cm.maxient.com/reportingform.php?TAMUCommerce&layout_id=20)
- University Title IX Compliance Office: <https://www.tamuc.edu/titleix/>
- University Title IX Contact: Amanda Berry, 903-886-5991, [titleix@tamuc.edu](mailto:titleix@tamuc.edu)
- University Police Department Sexual Assault pages: <https://www.tamuc.edu/university-police-department/crime-prevention/>
- University Counseling Center: <https://www.tamuc.edu/counseling-center/>
- Campus police email: [upd@tamuc.edu](mailto:upd@tamuc.edu)

**External resources:**

Crisis center of Northeast Texas: <http://www.ccnex.org>

Know your IX: <http://knowyourix.org>

End rape on campus: <http://endrapeoncampus.org>

Clery Center for Security on Campus: <http://clerycenter.org>

Not Alone: <http://changingourcampus.org/about-us/not-alone/>