Astr 489.01L: Introductory Astronomy Lab

COURSE SYLLABUS: Spring 2025

Class Location: T 3:30 PM – 5:50 PM, McFarland Science Building 107 and the Planetarium (McFarland Science Building 125)

INSTRUCTOR INFORMATION

Instructor: Dr. Kurtis A. Williams, Professor and Department Head
Office Location: Room 106A, McFarland Science Building
Student Hours:
M 1:30-2:30
T 10:30-11:30
F 2:30-3:30
By Appointment (Zoom)
University Email Address: 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
Preferred Pronouns: He/him/his

COURSE INFORMATION

Materials – Textbooks, Readings, Supplementary Readings

Materials and Textbook(s) Required

None

Course Description

Hours: 1
This lab course is designed to give students a hands-on approach to learning about stars and galaxies using techniques similar to those used by astronomers. Laboratory activities will include using the planetarium to learn the names and locations of stars and constellations, hands on experiments, and computer simulations.

The *syllabus/schedule are subject to change.*

Most people learn difficult subjects more by *doing* rather than by reading or listening. You can listen to all the lectures and look at all the pictures in the world about how to make beautiful cakes, but until you screw up several times in the kitchen, you won't actually be able to do it.

Astronomy is the same. You will learn more by doing than anything else in the course. In this course, we present a series of labs that reinforce concepts covered in the lecture course Astr 1103 as well as learn constellations in different seasons and hemispheres.

Student Learning Outcomes:

1. You will collaborate with fellow students on laboratory experiences.
2. You will collect accurate data during laboratory experiences.
3. You will evaluate the results of experiments in light of your collected data.
4. You will identify the primary constellations, stars, and deep sky objects of each season

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. You should be able to create either Microsoft Word documents (.docx) or plain text files. You must be familiar with Internet usage and safe browsing. You need to be able to watch YouTube videos on a computer.

How to Get Started

myLEO Online Access Information

This course uses myLEO Online, the learning management system at East Texas A&M University (ETAMU) 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 Spring 2025 Introductory Astronomy Lab to get to our course.

How This Course Is Organized

This course is organized by weeks. You should listen in class and check the course page on MyLeo Online often to see what activities and assignments are coming due.

What Should You Do First?

After attending class and reading this syllabus, you should proceed to the course page on MyLeo Online and familiarize yourself with the resources. Then show up on the first day of class.

Instructional Methods

Lab Packets

Each individual or group will receive a lab packet on the day of the experiment to be turned in after your group completes the lab. Your group can earn up to 10 points on this packet, equally weighted based on completion of the experiment, evidence of thought in answers, and correctness of your interpretation. Since labs often do not produce exactly the expected results, significant leeway will be given on the results. Main points: be neat, answer all questions, and make sure that your answers show evidence of thought and tying what we've covered in lecture into the lab.

The size of a group will vary, from individual work in the planetarium up to 3 people in room 107.

Participation

Each laboratory section has a maximum of 10 participation points you can earn. You can earn points by arriving to lab on time, remaining until your lab group is finished with the experiment, and by assisting your lab partners in the experiment. "Supervising" your lab group by watching everyone else work and not contributing to either the work or the thought process does not count as participation. Points are awarded at the instructor's discretion.

Night Sky Exam

During the last week of class, you will be tested on your knowledge of the night sky, including being able to name indicated constellations, stars, and deep-sky objects, and to recall basic information about these objects. This exam counts as 25% of your course grade.

If you are certified as needing special accommodations for examinations, please see me privately well before the exam with your letter of accommodation from the Student Disability Resources and Services office.

Extra Credit

No extra credit is offered. If you participate in labs, you will not need it.

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 unless required by the lab
- Checking MyLeo often for announcements and assignments
- Taking responsibility for their own grade.

GRADING

The *syllabus/schedule are subject to change.*

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

A = 90%-100%
B = 80%-89%
C = 70%-79%
D = 60%-69%
F = 59% or Below

Grading is on an absolute scale with no competition. If you all earn an A, you all get an A. 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:
Lab Packets: 40%
Attendance & Participation: 40%
Night Sky Exam: 20%

COURSE OUTLINE / CALENDAR

The schedule below is subject to change.

Date	*Lab*	*Room*
Tues Jan 14	NO LAB FIRST WEEK OF CLASSES	NO LAB
Tues Jan 21	Introduction & Telescope Lab	Sci 107
Tues Jan 28	Winter Skies	Planetarium
Tues Feb 4	Kepler's Laws	Sci 107
Tues Feb 11	Spectroscopy Lab	Sci 107
Tues Feb 18	Spring Skies	Planetarium
Tues Feb 25	Luminosity Lab	Sci 107
Tues Mar 4	Summer Skies	Planetarium
Tues Mar 11	NO LAB: SPRING BREAK	NO LAB
Tues Mar 18	Hertzsprung-Russell Diagram	Sci 107
Tues Mar 25	Fall Skies	Planetarium
Tues Apr 1	Transiting Planets Lab	Sci 107
Tues Apr 8	NO LAB: SOLAR ECLIPSE	NO LAB
Tues Apr 15	Southern Skies	Planetarium
Tues Apr 22	Night Sky Review	Planetarium
Tues Apr 29	Night Sky Exam	Planetarium

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TECHNOLOGY REQUIREMENTS

LMS

All course sections offered by East Texas A&M University 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

Zoom Video Conferencing Tool
https://inside.tamuc.edu/campuslife/CampusServices/CITESupportCenter/Zoom_Account.aspx?source=universalmenu

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**.**

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, an ETAMU 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

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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 ETAMU 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:

- **Unauthorized use of generative AI**. Generative AI tools should not be used for any purpose in this class unless you are explicitly told to use them. It is generally a bad idea anyway, because the training sets that are used by generative AI are full of inaccurate scientific information. Generative AI is meant to produce text or images that simulate English speech, and they are quite good at this. They have little or no ability at fact checking.
- **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 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.

- **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 East Texas A&M website for "academic integrity policy".

D2L 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.

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 (monitored Monday-Friday, 8am-5pm)
- Victim Advocacy and Support: https://www.tamuc.edu/student-advocacy-support/victim-support-services/
- How to Help and Report: https://www.tamuc.edu/student-advocacy-support/victim-support-services/

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- How to Report Concerns About a Fellow Student: 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
- 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

External resources:

Crisis center of Northeast Texas: http://www.ccnetx.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/

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.
http://www.tamuc.edu/Admissions/oneStopShop/undergraduateAdmissions/studentGuidebook.aspx

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

ETAMU Attendance

For more information about the attendance policy please visit the Attendance webpage and Procedures 13.99.99.R0.01:
http://www.tamuc.edu/admissions/registrar/generalInformation/attendance.aspx

http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/academic/13.99.99.R0.01.pdf

Academic Integrity

Students at East Texas A&M University 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

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Undergraduate Student Academic Dishonesty Form

http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/documents/13.99.99.R0.03UndergraduateStudentAcademicDishonestyForm.pdf

Graduate Student Academic Dishonesty Form

http://www.tamuc.edu/academics/graduateschool/faculty/GraduateStudentAcademicDishonestyFormold.pdf

http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/undergraduates/13.99.99.R0.03UndergraduateAcademicDishonesty.pdf

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
East Texas A&M University
Velma K. Waters Library Rm 162
Phone (903) 886-5150 or (903) 886-5835
Fax (903) 468-8148
Email: studentdisabilityservices@tamuc.edu
Website: Office of Student Disability Resources and Services
http://www.tamuc.edu/campusLife/campusServices/studentDisabilityResourcesAndServices/

Nondiscrimination Notice

East Texas A&M University will comply in the classroom, and in online courses, with all federal and state laws prohibiting discrimination and related retaliation on the basis of race, color, religion, sex, national origin, disability, age, genetic information or veteran status. Further, an environment free 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 East Texas A&M University 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 East Texas A&M 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 East Texas A&M campuses. Report violations to the University Police Department at 903-886-5868 or 9-1-1.

East Texas A&M Supports Students' Mental Health

The Counseling Center at East Texas A&M, 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/counsel**

AI use policy

East Texas A&M University 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

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