

PHYS 1103

Stellar Astronomy Lab



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Office Hours: Contact me by e mail anytime 9am to 9 pm

COVID-19 EXCEPTIONS

This semester we anticipate business as usual without significant modifications. However, it may be necessary for ASU to establish modifications to protect students, faculty, and staff. Our top priority is student and employee health and safety, and we are monitoring developments related to COVID-19. The university's top leadership and a health response team are in regular communication about these evolving circumstances. We are coordinating with our healthcare partner, Shannon Clinic, and local health authorities to ensure we have the best possible plans in place for prevention and response. We are following recommendations of the Centers for Disease Control and the Texas Department of State Health Services. We encourage everyone to go to the [CDC website](https://www.cdc.gov) or the [Texas Department of State Health Services website](https://www.dshs.texas.gov) to stay updated.

Although you will be at your computer (someplace) when occupied with this course, you should know what ASU's current policy on face masks is. It is repeated below:

Safety Standards (effective July 27, 2021)

- Students, faculty and staff are required to complete the [wellness check](#) if:
 - You have tested positive for COVID-19
 - You are experiencing symptoms of COVID-19.
 - You have had contact with a person who has recently tested positive for COVID-19.
- Masks are optional everywhere on campus. Anyone who feels more comfortable wearing a face covering should know your decision is supported.
- Washing hands is highly encouraged to prevent spread of all germs.

- Students who do not pass the wellness check should contact their instructors, just as they would for any illness.
- Students who do not feel comfortable coming back to in-person classes should look for online class opportunities or seek an [ADA accommodation](#).

Please address any questions to [Sam Spooner](#), director of risk and emergency management.

We encourage the Ram Family to follow guidance from the [Centers for Disease Control and Prevention](#) and [keep the Ram Fam Healthy](#).

I will be available by appointment during the day, preferably by email, or virtual office hours. I will monitor email from 9 AM to 9 PM 7 days a week and will respond to you as soon as I possibly can. Please feel free to contact me if you have any problems whatsoever in this course—or if you're doing well, and just want to talk about the wonders and mysteries of the Universe. It's in all our interests, and I care, that you do well! The best way to contact me is by e mail. Telephone is not to be used except in the most unusual cases. You may feel free to leave a voice message on my ASU Office phone. You will get your most rapid response by sending me email.

Course Information

Course Description

This course is a one-hour introduction to study of the current knowledge and techniques of modern astronomy. Course content focuses on the universe beyond the solar system including studies of nebulae, the life cycles of stars, galaxies, and cosmology. Emphasis is placed on current knowledge of the universe and how astronomical measurements are made. This lab and its related course (PHYS1303) and the companion courses (PHYS 1304/1104) satisfy the eight-hour physical science with lab requirement for most degree programs and can also be used in most degree plans for elective credit hours. **No one should take this lab without having taken PHYS 1303 or be taking it at the same time.**

Prerequisite Skills

There are no prerequisite courses for this course, however it is foolish to attempt to take this lab course if you have not already taken or are taking PHYS1303 Fundamentals of Astronomy.

Student Learning Outcomes

Goals, Objectives, and Outcomes

Course Objectives/Learning Outcomes

When you finish this course you should be able to:

- **Objective One:** Understand and apply appropriate methods and technology to the study of the natural sciences.
- **Objective Two:** Recognize scientific and quantitative methods and the differences between these approaches and other methods of inquiry and to communicate findings, analyses, and interpretation both orally and in writing.
- **Objective Three:** Identify and recognize the differences among competing scientific theories.
- **Objective Four:** Obtain the intellectual ability to translate, interpret, and extrapolate the most important scientific models governing modern astrophysics, the practices and methodologies used by modern astronomers in constructing astrophysical models, and to be familiar with the astronomical objects studied by astronomers.
- **Objective Five:** Further develop critical thinking and problem solving skills in the area of astronomy and the natural sciences.

Student learning outcomes will be assessed through a combination of written assignments and active participation in the cohort discussions established through a discussion board Forum. Just one is posted, and it counts as up to 5 extra points for the course.

Course Organization

Lesson 1: Introduction to Looking at the Sky

Lesson 2: Measuring the Stars

Lesson 3: Constellations

Lesson 4: Introduction to Stars

Lesson 5: Star Magnitudes

Lesson 6: Star Death

Lesson 7: Galaxies

Lesson 8: Space Exploration

Course Delivery

This is an online course offering that will be delivered via Blackboard.

Required Texts and Materials

The only materials required for the course is *Starry Night* software, obtainable from the Angelo State Bookstore, or from the publisher.

For the bookstore, you may go in person, or go to the store's website:

<http://shopangelo.com>

To order from the bookstore you need to supply your ASU e mail address and your CID. (The bookstore phone is 325-942-2335).

You can also obtain *Starry Night* by purchasing it from Simulation Curriculum online

<https://store.simulationcurriculum.com/collections/college-astronomy/products/starry-night-college-student-download>

This is the store for downloading *Starry Night*, v. 8. You will need an access code for these courses, which is **Code: 71c5** . **If you cannot open the site by clicking on above link, then copy the link and paste it into your browser.** Students will be able to purchase and download their student edition for \$29.95. Download takes 15 minutes or less.

If you are out of the continental United States, you may not be able to acquire the software from the publisher.

Please call Simulation Curriculum (Michael Goodman), or go to the support site if they have any problems. Simulation Curriculum Corp. [877-290-8256](tel:877-290-8256)

Technology Requirements

To successfully complete this course, students need to have access to a good enough Internet connection to be able to use Blackboard and e mail. You will require a computer. You will not be able to do the course using a phone or a pad.

Communication

In this class, we will communicate primarily by writing, mostly in e mail. In any form of communication, you are expected to treat your fellow students and your instructor with courtesy and respect. In this class, the following rules of etiquette apply:

- Spelling and grammar count. Don't use slang terms or shorthand "text-speak" abbreviations.

- It's okay to disagree, but it's not okay to insult. Flame-wars and [ad-hominem](#) attacks are not acceptable.
- No profanity. Offensive language will not be tolerated.
- No racial, ethnic, or cultural slurs. This may result in your removal from the class.

Grading

Evaluation and Grades

Course grades will be determined as indicated in the table below.

Assignments Due Each Week of PHYS1103

Week #	Exercises to be Done
1	Tutorial, A3, A4 ($8+7+4=19$ points) plus Discussion Board (5 points) Total 24 points
2	A5, A6, E1, B4 ($9+7+5+4=25$ points)
3	E2, E3, E4, F1 ($6+5+8+4=23$ points)
4	F2, F3, F4, F5 ($2+3+2+3=10$ points)
5	F6, F7, F8, G1 ($4+1+1+8=14$ points)
6	G2, G3, G4 ($6+5+5=16$ points)
7	H1, H2, H3 ($3+4+3=10$ points)
8	Starry Night Exercise (50 points)

The total number of questions for these labs is 177. Each lab will be scored by the total number of points earned by answering that lab. At the end, the sum of points earned will be converted to a percent of 177 possible points.

Grading System

Angelo State University employs a letter grade system. Grades in this course are determined on a **percentage scale**: the percent is determined by the ratio of the earned points to the assigned points (not counting any Extra Credit).

A = 90 – 100 %

B = 80 – 89 %

C = 70 – 79 %

D = 60 - 69 %

F = 59 % and below.

Note: This course is a full 16-weeks' material done in 8 weeks. It demands a lot of work in a compressed time. It cannot be done by working a couple hours on an evening trying to look

up answers in the text. It requires some effort every day, a minimum of 3-4 hours and no less per week.

Assignment and Activity Descriptions

The week-by-week set of activities are listed above and on Blackboard. The *dates* for the 8 weeks are shown below.

Week		
#	Exercises Available for Posting	Date Exercises Close
1	Monday, 1/17, 2022	Sunday, 1/23, 2022
2	Monday, 1/24, 2022	Sunday, 1/30, 2022
3	Monday, 1/31, 2022	Sunday, 2/6, 2022
4	Monday 2/7, 2022	Sunday, 2/13, 2022
5	Monday, 2/14, 2022	Sunday, 2/20, 2022
6	Monday, 2/21, 2022	Sunday, 2/27, 2022
7	Monday, 2/28, 2022	Sunday, 3/6, 2022
8	Monday, 3/7, 2022	Sunday, 3/13, 2022

General Policies Related to This Course

All students are required to follow the policies and procedures presented in these documents:

- [Angelo State University Student Handbook](#)¹
- [Angelo State University Catalog](#)²

Academic Integrity

Students are expected to maintain complete honesty and integrity in all work. Any student found guilty of any form of dishonesty in academic work is subject of disciplinary action and possible expulsion from ASU.

The College of Science and Engineering adheres to the university's [Statement of Academic Integrity](#).³

Accommodations for Students with Disabilities

ASU is committed to the principle that no qualified individual with a disability shall, on the basis of disability, be excluded from participation in or be denied the benefits of the services, programs or activities of the university, or be subjected to discrimination by the university, as provided by the Americans with Disabilities Act of 1990 (ADA), the Americans with Disabilities Act Amendments of 2008 (ADAAA) and subsequent legislation.

Student Disability Services is located in the Office of Student Affairs, and is the designated campus department charged with the responsibility of reviewing and authorizing requests for reasonable accommodations based on a disability. It is the student's responsibility to initiate such a request by contacting an employee of the Office of Student Affairs, in the Houston Harte University Center, Room 112, or contacting the department via email at ADA@angelo.edu. For more information about the application process and requirements, visit the [Student Disability Services website](#).⁴ The employee charged with the responsibility of reviewing and authorizing accommodation requests is:

Dallas Swafford
Director of Student Disability Services
Office of Student Affairs
325-942-2047
dallas.swafford@angelo.edu
Houston Harte University Center, Room 112

Incomplete Grade Policy

It is policy that incomplete grades be reserved for student illness or personal misfortune. Please contact faculty if you have serious illness or a personal misfortune that would keep you from completing course work. Documentation may be required. See ASU Operating Policy 10.11 [Grading Procedures](#)⁵ for more information.

Plagiarism

Plagiarism is a serious topic covered in ASU's [Academic Integrity policy](#)⁶ in the Student Handbook. Plagiarism is the action or practice of taking someone else's work, idea, etc., and passing it off as one's own. Plagiarism is literary theft.

In your discussions and/or your papers, it is unacceptable to copy word-for-word without quotation marks and the source of the quotation. It is expected that you will summarize or paraphrase ideas giving appropriate credit to the source both in the body of your paper and the reference list.

Papers are subject to be evaluated for originality. Resources to help you understand this policy better are available at the [ASU Writing Center](#).⁷

Student Absence for Observance of Religious Holy Days

A student who intends to observe a religious holy day should make that intention known in writing to the instructor prior to the absence. See ASU Operating Policy 10.19 Student Absence for [Observance of Religious Holy Day](#)⁸ for more information.

Title IX at Angelo State University

The University prohibits discrimination based on sex, which includes pregnancy, sexual orientation, gender identity, and other types of Sexual Misconduct. Sexual Misconduct is a broad term encompassing all forms of gender-based harassment or discrimination including: sexual assault, sex-based discrimination, sexual exploitation, sexual harassment, public indecency, interpersonal violence (domestic violence and/or dating violence), and stalking. As a faculty member, I am a Responsible Employee meaning that I am obligated by law and ASU policy to report any allegations I am notified of to the Office of Title IX Compliance.

Students are encouraged to report any incidents of sexual misconduct directly to ASU's Office of Title IX Compliance and the Director of Title IX Compliance/Title IX Coordinator at:

Michelle Miller, J.D.

Special Assistant to the President and Title IX Coordinator

Mayer Administration Building, Room 210

325-486-6357

michelle.boone@angelo.edu

You may also file a report online 24/7 at www.angelo.edu/incident-form.

If you are wishing to speak to someone about an incident in confidence you may contact the University Health Clinic and Counseling Center at 325-942-2173 or the ASU Crisis Helpline at 325-486-6345.

For more information about Title IX in general you may visit www.angelo.edu/title-ix.

¹ <https://www.angelo.edu/current-students/student-handbook/>

² <https://www.angelo.edu/academics/catalog/>

³ <https://www.angelo.edu/live/files/27603-student-handbook-2020-21#page=96>

⁴ <https://www.angelo.edu/current-students/disability-services/>

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- ⁵ <https://www.angelo.edu/content/files/14197-op-1011-grading-procedures>
- ⁶ <https://www.angelo.edu/live/files/27603-student-handbook-2020-21#page=96>
- ⁷ https://www.angelo.edu/current-students/writing-center/academic_honesty.php
- ⁸ <https://www.angelo.edu/content/files/14206-op-1019-student-absence-for-observance-of>