PHYS 1104
Stellar Astronomy Lab

Instructor: Fred L. Wilson, Ph.D.

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Phone: 486-6984
Office: VIN 118

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

COVID-19 EXCEPTIONS

There may be modifications of the posted calendar 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 or the Texas Department of State Health Services website to stay updated.

Although you will be at your computer (someplace) when occupied with this course, ASU has required that I include the following statement regarding wearing a mask.

"Course Syllabus Statement on Required Use of Masks/Facial Coverings by Students in Class At Angelo State University

As a member of the Texas Tech University System, Angelo State University has adopted the mandatory Facial Covering Policy to ensure a safe and healthy classroom experience. Current research on the COVID-19 virus suggests there is a significant reduction in the potential for transmission of the virus from person to person by wearing a mask/facial covering that covers the nose and mouth areas. Therefore, in compliance with the university policy students in this class are required to wear a mask/facial covering before, during, and after class. Faculty members may also ask you to display your daily screening badge as a prerequisite to enter the classroom. You are also asked to maintain safe distancing practices to the best of your ability."
For the safety of everyone, any student not appropriately wearing a mask/facial covering will be asked to leave the classroom immediately. The student will be responsible to make up any missed class content or work. Continued non-compliance with the Texas Tech University System Policy may result in disciplinary action through the Office of Student Conduct.”

Office hours will be severely restricted, and it will be easiest to contact me via email. 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 personal in-office visit, or by e-mail. Telephone is often less useful because the visual aspect is missing and it is often important if I am to respond properly to you.

Some modifications to the course have to be made as well. The start date is August 17 and the formal last day of the class is October 2 (although some material may be submitted to me until October 4. I will announce what must be done.)

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 (PHYS1304) and the companion courses (PHYS 1303/1103) 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.

Prerequisite and Co-requisite Courses

No one should take this lab without having taken PHYS 1304 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 PHYS1304 Solar System 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 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 discussion board questions each week.

**Course Organization**

**Assignments Due Each Week of PHYS1104**

<table>
<thead>
<tr>
<th>Week #</th>
<th>Exercises to be Done</th>
</tr>
</thead>
</table>
| 1      | Self Introduction (5 points on Discussion Board)  
Tutorial, A1, A2, A7 (5 + 8 + 4 + 4 + 4 = 25 points) |
| 2      | A8, A9, A10 (12 + 9 + 5 = 26 points) |
| 3      | A11, A12, A13 (11 + 6 + 5 = 22 points) |
| 4      | B1, B2, B3 (2 + 5 + 3 = 10 points) |
| 5      | B5, B6, B7 (3 + 7 + 2 = 12 points) |
| 6      | C1, C2, C3 (6 + 3 + 3 = 12 points) |
| 7      | C4, C5, D1 (5 + 5 + 4 = 14 points) |
| 8      | D2, D3, D4 (4 + 4 + 3 = 11 points) |

The total number of questions for these labs is 132. 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 132 possible points.

**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*, v. 8 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](http://shopangelo.com)

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

**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.
Grading System

Angelo State University employs a letter grade system. Grades in this course are determined on a percentage scale:

A = 90 – 100 % (119 points)
B = 80 – 89 % (106 points)
C = 70 – 79 % (83 points)
D = 60 - 69 % (80 points)
F = 59 % and below. (less than 80 points)

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.

<table>
<thead>
<tr>
<th>Week #</th>
<th>Quizzes Available for Posting</th>
<th>Date Quizzes Close</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Monday, 3/29, 2021</td>
<td>Sunday, 4/4, 2021</td>
</tr>
<tr>
<td>3</td>
<td>Monday, 4/5, 2021</td>
<td>Sunday, 4/11, 2021</td>
</tr>
<tr>
<td>4</td>
<td>Monday 4/12, 2021</td>
<td>Sunday, 4/18, 2021</td>
</tr>
<tr>
<td>5</td>
<td>Monday, 4/19, 2021</td>
<td>Sunday, 4/25, 2021</td>
</tr>
<tr>
<td>6</td>
<td>Monday, 4/26, 2021</td>
<td>Sunday, 5/2, 2021</td>
</tr>
<tr>
<td>7</td>
<td>Monday, 5/3, 2021</td>
<td>Sunday, 5/9, 2021</td>
</tr>
<tr>
<td>8</td>
<td>Monday, 5/10, 2021</td>
<td>Friday, 5/14, 2021</td>
</tr>
</tbody>
</table>

The total number of questions for these labs is 132. Each lab will be scored by the total number of points earned by answering that lab.

Extra Credit

You may earn extra credit (5 points per unique show) for attending Planetarium shows. If you attend, you must sign in at the door. Write your Name (legibly), your CID, and specify PHYS1104 (online). If you are also taking PHYS1304 you may split points. You can’t get credit for seeing the same show twice, or credit for both, but you may get credit for every unique show you attend. If you have questions, email me. If you are off campus or otherwise unable to attend shows in
the ASU Planetarium, contact me for other alternatives for extra credit. Owing to COVID-19 there may not be any Planetarium Shows available.

**Final Exam**

This course does not require a final exam as you are evaluated on a weekly basis. However all work must be completed by the dates specified in assignments.

**General Policies Related to This Course**

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

- Angelo State University Student Handbook¹
- Angelo State University Catalog²

**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
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 for more information.

Plagiarism

Plagiarism is a serious topic covered in ASU’s Academic Integrity policy 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.

In this course, plagiarism particularly applies to posting the work of someone else as your own. Any copying or reposting of answers from a source other than your own work will be considered an flagrant violation of this policy.

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 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 Boone, J.D.
Director of Title IX Compliance/Title IX Coordinator
Mayer Administration Building, Room 210
325-942-2022
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.

Course Schedule

All dates are shown above and are posted in the Blackboard site for the course.

1 https://www.angelo.edu/student-handbook/
2 https://www.angelo.edu/catalogs/
3 https://www.angelo.edu/student-handbook/community-policies/academic-integrity.php
4 https://www.angelo.edu/services/disability-services/
5 https://www.angelo.edu/content/files/14197-op-1011-grading-procedures
6 https://www.angelo.edu/student-handbook/community-policies/academic-integrity.php
7 https://www.angelo.edu/dept/writing_center/academic_honesty.php
8 https://www.angelo.edu/content/files/14206-op-1019-student-absence-for-observance-of