

# PHYSICS 1104

## Solar System Astronomy Lab



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**Virtual Office Hours:** By appointment only

## Course Information

### Course Description

Physics 1104, Solar System Astronomy Laboratory, is a one credit hour introductory study of the current knowledge and techniques of planetary astronomy. Broad topics in the field will be covered, but the emphasis will be on planetary astronomy and planetary geology.

### Required Materials

- The Norton *Starry Night Workbook* by Desch & Marks (ISBN: 978-0-393-60256-2)
  - This workbook comes with a download code for the *Starry Night College* software. **Both the software and workbook are required for this course.** *Starry Night College* is a realistic and user-friendly planetarium simulation program that is designed to allow you to perform observational activities on your computer.
- Computer

### Getting Started

- Download *Starry Night College* software on to your computer. The software download instructions are given on the inside cover of your *Starry Night Workbook*.
- Alternatively, you can also access *Starry Night College* in the MCS 111 computer lab (computers 10-44), but you will still need to purchase the *Starry Night Workbook* to have access to the Student Exercise instructions and answer sheets.
- Make sure you read the Preface (p. vii) and Quick Tips (p. ix) in the workbook.

### Communication

**Written communication via email:** All private communication will be done exclusively through your ASU email address. Check frequently for announcements and policy changes. In your emails, include the course name and section number in your subject line. I will respond to email and/or telephone messages within 24 hours during working hours Monday through Friday. Weekend messages may not be returned until Monday.

## Technology

You will be required to have a modern computer with internet access for this course with room to download and the capability to run the required software.

## Grading

### Evaluation and Grades

Your final grade will be determined by your scores on all lab tests. There are 14 tests worth 25 points each giving a total of 350 possible points. An extra credit lab will also be available to help raise your grade.

### Grading System

Course grades will be dependent upon completing course requirements and meeting the student learning outcomes. The following grading scale is in use for this course:

- A = 90.00-100%
- B = 80.00-89.99%
- C = 70.00-79.99%
- D = 60.00-69.99%
- F = 0-59.99%

### Attendance and Assignment Policy

You are expected to complete each lab. Missed labs cannot be made up. If your assignments are not submitted by the posted deadline you will receive a zero for that assignment. You must contact your professor before the assignment is due if you believe it will be late or as soon as possible after the due date in the case of an unexpected emergency. NOTE: You are NOT automatically dropped if you stop completing assignments. The last day to drop this course is August 2, 2021.

## Lab Assignments

### Instructions for lab

Follow this plan as you work your way through each lab assignment:

1. Labs will be assigned as described in this syllabus.
2. Follow the instructions (LAB INSTRUCTIONS in Blackboard) for each lab carefully and fully.
3. Do each lab as assigned (see lab assignment schedule below), answering all the questions and/or recording data on the Starry Night Workbook answer sheet or on the Starry Night Work Sheets (available on our Blackboard site).
4. I recommend you do the labs early to avoid having to rush through them at the last minute.
5. After you complete the lab, take the Blackboard lab quiz (look in the LAB TESTS tab).
6. Make sure you **submit the test** when you complete it and that you meet the deadline for submission for the test.
7. You can use your completed workbook answer sheet pages or work sheets while taking the test.

8. You **will not** have to turn in the answer sheet from the Starry Night Workbook or the work sheets.
9. Grades will be reported in Blackboard (Tools/My Grades).

## **Laboratory Assignments and Due Dates**

Note: "End of the day" means 11:59 PM and tests are unavailable after 11:30 PM

WEEK 1: July 12 – 16

### **Lab 1 – Starry Night Tutorial**

Blackboard test due by the end of the day Friday July 16.

### **Lab 2 – Starry Night Student Exercises A1, A2, A3, A4, A5**

Blackboard test due by the end of the day Friday July 16.

### **Lab 3 – Starry Night Student Exercises A6, A7, A8, A9, & A13**

Blackboard test due by the end of the day Friday July 16.

WEEK 2: July 19 – 23

### **Lab 4 – Precession (p. 33 in workbook)**

Blackboard test due by the end of the day Monday July 19.

### **Lab 5 – Starry Night Student Exercises A10, A11, & A12 AND Motion of the Moon (p. 15 in workbook)**

Blackboard test due by the end of the day Wednesday July 21.

### **Lab 6 – Starry Night Student Exercises B1, B2, B3, B4, & B5 AND Kepler's Laws (p. 39 in workbook)**

Blackboard test due by the end of the day Friday July 23.

WEEK 3: July 26 – 30

### **Lab 7 – Flying to Mars (p. 43 in workbook)**

Blackboard test due by the end of the day Monday July 26.

### **Lab 8 – Starry Night Student Exercises B6, C1, C2, C4, & C5**

Blackboard test due by the end of the day Wednesday July 28.

### **Lab 9 – The Moons of Jupiter (p. 47 in workbook)**

Blackboard test due by the end of the day Friday July 30.

WEEK 4: August 2 – 6

### **Lab 10 – The Rings of Saturn (p. 53 in workbook)**

Blackboard test due by the end of the day Monday August 2.

### **Lab 11 – Starry Night Student Exercises D1, D2, D3, & D4**

Blackboard test due by the end of the day Wednesday August 4.

### **Lab 12 – Pluto and Kuiper Belt Objects (p. 57 in workbook)**

Blackboard test due by the end of the day Friday August 6.

WEEK 5: August 9 – August 13

**Lab 13 – Asteroids (p. 61 in workbook)**

Blackboard test due by the end of the day Monday August 9.

**Lab 14 – Motion of the Sun Along the Ecliptic (p. 11 in workbook)**

Blackboard test due by the end of the day Wednesday August 11.

**Extra Credit – Lab 15 – The Celestial Sphere (p. 1 in workbook)**

Blackboard test due by the end of the day Friday August 13.

## 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](#)<sup>1</sup>
- [Angelo State University Catalog](#)<sup>2</sup>

### 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](#).<sup>3</sup>

### 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](mailto:ADA@angelo.edu). For more information about the application process and requirements, visit the [Student Disability Services website](#).<sup>4</sup> 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](mailto: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](#)<sup>5</sup> for more information.

## **Plagiarism**

Plagiarism is a serious topic covered in ASU's [Academic Integrity policy](#)<sup>6</sup> 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. I encourage you to work together on homework assignments and to study together for exams. However, anything you turn in must be in your own words.

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

## **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](#)<sup>8</sup> 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](mailto:michelle.boone@angelo.edu)

**You may also file a report online 24/7 at [www.angelo.edu/incident-form](http://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](http://www.angelo.edu/title-ix).

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

<sup>2</sup> <https://www.angelo.edu/catalogs/>

<sup>3</sup> <https://www.angelo.edu/student-handbook/community-policies/academic-integrity.php>

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

<sup>5</sup> <https://www.angelo.edu/content/files/14197-op-1011-grading-procedures>

<sup>6</sup> <https://www.angelo.edu/student-handbook/community-policies/academic-integrity.php>

<sup>7</sup> [https://www.angelo.edu/dept/writing\\_center/academic\\_honesty.php](https://www.angelo.edu/dept/writing_center/academic_honesty.php)

<sup>8</sup> <https://www.angelo.edu/content/files/14206-op-1019-student-absence-for-observance-of>