Physics 1103: Stellar Astronomy Laboratory

Summer I 2020

Course Information

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Office Hours: BY APPOINTMENT

Course Description
Physics 1103, Stellar Astronomy Laboratory, is a one credit hour introductory study of the current knowledge and techniques of astronomy and astrophysics. Broad topics in the field will be covered, but the emphasis will be on stellar astronomy and cosmology.

Required Materials

The Norton Starry Night Workbook by Desch & Marks

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.

Academic Integrity
Angelo State University expects its students to maintain complete honesty and integrity in their academic pursuits. Students are responsible for understanding and complying with the university Academic Honor Code and the ASU Student Handbook.

Accommodations for Disabilities
The Student Life Office is the designated campus department charged with the responsibility of reviewing and authorizing requests for reasonable accommodations based on a disability, and it is the student’s responsibility to initiate such a request by contacting the Student Life Office. The Student Life Office will establish the particular documentation requirements necessary for the various types of disabilities.

Religious Holidays
A student who intends to observe a religious holy day should make that intention known in writing to the instructor prior to the absence. A student who fails to do class work for the observance of a religious holy day shall be allowed to take an examination or complete an assignment scheduled for that day within a reasonable time after the absence.
Assessing Outcomes & Grade Determination

Method of Assessing Outcomes

- Student learning outcomes will be assessed through tests administered on Blackboard for each of the completed labs.
- Make sure you complete each lab before you attempt to take the test.
- You will not have enough time to do the lab and take the test at the same time. All tests are timed with a limit of 30 minutes and once started, the test must be completed in one sitting.
- DO NOT leave the test before clicking Save and Submit.

NOTE: Blackboard issues will arise, if you wait until the last minute to complete assignments you run the risk of missing them. I can fix problems such as browser crashes and internet outages, but NOT the hour before it is due. You have more than one day to complete work, so due dates are firm.

Grade Determination

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.

Angelo State University employs a letter grade system. Grades in this course are determined on a percentage scale: A = 90-100%, B = 80-89%, C = 70-79%, D = 60-69%, F = 59% and below

Late Work

- Unexcused late work or missed tests will not be accepted.
- 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.

Course Outline

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.
**Action Plan**

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 tab 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 that you do the labs early to avoid having to rush 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 to help you while taking the test.
8. You do 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: June 1 – 5**

Lab 1 – Starry Night Tutorial
*Blackboard test due by the end of the day Friday June 5.*

Lab 2 – Starry Night Student Exercises E1, E2, E3, & E4
*Blackboard test due by the end of the day Friday June 5.*

Lab 3 – Starry Night Student Exercises B3, B4, & B5
*Blackboard test due by the end of the day Friday June 5.*

**WEEK 2: June 8 – 12**

Lab 4 – Starry Night Student Exercises F1, F2, F3, F4, & F5
*Blackboard test due by the end of the day Monday June 8.*

Lab 5 – The Magnitude Scale and Distances (p. 67 in workbook)
*Blackboard test due by the end of the day Wednesday June 10.*

Lab 6 – Stars and the HR Diagram (p. 71 in workbook)
*Blackboard test due by the end of the day Friday June 12.*
**WEEK 3: June 15 – 19**

Lab 7 – Nebulae: The Birth and Death of Stars (p. 75 in workbook)  
*Blackboard test due by the end of the day Monday June 15.*

Lab 8 – Pulsars and Supernova Remnants (p. 79 in workbook)  
*Blackboard test due by the end of the day Wednesday June 17.*

Lab 9 – Starry Night Student Exercises F6, F7, & F8  
*Blackboard test due by the end of the day Friday June 19.*

**WEEK 4: June 22 – 26**

Lab 10 – Starry Night Student Exercises G1, G2, G3, & G4  
*Blackboard test due by the end of the day Monday June 22.*

Lab 11 – Quasars and Active Galaxies (p. 87 in workbook)  
*Blackboard test due by the end of the day Wednesday June 24.*

Lab 12 – Views of the Milky Way (p. 91 in workbook)  
*Blackboard test due by the end of the day Friday June 26.*

**WEEK 5: June 29 – July 1**

Lab 13 – Globular Clusters (p. 95 in workbook)  
*Blackboard test due by the end of the day Monday June 29.*

Lab 14 – The Neighborhood of the Sun (p. 99 in workbook)  
*Blackboard test due by the end of the day Wednesday July 1.*

Extra Credit – Lab 15 – Beyond the Milky Way Galaxy (p. 103 in workbook)  
*Blackboard test due by the end of the day Wednesday July 1.*