

**South Plains College
Common Course Syllabus: ASTR 1403
Revised Summer 1 2026**

Department: Science
Discipline: Astronomy
Course Number: ASTR 1403
Course Title: Stars and Galaxies
Available Formats: Online
Campuses: Online, Online Dual Credit

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Course Description: Study of Stars, Galaxies, and the Universe outside our Solar System

Prerequisite: There are no prerequisites for this course, however you will be expected both on the homework and on the exams to be able to perform simple mathematical calculations. Examples of the mathematical concepts we will use in this course are scientific notation, multiplying and dividing powers of 10, converting between different metric units, rearranging and solving simple equations. It will be assumed that you are familiar with high school algebra.

Credit: 4 **Lecture:** 3 **Lab:** 3

Course Textbook: The Essential Cosmic Perspective, 9th Edition by Bennett, Donahue, Schneider, and Voit. Students will also need the online code for Pearson's Mastering Astronomy.

This course partially satisfies a Core Curriculum Requirement:
Life and Physical Sciences Foundational Component Area (030)

Core Curriculum Objectives addressed:

- **Communications skills**—to include effective written, oral, and visual communication
- **Critical thinking skills**—to include creative thinking, innovation, inquiry and analysis, evaluation and synthesis of information
- **Empirical and quantitative competency skills**—to manipulate and analyze numerical data or observable facts resulting in informed conclusions
- **Teamwork**—to include the ability to consider different points of view and to work effectively with others to support a shared purpose or goal.

Student Learning Outcomes:

Upon successful completion of this course, students shall be able to:

1. Describe key features of the universe, its scale, our place in it, and the physical principles relevant to astronomy.
2. Understand basic principles of physics that allow astronomers to learn about the universe.
3. Apply quantitative reasoning to solve a variety of astronomical problems.
4. Describe the classifications and lifecycles of stars.
5. Explain the basic classification of galaxies in terms of structure.
6. Discuss current theories of galaxy formation and evolution.
7. Describe the spatial distribution of galaxies within the Universe.
8. Describe the evidence for the Big Bang as the origin of the Universe and the methods for estimating the age of the Universe.
9. Discuss experimental observations leading to the ideas of Dark Matter and Dark Energy and current theories for explaining these observations.

Course Evaluation:**Breakdown of Grading:**

Homework	20%
Quiz average	20%
Exam 1	20%
Exam 2	20%
Final	20%

Grading scale:

100---A---90, 89---B---80, 79---C---70, 69---D---60, 59---F---0

Note: Final grades will be calculated using the breakdown above.

(Late Work will not be accepted. Bonus points may be given for assignments and activities that are considered above and beyond course requirements. *Students are strongly encouraged to attempt all bonus assignments.* Bonus points will be added to Quiz 1 at the end of the semester.)

Attendance Policy: Attendance and effort are vital to success in this course. Attendance (logging into the course several times each week) keeps you well connected to the course and gives you opportunities to ask questions and clear up confusions. Therefore, students are expected to log into the course a minimum of 2 to 3 times each week. Students who go long stretches without working on the course should not be surprised if they find themselves performing poorly in the course.

Computer/Software requirements

Minimum Computer Requirements:

1. Personal computer with a 1 GHz Pentium processor and at least 512 MB of RAM memory, a minimum 5 GB of free hard drive, running Windows 7 / MacOS 10.8 or later (Windows 10 / MacOS 10.12 recommended).
2. Web Browser: Google Chrome seems to work the best with Blackboard and HOL.
3. A high speed internet connection of 5+ Mbps.
4. Microsoft Office and Microsoft PowerPoint and Word software (a recent version, preferably 2016 or higher).
5. Windows Media Player (the latest version).
6. Soundcard and functioning speakers.
7. Knowledge of how to navigate Google Chrome web pages and how to deal with pop-up blockers and other devices and warnings on Google Chrome.
8. Knowledge of how to download files from the Google Chrome and find them on your computer once they are downloaded.
9. Knowledge of basic operations of Microsoft Word and Microsoft PowerPoint.
10. Knowledge of how to view and adjust videos with Windows Media Player.

Additional notes on technology:

I will respond to individual emails as quickly as I can. If you send me something through email, and you do not receive a response within 1 business day, please resend it. I will always at least touch base with you within a 1-day time period unless I am ill. Also, a student will not be punished in the event that Blackboard or an SPC server is down when an assignment is due. (Note: This does not apply to your own server or computer having issues!) If you need to print, turn something in, or access something online, please try to do so ahead of time and not at the last minute in order to avoid this situation.

For information regarding official South Plains College statements about intellectual exchange, disabilities, non-discrimination, Title IX Pregnancy Accommodations, CARE Team, and Campus Concealed Carry, please visit <https://www.southplainscollege.edu/syllabusstatements/>.

ASTR 1403 Stars and Galaxies Schedule Summer 1 2026

(Some of the scheduled activities are weather dependent and subject to change accordingly.)

(Note: All HW assignments will be posted in the Blackboard folder for that chapter. Assignments will always be due at 11pm on the night of the due date.)

Week 1A June 1-2 Register for Mastering Astronomy HW 1 Ch 11, due June 3	Week 3C June 19-21 HW 6 Ch 16, due June 22
Week 1B June 3-4 HW 2 Ch 12, due June 5	Week 4A June 22-23 Quiz 2 over Ch 15-16, due June 24
Week 1C June 5-7 Quiz 1 over Ch 11-12, due June 8	Week 4B June 24-25 HW 7 Ch 17, due June 26
Week 2A June 8-9 HW 3 Ch 13, due June 10	Week 4C June 26-28 HW 8 Ch 18, due June 29 *Sky Observation Session in Levelland (+10 Bonus points)
Week 2B June 10-11 HW 4 Ch 14, due June 12	Week 5A June 29 HW 9 Ch 19, June 30
Week 2C June 12-14 Observation Lab 1, due June 15	Week 5B June 30 Exam 2 over Ch 15-19, due July 1
Week 3A June 15-16 Exam 1 over Ch 11-14, due June 17	Week 5C July 1 Observation Lab 2, due July 2
Week 3B June 17-18 HW 5 Ch 15, due June 19	Final exam will be posted on Blackboard at 8am on July 2. It will be due by 11pm on July 2.