PHYS 1403 Stars and Galaxies Syllabus
Dallas College
NorthLake Campus

Contacting Your Instructor
Instructors typically respond to emails from students within 24 hours. However, over the weekend and holiday periods responses may be delayed. Find out more about contacting your instructor.

Instructor Contact Information
Name: N. Zargar
Email: nzargar@dcccd.edu
Office Phone Contact by email
Office Location: C 303B
Office Hours: 10Am-11Am Tuesday and Friday
Division Office and Phone: Contact by email

Course Information
Course Title: Stars and Galaxies
Course Number: Phys 1403
Section Number: 71430
Semester/Year: Fall 2020
Credit Hours: 4
Class Meeting Time/Location: Lec MTWRFs INET – Lab MTWRFs INET
Certification Date: 08/28/2020
Last Day to Withdraw: 09/30/2020

Course Description
The study of stars, galaxies, and the universe outside our solar system. Introduces the properties of stars, stellar evolution, black holes, galaxies and current cosmological ideas. Emphasis is on the application of scientific principles and explanation of
phenomena in the universe. The laboratory includes outdoor viewing sessions and the use of spectra. (3 Lec., 3 Lab.)

**Student Learning Outcomes**

**Upon successful completion of this course, students will:**

1. Explain the daily and annual motions that occur in the sky.
2. Relate the contributions of astronomers through the centuries and describe the methods used by them to explain their observations.
3. Apply the principles to science to describe and explain various astronomical phenomena.
4. Describe the basic features of the Sun and explain how it produces its energy.
5. List the different stages in stellar evolution and the properties of stars during their life cycles.
6. Distinguish between different types of galaxies and explain current views on their formation.
7. Discuss current cosmological ideas regarding the structure and formation of the universe.
8. Perform lab experiments and exercises which illustrate the concepts listed above.
9. View the night sky, identify the brightest stars and constellations, and observe various objects through the telescope, to personally experience the marvels of the universe.

**Texas Core Objectives**

The College defines essential knowledge and skills that students need to develop during their college experience. PHYS 1403 is a **Tier 2** course in the **Scientific Discovery and Sustainability** learning category. “Knowledge and skills learned in Tier 1 are reinforced and applied. The **Scientific Discovery and Sustainability** category enables you to construct and examine the relationship of the natural sciences to the world around you. Becoming a scientifically literate person can develop your ideas of how science and technology influence one another and contribute to modern culture.” - *Catalog of the Colleges of DCCCD*

These general education competencies parallel the Texas Core Objectives for Student Learning. In this course, the activities you engage in will give you the opportunity to practice two or more of the following core competencies:

1. **Critical Thinking Skills** - to include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information
2. **Communication Skills** - to include effective development, interpretation, and expression of ideas through written, oral, and visual communication

3. **Empirical and Quantitative Skills** - to include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions

4. **Teamwork** - to include the ability to consider different points of view and to work effectively with others to support a shared purpose or goal

**Required Course Materials**

If your Dallas College course requires learning materials they will be provided as part of the IncludED program (dcccd.edu/included) or as free materials you can access in your online course shell.

If you opt out of the IncludED program, you are responsible for obtaining all your required learning materials by the first day of the class. For more details, see Institutional Policies.

**Title:** *The Cosmic Perspective*

**Edition:** 8th Edition

**Authors:** Jeffrey Bennett, Megan Donahue, Nicholas Schneider and Mark Voit

**Publisher:** Pearson

**Copyright year:** 2017

**ISBN:** 978-0-13-411031-8 (loose leaf version)

**ISBN:** 978-0-13-412755-2 (eTextbook)

**Course Outline**

This course is divided into twelve lessons, over eight weeks.

Lesson 1: The Big Picture
Lesson 2: Clocks and Calendars
Lesson 3: Analyzing Starlight
Lesson 4: The Sun
Lesson 5: Stellar Measurements
Lesson 6: The HR Diagram
Lesson 7: Stellar Birth
Lesson 8: Stellar Maturity
Lesson 9: Stellar Death
Lesson 10: The Milky Way Galaxy
Lesson 11: Other Galaxies
Lesson 12: Cosmology
Graded Work

The tables below provide a summary of the graded work in this course and an explanation of how your final course grade will be calculated.

Summary of Graded Work

<table>
<thead>
<tr>
<th>Assignments</th>
<th>Points</th>
<th>Totals</th>
<th>Approx. %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lesson Quizzes</td>
<td>12 @ 20 points each</td>
<td>240 points</td>
<td>24%</td>
</tr>
<tr>
<td>Tests</td>
<td>4 @ 100 points each</td>
<td>400 points</td>
<td>40%</td>
</tr>
<tr>
<td>Orientation Quiz</td>
<td>1 @ 10 points</td>
<td>10 points</td>
<td>1%</td>
</tr>
<tr>
<td>Discussion Boards</td>
<td>5 @ 20 points each</td>
<td>100 points</td>
<td>10%</td>
</tr>
<tr>
<td>Labs</td>
<td>6 @ 25 points each</td>
<td>150 points</td>
<td>15%</td>
</tr>
<tr>
<td>Stargazing Activities</td>
<td>5 @ 10 points</td>
<td>50 points</td>
<td>5%</td>
</tr>
<tr>
<td>Astronomy Project</td>
<td>1 @ 50 points</td>
<td>50 points</td>
<td>5%</td>
</tr>
</tbody>
</table>

**TOTAL: 1,000 points**
Extra Credit: Up to 3 extra stargazings

Final Grade

<table>
<thead>
<tr>
<th>Points</th>
<th>Percentages</th>
<th>Letter Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>900-1,000</td>
<td>90-100%</td>
<td>A</td>
</tr>
<tr>
<td>800-899</td>
<td>80-89%</td>
<td>B</td>
</tr>
<tr>
<td>700-799</td>
<td>70-79%</td>
<td>C</td>
</tr>
<tr>
<td>600-699</td>
<td>60-69%</td>
<td>D</td>
</tr>
<tr>
<td>0-599</td>
<td>0-59%</td>
<td>F</td>
</tr>
</tbody>
</table>

Description of Graded Work

Orientation Activities

All students must read the orientation information and complete the Orientation Quiz posted in “Getting Started” by the assigned due date.

Quizzes
The course is divided into twelve lessons and there is a quiz for each lesson, which is graded for 20 points. Late assignments will not be graded, unless you have made arrangements with the Instructor. A 10-point orientation quiz is also required, to familiarize you with the various components of the website.

Tests

There will be four tests, each worth 100 points. Tests will be multiple choice, true false and short answer. Some questions may involve simple computations. All tests are taken on-line and are open-book, but are timed for 120 minutes. You will receive instructions and passwords prior to the test in the weekly emails.

Discussion Board

A discussion topic will be posted on the Discussion Board every other week. Post your frank and thoughtful responses to the original topic and at least twice to another classmate for each forum. Follow the rules for online etiquette. Your participation in the discussion board will be graded for 100 points.

Lab Exercises and Stargazing Activities

There are 6 lab exercises scheduled, and at least 5 stargazing activities to be done. You may do up to three extra stargazings for extra credit. An optional lab which consists of writing essays, is also available in case stargazing is not possible, but the essays may not be used for extra credit. **A student must make a passing grade in lab to receive a passing grade in the course.**

Astronomy Project

This will be a lab designed by you using animations provided by your instructor or a resource discovered by you. It will evaluate the core objectives of critical thinking, communication and empirical and quantitative skills. The project will be graded for 50 points.

Attendance and Your Final Grade

Since this is an online class, no on-campus attendance is required. However, students are expected to log in and participate actively via eCampus. [http://ecampus.dcccd.edu](http://ecampus.dcccd.edu) Try to check emails daily and access the class at least 3 times per week. You must show participation in this class **prior to the certification date**, 08/28/2020.
As a general guideline, you should be actively learning through working with the online lesson materials for about 3 hours per week (the same as attending class) and dedicate at least the same amount of additional time to studying and reviewing the lesson materials either offline or online. You should also be actively working on the labs for about 3-6 hours each week. In total, to be successful, students should spend a MINIMUM of 9-12 hours working on course materials each week of the semester.

**Late Work Policy**

It is in each student's best interest to submit work in a timely fashion. As this is an accelerated course, late work will not be accepted without the instructor's permission.

**Other Course Policies**

**Incompletes**

An incomplete grade of "I" may be given when an unforeseen emergency prevents you from completing the work for this class. Make contact with the instructor immediately if there is a situation preventing you finishing the course.

**Communication**

The primary means of communication for this class is email. You are responsible for ensuring that your email address is correctly listed in the course (Check this on the first day!) and that you are receiving emails from the instructor. To ensure you receive all notices from the instructor in a timely manner, check your email frequently (at least 3-4 times per week).

If you send the instructor an email with a technical problem or other request that requires a rapid response to meet a deadline, make sure to use the correct subject line and then check your email frequently between the time you send your request/problem and the due date. Extensions will NOT be granted in situations where the instructor responded before the due date with instructions, but the student did not check frequently enough to see the response.

The instructor will reply to all emails sent in the proper format within 24 hours, so double check your format and re-send your email if you do NOT hear back from the instructor within this time frame. Do NOT assume that an unanswered email was received – ALWAYS RE-SEND if you do not receive a reply in 24 hours!
Required Subject Line Format
When contacting the instructor, the SUBJECT LINE must contain the course ID (PHYS 1403-**section #***) AND the student’s first and last name. The email itself (the body/message) must ALSO contain course ID and the student’s first and last name at the end of the message. Emails sent without this format will either receive no reply or a reply telling the student to re-send in proper format, which slows down response time.

Institutional Policies
Institutional Policies include information about tutoring, Disabilities Services, class drop and repeat options, Title IX, and more.