PHYS-1403-302IN
Stars and Galaxies
Fall 2022
Online

Instructor Information:
Andrew VandenHeuvel
avandenheuvel@com.edu
616-724-7188

Student hours and location:
I work remotely from my home office in Michigan.
Student hour: Fridays from 10:00 AM to 11:00 AM in my Zoom Meeting Room.

Required Textbook: There is no required textbook. All readings are freely available in the course.

Course Description: This course provides an introductory account of the Earth, Moon, planets, Sun, and other members of our solar system, including theories of their origins. The history and evolution of modern astronomy will also be discussed. A laboratory component consisting of simulations, observations, and experiments is also part of the course. Prerequisite: TSI 351 Reading or IRW 0320 grade "C" or better.

Course requirements: Students will need access to a printer and camera to complete certain lab activities.

Determination of Course Grade: Each assessment is worth a specific number of points. Below is a table which lists each type of assessment, how many are included in the course, the total number of points represented, and the percent of the final score that can be attributed to each assessment type.

Discussions (3)	15 points	4%
Practice Quiz (3)	30 points	6%
Quizzes (8)	105 points	23%
Labs (7)	70 points	16%
Midterm (1)	70 points	16%
Final (1)	100 points	22%

Grading Scale:

A	100 – 90%
B	89 – 80%
C	79 – 70%
D	69 – 60%
F	Below 60%

Fail Lab = Fail Class Syllabus Statement: The grade for this course consists of both a lecture and laboratory component. Students must earn a 70% or better in the laboratory component to successfully pass the course. Earning less than 70% in the laboratory component will result in an F for the course regardless of the lecture grade. Passing the laboratory component and failing the lecture component will not guarantee a passing grade for the course. Deviations from this policy will be at the sole discretion of the instructor.

Late Work, Make-Up, and Extra-Credit Policy: All assignments should be submitted by 11:59 pm on the date that they are assigned. Late work will be accepted with a 10% penalty for each week that it is late. There are no extra credit opportunities available in this course.

Attendance Policy: Attendance in this online course is based entirely on the completion of assignments. Simply logging in to the course or reviewing the course content does not constitute attendance. Please be sure you complete your assignments on or near the due date to avoid penalties for extended absences, up to and including being withdrawn from the course.

Communicating with your instructor: Email is the preferred method of communication for our course. Your professor will respond to all email inquiries within 24 hours, Monday - Friday, excluding holidays. ALL electronic communication with the instructor must be through your COM email. Due to FERPA restrictions, faculty cannot share any information about performance in the class through other electronic means.

Student Learner Outcome	Maps to Core Objective	Assessed via this Assignment
1. Demonstrate knowledge of our place in the universe and how astronomy applies to us, astronomical terminology, our moon's phases, and lunar and solar eclipses; the origins of modern astronomy, gravity and how it affects planetary motion, and light and the use of telescopes in astronomy; the origin of our solar system and	*Critical Thinking Skills* Students will demonstrate creative thinking, innovation, and the ability to analyze, evaluate, and synthesize information.	Chapter quizzes

Earth; terrestrial planets; gas giants and other objects in our solar system.		
2. Analyze and interpret data from observations to draw valid scientific conclusions and communicate these conclusions in a clear and articulate manner	*Empirical/Quantitative Skills* Manipulate and analyze observable facts, evidence, or numerical data and arrive at an informed conclusion.	Lab activities
3. Scientifically justify stances on modern scientific controversies related to the solar system.	*Communication Skills* Develop, interpret, and express ideas through written communication.	Great Debate
4. Demonstrate the ability to work effectively with others to support and accomplish a shared goal while recognizing and respecting different viewpoints.	*Teamwork* Students will demonstrate the ability to work effectively with others to support and accomplish a shared goal, while recognizing and respecting different viewpoints.	Observing Project

Academic Dishonesty: Any incident of academic dishonesty will be dealt with in accordance with college policy and the Student Handbook. Academic dishonesty – such as cheating on exams is an extremely serious offense and will result in a grade of zero on that exam and the student will be referred to the Office of Student Conduct for the appropriate disciplinary action.

This online course is considered "open book." You may use any resources from the course as you complete the practice quizzes, chapter quizzes, tests, and final exam. You should not, however, consult any other person or website while completing an assessment in our course (i.e. "Googling" answers to quizzes, tests, or the final is considered cheating).

Student Concerns: If you have any questions or concerns about any aspect of this course, please contact me using the contact information previously provided. If, after discussing your concern with me, you continue to have questions, please contact my supervisor, Sheena Abernathy, the Science Department Chair at 409-933-8330 or sabernathy@com.edu.

Course outline:

Chapter	**Assignments**	**Due Date**
Read Me First	- Syllabus Quiz	Thu, Aug 25

	- A little about yourself	
Chapter 1 The Tools of Astronomy	- Practice 1.1 - Lab 1 - Discussion - Quiz 1	Mon, Aug 29
Chapter 2 Astrophysics	- Practice 2.1 - Lab 2 - Quiz 2	Mon, Sep 12
Chapter 3 Stars	- Practice 3.1 - Lab 3 - Quiz 3	Mon, Sep 26
Chapter 4 Stellar Evolutions	- Lab 4 - Quiz 4	Mon, Oct 10
Midterm	- Midterm Exam	Mon, Oct 24
Chapter 5 The Milky Way	- Lab 5 - Quiz 5	Mon, Nov 7
Chapter 6 Galaxies Beyond	- Lab 6 - Quiz 6	Mon, Nov 21
Chapter 7 The Big Bang	- Lab 7 - Quiz 7	Mon, Nov 28
Chapter 8 Cosmology	- Quiz 8	Mon, Dec 5
Final Exam	- Final Exam	Wed, Dec 7

Institutional Policies and Guidelines

Grade Appeal Process: Concerns about the accuracy of grades should first be discussed with the instructor. A request for a change of grade is a formal request and must be made within six months of the grade assignment. Directions for filing an appeal can be found in the student handbook.<https://build.com.edu/uploads/sitecontent/files/student-services/Student_Handbook_2019-2020v5.pdf. *An appeal will not be considered because of general dissatisfaction with a grade, penalty, or outcome of a course. Disagreement with the instructor's professional judgment of the quality of the student's work and performance is also not an admissible basis for a grade appeal.* https://build.com.edu/uploads/sitecontent/files/student-services/Student_Handbook_2019-2020v5.pdf

Academic Success & Support Services: College of the Mainland is committed to providing students the necessary support and tools for success in their college careers. Support is offered through our Tutoring Services, Library, Counseling, and through Student Services. Please discuss any concerns with your faculty or an advisor.

ADA Statement: Any student with a documented disability needing academic accommodations is requested to contact Michelle Brezina at 409-933-8124 or mvaldes1@com.edu. The Office of Services for Students with Disabilities is located in the Student Success Center.

Textbook Purchasing Statement: A student attending College of the Mainland is not under any obligation to purchase a textbook from the college-affiliated bookstore. The same textbook may also be available from an independent retailer, including an online retailer.

Withdrawal Policy: Students may withdraw from this course for any reason prior to the last eligible day for a "W" grade. Before withdrawing students should speak with the instructor and consult an advisor. Students are permitted to withdraw only six times during their college career by state law. The last date to withdraw from the 1 st 8-week session is October 5. The last date to withdraw from the 16-week session is November 18. The last date to withdraw for the 2 nd 8-week session is December 1.

F_N Grading: The F_N grade is issued in cases of *failure due to a lack of attendance*, as determined by the instructor. The F_N grade may be issued for cases in which the student ceases or fails to attend class, submit assignments, or participate in required capacities, and for which the student has failed to withdraw. The issuing of the F_N grade is at the discretion of the instructor. The last date of attendance should be documented for submission of an F_N grade.

Early Alert Program: The Student Success Center at College of the Mainland has implemented an Early Alert Program because student success and retention are very important to us. I have been asked to refer students to the program throughout the semester if they are having difficulty completing assignments or have poor attendance. If you are referred to the Early Alert Program you will be contacted by someone in the Student Success Center who will schedule a meeting with you to see what assistance they can offer in order for you to meet your academic goals.

Resources to Help with Stress:
If you are experiencing stress or anxiety about your daily living needs including food, housing or

just feel you could benefit from free resources to help you through a difficult time, please click here https://www.com.edu/community-resource-center/. College of the Mainland has partnered with free community resources to help you stay on track with your schoolwork, by addressing life issues that get in the way of doing your best in school. All services are private and confidential. You may also contact the Dean of Students office at deanofstudents@com.edu or communityresources@com.edu.