



PHYS 1403.301IN
Stars and Galaxies
Spring 2022

Instructor Information: **Name:** Kirk McVey
 Email: kmcvey@com.edu (in the course under Course
 Communication click on Email Instructor then All Instructor
 Users)

Student hours and location: I will be live in the course Fridays 1-2pm to answer any questions

Required Textbook/Materials: www.openstax.org/details/astronomy
Astronomy from OpenStax, Print ISBN 1938168283, Digital ISBN 1947172247
Your textbook for this class is available for free online, in web view and PDF format. You can also purchase a print version, if you prefer, via the campus bookstore or from OpenStax on Amazon.com.

Course Description: This course provides an introductory account of stars and their structure, neutron stars, black holes, the Milky Way galaxy, active galaxies, and our universe, including theories of their origin and end states. A laboratory component consisting of observations is also part of the course.

Course requirements: Your knowledge of the material covered in the course objectives is evaluated using the following assignments and assessments described below:

Syllabus Quiz (1): A short quiz over the syllabus

Introduction (1): An introduction of yourself to the class through the discussion board; follow instructions given in the Introduce Yourself discussion board.

Discussion Boards (5): Discussion board posts and replies will focus on a certain question or statement concerning astronomy; follow instructions given in the Unit 1 discussion board.

Observations (5): Observation assignments in which you will study an image, interact with a simulation, and/or analyze data, and then answer questions concerning the image, simulation, and/or data; follow instructions given for each observation assignment.

Unit Exams (5): Unit exams consisting of 50 multiple choice questions are designed and administered to promote mastery of course objectives addressed in each unit; follow instructions given for each unit exam.

[Blackboard test-taking recommendations](#)

Project (1): A group project consisting of a PowerPoint presentation; follow instructions given on your group's project page.

Determination of Course Grade/Detailed Grading Formula: The points you earn for this course are the sum of all assignments and assessments. The maximum point total from this calculation is 1000 points.

Assignment	Number of assignments/assessments	Max points per assignment	Max points possible	% of Final Grade
Syllabus Quiz	1	50	50	5
Introduction	1	50	50	5
Disc. Boards	5	50	250	25
Observations	5	50	250	25
Unit Exams	5	50	250	25
Project	1	150	150	15
Totals	18	-	1000	100

A: 900 total points or greater

B: 800 – 899 total points

C: 700 – 799 total points

D: 600 – 699 total points

F: 599 total points or less

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.

Grade Return Policy: All graded work will be returned within one week after the assignment due date.

Late Work, Make-Up, and Extra-Credit Policy: *No late work is accepted.* All assignments and exams must be completed and submitted by specified deadlines. All deadlines appear in the course outline of the syllabus as well as the course calendar in Blackboard and it is the student's responsibility to ensure that all assignments have been submitted by the deadline.

Attendance Policy: Since this is an online class, attending class will be by logging into the class a minimum of 2 times per week and expect to spend 4 to 6 hours each week to review new information, participate in discussions, complete assignments, take exams, and/or other activities listed in the syllabus course outline and calendar as scheduled by the instructor. Full participation in all course activities is required to earn credit for all graded activities.

Communicating with your instructor: 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.

Course Communication: The best way to contact me is through my COM e-mail kmcvey@com.edu. I will respond to e-mails within 24 hours of receiving them, except for weekends, holidays, and unscheduled COM closures.

Student Learner Outcome	Maps to Core Objective	Assessed via this Assignment
1. Demonstrate knowledge of the atom and starlight; the formation, structure, and evolution of our Sun and other stars; the interstellar medium, neutron stars, black holes, and active galaxies; the formation, structure, and evolution of our Milky Way Galaxy and other galaxies; the development and theories of modern cosmology and astrobiology.	Critical Thinking Skills: Students will demonstrate creative thinking, innovation, and the ability to analyze, evaluate, and synthesize information.	Unit Exams 1-5
2. Analyze and interpret data from observations to draw valid scientific conclusions and communicate these conclusions in a clear and articulate manner	Empirical and Quantitative Skills: Manipulate and analyze observable facts, evidence, or numerical data and arrive at an informed conclusion.	Observation Assignments 1-5
3. Scientifically justify stances on modern scientific controversies related to stars and galaxies.	Communication Skills: Develop, interpret, and express ideas through written communication.	Discussion Boards 1-5
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.	PowerPoint Project

Critical thinking skills will be assessed using an assignment that requires students to:

-answer questions on exams that involve analyzing graphs of stellar spectra curves, luminosity versus spectral type plots, and H-R diagrams, and then choosing the correct conclusion to the question.

Empirical and Quantitative Skills will be assessed using an assignment that requires students to:

-make observations of the Sun and sunspots, the H-R diagram, and galaxies, and then analyze data collected from observations to come to logical conclusions.

Communication skills will be assessed using an assignment that requires students to:

-make posts to discussion boards concerning unanswered scientific questions, human vision in infrared light versus visible light, the evolution of the Sun and Earth, the evolution of the Milky Way, and extraterrestrial intelligence, with supportive reasoning and documented evidence; make replies to other student posts on the above topics that further the discussion.

Teamwork skills will be assessed using an assignment that requires students to:

-develop a PowerPoint project by collaborating with other students to choose a project topic and dividing workload among group members; do a peer review of project and project process.

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 or plagiarism, is an extremely serious offense and will result in a **grade of zero** on that assignment or exam, and the student will be referred to the Dean of Students for the appropriate disciplinary action.

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 Sheena Abernathy, Science Department chairperson, at 409-933-8330 or sabernathy@com.edu.

Course outline

Assignment	Preparation	Due Date
Syllabus Quiz	Read over course syllabus.	1/21/2022 by 11:59pm
Introduction	Be prepared to introduce yourself to your classmates in a discussion board	1/21/2022 by 11:59pm
Unit 1 Discussion	Refer to instructions for discussion posts/replies in Unit 1 discussion board.	1/23/2022 by 11:59pm
Unit 1 Observation	Refer to instructions for observation assignments.	1/30/2022 by 11:59pm
Unit 1 Exam	Read and Study Chapters 1, 5 & 6. Prepare: chapter study guides and practice tests	2/6/2022 by 11:59pm

Unit 2 Discussion	Refer to instructions for discussion posts/replies in Unit 1 discussion board.	2/13/2022 by 11:59pm
Unit 2 Observation	Refer to instructions for observation assignments.	2/20/2022 by 11:59pm
Unit 2 Exam	Read and Study Chapters 16 – 19. Prepare: chapter study guides and practice tests	2/27/2022 by 11:59pm
Unit 3 Discussion	Refer to instructions for discussion posts/replies in Unit 1 discussion board.	3/6/2022 by 11:59pm
Unit 3 Observation	Refer to instructions for observation assignments.	3/13/2022 by 11:59pm
Unit 3 Exam	Read and Study Chapters 21 – 24. Prepare: chapter study guides and practice tests	3/27/2022 by 11:59pm
Unit 4 Discussion	Refer to instructions for discussion posts/replies in Unit 1 discussion board.	4/3/2022 by 11:59pm
Unit 4 Observation	Refer to instructions for observation assignments.	4/10/2022 by 11:59pm
Unit 4 Exam	Read and Study Chapters 25 – 28. Prepare: chapter study guides and practice tests	4/17/2022 by 11:59pm
Unit 5 Discussion	Refer to instructions for discussion posts/replies in Unit 1 discussion board.	4/24/2022 by 11:59pm
Unit 5 Observation	Refer to instructions for observation assignments.	5/1/2022 by 11:59pm
Unit 5 Exam	Read and Study Chapters 29 & 30. Prepare: chapter study guides and practice tests	5/8/2022 by 11:59pm
PowerPoint Project	Refer to instructions on the group project page	5/11/2022 by 11:59pm

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 Holly Bankston at 409-933-8520 or hbankston@com.edu. The Office of Services for Students with Disabilities is located in the Student Success Center.

Counseling Statement: Any student needing counseling services is requested to please contact Holly Bankston in the student success center at 409-933-8520 or hbankston@com.edu. Counseling services are available on campus in the student center for free and students can also email counseling@com.edu to set up their appointment. Appointments are strongly encouraged; however, some concerns may be addressed on a walk-in basis.

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 1st 8-week session is March 2. The last date to withdraw from the 16-week session is April 25. The last date to withdraw for the 2nd 8-week session is May 4.

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.

COVID-19 Statement: All students, faculty, and staff are expected to familiarize themselves with materials and information contained on the College of the Mainland’s Coronavirus Information

site at www.com.edu/coronavirus. In compliance with Governor Abbott's May 18 Executive Order, face coverings/masks will no longer be required on COM campus. Protocols and college signage are being updated. We will no longer enforce any COM protocol that requires face coverings. We continue to encourage all members of the COM community to distance when possible, use hygiene measures, and get vaccinated to protect against COVID-19. Please visit com.edu/coronavirus for future updates.