AST1002: DISCOVER THE UNIVERSE

10249, SECTION 4B27, 3 CREDIT HOURS, SUMMER B 2025

INSTRUCTOR: *Naibi Mariñas*

Office number: Bryant Hall, Room 224
E-mail address: marinas@ufl.edu
phone number: (352) 294-1859 (use e-mail for contact)

COURSE TA'S: *To be announced*

MEETING TIMES: *MTWRF, 4th Period (12:30 am to 1:45 pm)*

CLASSROOM: *NEB 202*

OFFICE HOURS: *Tuesdays 2:00 pm to 3:00 pm*

COURSE WEBSITE: *https://ufl.instructure.com/*

REQUIRED TEXT: The Essential Cosmic Perspective by Bennett, Donahue, Schneider, and Voit, **9th Edition**, *Publisher: Pearson/Addison-Wesley, San Francisco*.

OTHER REQUIRED MATERIALS:

1. *Access to and on-going use of a computer OR iPad is required for all students since part of the material will be online.*
2. *HIGH SPEED broadband connection to the Internet is necessary to view the introductory online class videos.*

COURSE DESCRIPTION: This course provides a comprehensive look at modern astronomy, emphasizing the use of the scientific method and the application of physical laws to understand the Universe including Earth and its environment. Throughout this course, students will develop the ability to discern scientific knowledge from non-scientific claims by using critical thinking. (P)

The topics we will cover include:

- Observing the sky
- Tools of Astronomy
- Our solar system

- The nature and lives of stars
- The search for extraterrestrial life
- The nature of our Milky Way Galaxy
- Properties of other galaxies
- The origin and fate of the Universe

GENERAL EDUCATION: AST 1002, Discover the Universe, meets the requirements for a General Education physical science (P) course. Physical science courses provide instruction in the basic concepts, theories, and terms of the scientific method in the context of the physical sciences. Courses focus on major scientific developments and their impacts on society, science and the environment, and the relevant processes that govern physical systems. Students will formulate empirically-testable hypotheses derived from the study of physical processes, apply logical reasoning skills through scientific criticism and argument, and apply techniques of discovery and critical thinking to evaluate outcomes of experiments. A minimum grade of "C" is required for general education credit.

PREREQUISITE KNOWLEDGE AND SKILLS: Although this is essentially a non-mathematical science course, a very basic knowledge of mathematics is required. Middle School arithmetic and pre-algebra is sufficient.

COURSE AND GEN ED STUDENT LEARNING OBJECTIVES AND OUTCOMES:

1. To provide students with a broad overview of modern astronomy. Students will be able to:
    - define terms used to measure and describe the universe
    - explain the processes involved in the formation and evolution of celestial objects over astronomical time according to different models and theories
2. To review the major scientific developments in astronomy and summarize their impacts on society and our environment. Students will be able to:
    - describe how scientific theories evolve in response to new observations and critically evaluate their impact on society
3. To teach the scientific method, improve scientific literacy, and help students learn to communicate scientific ideas clearly and effectively using written or graphic forms. Students will be able to:
    - formulate empirically-testable hypotheses derived from the study of physical processes and phenomena
    - gather and analyze astronomical data and communicate results in graphic and written forms
4. To develop the ability to distinguish science from non-science
    - apply logical reasoning skills through scientific criticism and argument to separate science from non-science

See https://undergrad.aa.ufl.edu/general-education/gen-ed-program/subject-area-objectives/ for General Education objectives for all physical science courses.

COURSE POLICIES:

This is a 6-week course that will combine online learning and in-class activities. Each week students will be required to complete a set of assignments. As this class has an online component, students must plan to have regular Internet access and time to explore the resources available on the various ideas and topics that we will be covering.

REQUIREMENTS: *Students are expected to:*

- *Attend all classes and actively participate in discussions and group projects (Projects are done in-class and account for a large fraction of your grade).*
- *Complete all reading assignments and online assignments in the class website in a timely fashion. It is not my objective to repeat in class what you have already learned through reading the textbook. Our time in class will be used to expand on concepts already presented in the class website by using mini-lectures, discussions and group activities.*
- *Complete all projects*
- *Complete all exams*

COURSE TECHNOLOGY: *Competency in the basic use of a computer is required. Course work will require use of a computer and a high speed broadband connection to the Internet. For additional information on UF College of Liberal Arts and Sciences policy regarding computer requirements you can visit: http://it.clas.ufl.edu/policies/student-computer-requirement.*

COURSE EVALUATION BY STUDENTS: Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at https://gatorevals.aa.ufl.edu/students/. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via https://ufl.bluera.com/ufl/. Summaries of course evaluation results are available to students at https://gatorevals.aa.ufl.edu/public-results/.

GRADING POLICIES:

See https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx for general UF grading policies. Grades for the course will be based on the following:

Assignment	Points or percentage
Weekly Graded Quizzes	20 %
Weekly in-class projects and activities	40 %
In-class Exams (2 exams)	40 %

GRADING SCALE:

Grade	% Points	GPA	Grade	% Points	GPA	Grade	% Points	GPA
A	> 90	4.0	B-	77 – 79	2.67	D+	64 – 66	1.33
A-	87 – 89	3.67	C+	74 – 76	2.33	D	60 – 63	1.0
B+	84 – 86	3.33	C	70 – 73	2.0	D-	57 – 59	0.67
B	80 – 83	3.0	C-	67 – 69	1.67	F	< 56	0

QUIZZES (20 %):

Online Quizzes (20 %): A major responsibility for this class will be to view the introductory videos in the class website and complete the reading assignments given weekly so you can learn the material and contribute to in-class assignments. Reading and video quizzes will be assigned each week to help you keep up with the material. These quizzes will be available at the end of each module in the class website.

A late penalty of 10% per day will be applied to quizzes submitted after the due date.

IN CLASS ACTIVITIES (40 %): One of the most enjoyable aspects of science is doing research and making discoveries. However, science doesn't take place in isolation. We will use in class group projects and discussions to further explore topics we study each week, going beyond what the text has to say and collaborating with each other to find new perspectives on the topics and how they relate to other disciplines or areas of our lives. As such, you will be heavily assessed by your participation in these activities.

Since most in-class activities will involve group work, there is no make up work for in-class

group work. The lowest score on one activity will be dropped to allow for any one-time difficulty in completing the assignments (for example, due to an excused or unexcused absence). For individual activities, make up work will be allowed for excused absences. The students are responsible for notifying the instructor before the due date.

INDIVIDUAL IN-CLASS EXAMS (40 %): Two in-class exams will be assigned during the semester. Students should present their UF ID's to the exam proctors at the end of the exam. **Without an ID, your exam will not be graded.**

MAKE-UP POLICY: Students need to contact the Dean of Student Office Care Area and notify the instructor if they have personal or family issues that prevent them from attending class and completing assignments for more than one day. After the instructor receives the information from the Care Area, students will be given a reasonable amount of time to complete the missed work.

ATTENDANCE POLICY: Requirements for class attendance is consistent with university policies that can be found at: https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx

COURSE EVALUATION BY STUDENTS: Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online. Students can complete evaluations in three ways:

1. The email they receive from GatorEvals
2. Their Canvas course menu under GatorEvals
3. The central portal at https://my-ufl.bluera.com

Guidance on how to provide constructive feedback is available athttps://gatorevals.aa.ufl.edu/students/. Students will be notified when the evaluation period opens. Summaries of course evaluation results are available to students at https://gatorevals.aa.ufl.edu/public-results/.

UF POLICIES:

UNIVERSITY POLICY ON ACCOMMODATING STUDENTS WITH DISABILITIES: Students requesting accommodation for disabilities must first register with the Dean of Students Office (http://www.dso.ufl.edu/drc/). The Dean of Students Office will provide documentation to the student who must then provide this documentation to the instructor when requesting accommodation. You must submit this documentation prior to submitting assignments or taking the quizzes or exams. Accommodations are not retroactive; therefore, students should contact the office as soon as possible in the term for which they are seeking accommodations.

UNIVERSITY POLICY ON ACADEMIC MISCONDUCT: Academic honesty and integrity are fundamental values of the University community. Students should be sure that they understand the UF Student Honor Code at https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/

This is an excerpt from the Academic Honesty Guidelines and Student Conduct Code in the University of Florida Undergraduate Catalog:

"Academic Honesty: The university requires all members of its community to be honest in all endeavors. A fundamental principle is that the whole process of learning and pursuit of knowledge are diminished by cheating, plagiarism, and other acts of academic dishonesty. In addition, every dishonest act in the academic environment affects other students adversely, from the skewing of the grading curve to giving unfair advantage for honors or for professional or graduate school admission. Therefore, the university will take severe action against dishonest students. Similarly, measures will be taken against faculty, staff, and administrators who practice dishonest or demeaning behavior."

Cheating is not tolerated in this class. Everyone in this class is expected to follow the University of Florida Honor Code: We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity. Any student suspected of academic misconduct will be automatically referred to the Honor Code Chancellor as required by UF.

On all work submitted for credit by students at the university, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment."

NETIQUETTE: COMMUNICATION COURTESY: All members of the class are expected to follow rules of common courtesy in all email messages, threaded discussions and chats. http://sfrc.ufl.edu/courses/distance/NetiquetteGuideforOnlineCourses.pdf

UF ONLINE HANDBOOK: Additional information can be found on http://handbook.ufonline.ufl.edu/

PRIVACY AND ACCESSIBILITY POLICY:

Our class sessions may be audio visually recorded for students in the class to refer back and for enrolled students who are unable to attend live. Students who participate with their camera engaged or utilize a profile image are agreeing to have their video or image recorded. If you are unwilling to consent to have your profile or video image recorded, be sure to keep your camera off and do not use a profile image. Likewise, students who un-mute during class and participate

orally are agreeing to have their voices recorded. If you are not willing to consent to have your voice recorded during class, you will need to keep your mute button activated and communicate exclusively using the "chat" feature, which allows students to type questions and comments live. The chat will not be recorded or shared. As in all courses, unauthorized recording and unauthorized sharing of recorded materials is prohibited.

INFRASTRUCTURE (CANVAS)

- Privacy PolicyLinks to an external site.
- AccessibilityLinks to an external site.

ZOOM

- Privacy Policy (Links to an external site.)
- Accessibility (Links to an external site.)

YOUTUBE (GOOGLE)

- Privacy Policy (Links to an external site.)

HONORLOCK

- Privacy Policy (Links to an external site.)
- Accessibility

GETTING HELP:

For issues with technical difficulties for E-learning, **do NOT contact the instructor**, please contact the UF Help Desk at:

- Learning-support@ufl.edu
- (352) 392-HELP - select option 2
- https://elearning.ufl.edu/keep-learning/

Any requests for make-ups due to technical issues MUST be accompanied by the ticket number received from LSS when the problem was reported to them. The ticket number will document the time and date of the problem. Students MUST contact the instructor within 24 hours of the technical difficulty to request a make-up.

Other resources are available at http://www.distance.ufl.edu/getting-help for:

- Counseling and Wellness resources
- Disability resources
- Resources for handling student concerns and complaints
- Library Help Desk support

Should students have any complaints with their experience in this course they should visit http://www.distance.ufl.edu/student-complaints to submit a complaint.

TENTATIVE SCHEDULE:

This is only tentative and it can change at any time!

	Website Modules	Textbook Chapters	Exams
Week 1	Naked Eye Astronomy: Module 1	Chapters 1, 2	
Week 2	Science of Astronomy: Modules 2, 3	Chapters 3, 4, 5	
Week 3	Solar System: Modules 4, 5	Chapters 6, 7, 8, 9	Exam 1
Week 4	Other Planetary Systems and Stars: Modules 6, 7, 8	Chapters 10, 11, 12,13	
Week 5	Death of Stars and Galaxies: Modules 9, 10, 11	Chapters 14, 15, 16	
Week 6	Cosmology: Modules 12, 13	Chapters 17, 18	Exam 2