

# Astronomy 2000: Cosmology

Course Dates for 2023 Spring:

January 9 – May 4

Lecture Times and Locations:

Tuesdays 10:40AM – 11:30AM (4) in CSE E221

Thursdays 10:40AM – 11:30AM (4), 11:45AM – 12:35AM (5) in CSE E220

Instructor: Dr. Paul Sell  
Office: Bryant Space Sciences Center 222  
Office Hours: TBD and by appointment  
Email: [psell@ufl.edu](mailto:psell@ufl.edu)  
Office Phone: (352) 294-1867

Course Website: Canvas/E-Learning

**Textbook:** You must purchase the required text (available in print-only): *Your Cosmic Context, An Introduction to Modern Cosmology* by Duncan and Tyler (ISBN-13: 978-0-13-240010-7). Other references may be used for supplemental information throughout the course.

**Brief Description:** Overview of cosmology, the study of the large-scale structure and history of the universe, in four components: ideas about the universe as a whole predating the twentieth century; ideas from twentieth century physics that impact modern cosmology; stars, black holes, galaxies and quasars as probes of the universe; and the Hot Big Bang Model.

## Detailed Description of the Graded Course Structure

**Worksheets:** Worksheets will be assigned during most classes to give you an opportunity to review the material and give the instructor the opportunity to check your comprehension of the material. Worksheets typically will be due at the end of the class they are assigned and are not accepted late. Class participation is expected and will greatly help you complete this work.

The number and frequency of these assignments is at the discretion of the instructor. The lowest few (depending on the total number given) will be dropped or counted as extra credit for your final grade (this action is completed at the very end and does not show up in the Canvas gradebook). Given this lenient policy, please do not contact the instructor to make up this work unless you have a serious ongoing problem, which should be an excused absence consistent with university policy: <https://catalog.ufl.edu/UGRD/academic-regulations/attendance-policies/>.

**Homeworks:** Problem sets will be regularly assigned throughout the semester. Late homework is penalized 25% per day; exception: when answers must be posted promptly for exam studying, no late homework after that point will be accepted. The assignment with the lowest grade will be dropped.

Working in groups is allowed for homeworks and (usually strongly encouraged) for worksheets, although if you do, discuss the problem/solution and then write your own answers without looking at the other students' paper; also write the names of the people you worked with on the submitted homework. Each student is required to show all work and submit separate homework solutions. No emailed work.

**Exams:** There will be one midterm exam and a final exam. The midterm exam will cover material from approximately the first half of the class (outline of topics/chapters will be provided when appropriate) and the final exam will primarily cover material after the midterm exam; both will include material from lecture and the book. The midterm exam will be during normal class time about halfway through the semester. The final exam is scheduled for 5:30 PM – 7:30 PM on 05/04/2023. Bring a working scientific calculator without memory capability, at least two pencils (with erasers), and your ID with you to all exams.

**Project:** A handout and discussion to explain the project fully will be provided early in the semester. All guidelines including due dates will be provided in the handout.

**Extra Credit:** A handout and discussion to explain the extra credit options will be provided early in the semester. All guidelines including due dates will be provided in the handout.

**Course Grade Summary Breakdown:** Each of the components of class described above will be assigned the following weights to determine your final score:

- Worksheets: 15%
- Homeworks: 25%
- Midterm Exam: 20%
- Final Exam: 25%
- Project: 15%

**Grading Scale:** (<https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>)

<u>Score</u>	<u>Grade</u>	<u>Score</u>	<u>Grade</u>	<u>Score</u>	<u>Grade</u>
90% – 100%	A	77% – 79%	B–	64% – 66%	D+
87% – 89%	A–	74% – 76%	C+	60% – 63%	D
84% – 86%	B+	70% – 73%	C	57% – 59%	D–
80% – 83%	B	67% – 69%	C–	Less than	E

## Class/University Policies

- Please put your phones and, unless you are taking notes, your laptops away during class: no Facebook, Twitter, texting, etc.
- You may need to make calculations, so you should always have available a scientific calculator in addition to your usual materials for taking notes.
- Students with disabilities who experience learning barriers and would like to request academic accommodations should connect with the Disability Resource Center by visiting [disability.ufl.edu/students/get-started](https://disability.ufl.edu/students/get-started). It is important for students to share their accommodation letter with their instructor and discuss their access needs, as early as possible in the semester. Classroom accommodations can only be provided after appropriate verification.
- Responsible citizenship among college students includes honesty and integrity in classwork; regard for the rights of others; and respect for local, state, and federal laws as well as campus standards. Students are responsible for understanding the standards of the “Code of Student Conduct” and the Student Handbook. 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.” Any student caught cheating will be referred to the Honor Code Chancellor.
- 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/>.

## Campus Resources

### **Health and Wellness**

- *U Matter, We Care*: If you or someone you know is in distress, please contact [umatter@ufl.edu](mailto:umatter@ufl.edu), 352-392-1575, or visit [U Matter, We Care website](#) to refer or report a concern and a team member will reach out to the student in distress.
- *Counseling and Wellness Center*: [Visit the Counseling and Wellness Center website](#) or call 352-392-1575 for information on crisis services as well as non-crisis services.
- *Student Health Care Center*: Call 352-392-1161 for 24/7 information to help you find the care you need, or [visit the Student Health Care Center website](#).
- *University Police Department*: [Visit UF Police Department website](#) or call 352-392-1111 (or 9-1-1 for emergencies).
- *UF Health Shands Emergency Room / Trauma Center*: For immediate medical care call 352-733-0111 or go to the emergency room at 1515 SW Archer Road, Gainesville, FL 32608; [Visit the UF Health Emergency Room and Trauma Center website](#).

### **Academic Resources**

- *E-learning technical support*: Contact the [UF Computing Help Desk](#) at 352-392-4357 or via e-mail at [helpdesk@ufl.edu](mailto:helpdesk@ufl.edu).
- *Career Connections Center*: Reitz Union Suite 1300, 352-392-1601. Career assistance and counseling services.
- *Library Support*: Various ways to receive assistance with respect to using the libraries or finding resources.
- *Teaching Center*: Broward Hall, 352-392-2010 or to make an appointment 352- 392-6420. General study skills and tutoring.
- *Writing Studio*: 2215 Turlington Hall, 352-846-1138. Help brainstorming, formatting, and writing papers.
- *Student Complaints On-Campus*: [Visit the Student Honor Code and Student Conduct Code webpage for more information](#).
- *On-Line Students Complaints*: [View the Distance Learning Student Complaint Process](#).

### Tentative Class Schedule

(43 total classes; 13 chapters; ~3 classes/chapter)

Week Starting (Number of Classes)	Topics Covered	Week Starting (Number of Classes)	Topics Covered
01/09 (3)	Introduction to the Course, Chapter 1	03/06 (3)	Chapter 8
01/16 (3)	Chapter 2	03/13 (0)	Spring Break
01/23 (3)	Chapter 2-3	03/20 (3)	Chapter 9
01/30 (3)	Chapter 3	03/27 (3)	Chapter 10
02/06 (3)	Chapter 4	04/03 (3)	Chapter 11
02/13 (3)	Chapter 5	04/10 (3)	Chapter 12
02/20 (3)	Chapter 6, Midterm Exam	04/17 (3)	Chapter 14, Presentations
02/27 (3)	Chapter 7	04/24 (1)	Presentations

The final exam is 05/04 at 5:30 PM – 7:30 PM.