**Introductory Astronomy and Cosmology**
**Phys 202–003 F2024 ECE115**
**WF 1-2:20**

**Slides and reinforcing videos, are posted before class on canvas.njit.edu.**

## Instructor

Dr. George E. Georgiou
TIER 423E
georgiou@njit.edu (preferred contact method)

OFFICE HOURS: W 11:30-12:30, after class or by appointment (send email)

## Textbook

**Primary on which class is based:**
"Astronony" by A.Fraknoi, D.Morrison, S.Wolf …
Downloadable Open Stax text: https://openstax.org/details/books/astronomy

**Optional paper textbook: (if do not like reading e-books)**
Jeffrey Bennett, Megan Donahue, Nicholas Schneider, and Mark Voit. *The Cosmic Perspective Fundamentals*, 2nd Ed. Pearson Education, Inc., United States of America, 2015. – but ANY EDITION will work for reading material

## Additional Reading (optional but may be interesting):

Neil deGrasse Tyson, J. Richard Gott and Michael A. Strauss, Welcome to the Universe, an Astrophysical Tour, Princeton University Press (2016)

## Grade

Your final grade will be based upon class participation / attendance (10%), two in-class exams (25% each),and one Final Examination (40%). The number grade is .25*(exam 1+2) + .4*Final + .1*participation.

The exam schedule is as follows:

| | | |
|---|---|---|
| First Examination | (25%) | 10/11 Friday (Thru week 5) |
| Second Examination | (25%) | 11/8 Friday (Weeks 6-9) |
| Final Examination | (40%) | TBD 12/16-12/20 (All-inclusive) |

There are no make-up examinations without a valid reason. The following table will determine your final letter grade.

| | |
|---|---|
| 90% to 100% | A |
| 85% to 90% | B+ |
| 70% to 85% | B |
| 60% to 69% | C+ |
| 50% to 59% | C |
| 40% to 49% | D |
| 0% to 39% | F |

Introductory Astronomy and Cosmology (Phys 202) and Introductory Astronomy and Cosmology Laboratory (Phys 202A) are two separate courses. You can be registered for 202 now and take 202A later.

## Academic Integrity

Any student who is disruptive in the classroom or cheats during an examination, will be in violation of the Academic Honor Code and will be reported to the Dean of Student Services.

**Syllabus (Chapters for reading refer to OpenStax Download text)**

| | | |
|---|---|---|
| Week 1 –WF | 9/4 | Observing the Sky (Chapters One & Two) |
| | | Orbits and Gravity (Chapter Three) |
| Week 2 -- WF | 9/11 | Earth, Moon, and Sky (Chapter Four) |
| | | Radiation and Spectra (Chapter Five) |
| Week 3 --WF | 9/18 | Astronomical Instruments (Chapter Six) |
| | | Introduction to the Solar System (Chapter Seven) |
| Week 4 -- WF | 9/25 | Earth and Other Cratered Worlds (Chs. 8 and 9) |
| | | Venus and Mars (Chapter Ten) |
| Week 5 – WF | 10/2 | Giant Planets, Rings, Moons (Chapters 11 and 12) |
| | | Comets, Asteroids, Samples (Chapters 13 and 14) |
| Week 6 -- W | 10/9 | The Sun (Chapters 15 and 16) |
| Week 6 – F | 10/11 | EXAM 1 (uses Canvas, in-class, covers week 1-5) |
| Week 7 – WF | 10/16 | Starlight and Stars (Chapters 17 and 18) |
| | | Distances. Gas & Dust in Space (Ch. 19 and 20) |
| Week 8 – WF | 10/23 | Star & Planet Formation (Chapter 21) |
| | | Stars' Adolescence to Old Age (Chapter 22) |
| Week 9 -- WF | 10/30 | Death of Stars (Chapter 23) |
| | | Black Holes, Curved Space-Time (Chapter 24) |
| Week 10 -- W | 11/6 | The Milky Way Galaxy (Chapter 25) |
| | | EXAM2 - - F 11/8 (uses Canvas, covers week 6-9) |
| Wk11 -- WF | 11/15 | QSOs, Black holes, Galaxy Evolution (Chs. 27 & 28) |
| *Wk 12 -- WF* | *11/22* | *The Big Bang (Chapter 29)* |
| | | *More Big Bang (Chapter 29)* |
| *Wk 13 -- W* | *11/27* | *??? – Friday Schedule* |
| *Wk 14 – WF* | *12/4* | *Review* |

| | | |
|---|---|---|
| Last Day of Class | W Dec 11,2023 | |
| Reading Days | R and F Dec. 12-13 | |
| FINAL EXAM | Dec 16-20 | Cummulative, |

**Fall 204 Academic Calendar**

| | | |
|---|---|---|
| Sept | 2 | Monday -- Labor Day. University Closed |
| Sept | 3 | Tuesday -- First Day of Classes |
| Sept | 9 | Monday -- Last Day to Add/Drop a Class |
| Sept | 9 | Monday -- Last Day for 100% Refund, Full or Partial Withdrawal |
| Sept | 10 | Tuesday -- W Grades Posted for Course Withdrawals |
| Sept | 16 | Monday -- Last Day for 90% Refund, Full or Partial Withdrawal - No Refund for Partial Withdrawal after this date |
| Sept | 30 | Monday -- Last Day for 50% Refu nd, Full Withdrawal |
| Oct | 21 | Monday -- Last Day for 25% Refund, Full Withdrawal |
| Nov | 11 | Monday -- Last Day to Withdraw from Classes |
| Nov | 26 | Tuesday -- Thursday Classes Meet |
| Nov | 27 | Wednesday -- Friday Classes Meet |
| Nov | 28 | Thursday --Thanksgiving Recess Begins. No Classes |
| Dec | 1 | Sunday --Thanksgiving Recess Ends |
| Dec | 11 | Wednesday -- Last Day of Classes |
| Dec | 12 | Thursday -- Reading Day 1 |
| Dec | 13 | Friday -- Reading Day 2 |
| Dec | 14 | Saturday Classes Meet |
| Dec | 15 | Sunday --Final Exams Begin |
| Dec | 21 | Saturday -- Final Exams End |
| Dec | 23 | Monday -- Final Grades Due |