

Fall 2019

PHYS 202-101: Introductory Astronomy and Cosmology

George Georgiou

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Introductory Astronomy and Cosmology
Phys 202–101
Fall 2019
Mondays, 06:00 - 09:05 p.m. T113

Instructor

Dr. George E. Georgiou
Microelectronics Research Center, Room 207 (in bridge between FMH and ECE)
george.e.georgiou@njit.edu (preferred contact method)
973-596-5690
OFFICE HOURS: M 4-5:30 or after class or by appointment (send email)

Textbook

Primary on which class is based:

“Astronomy” by A.Fraknoi, D.Morrison, S.Wolf ...

Downloadable Open Stax text: <https://openstax.org/details/books/astronomy>

Previous paper textbook: (optional 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 (10%), four examinations (15% each), and one Final Examination (30%). The examinations will be administered on the following dates.

| | | |
|--------------------|------------------------------|-------|
| First Examination | Monday, September 23, 2019 | (15%) |
| Second Examination | Monday, October 14, 2019 | (15%) |
| Third Examination | Monday, November 11, 2019 | (15%) |
| Fourth Examination | Monday, December 9, 2019 | (15%) |
| Final Examination | Finals Week (probably 12/17) | (30%) |

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

| | |
|-------------|----|
| 80% to 100% | A |
| 75% to 79% | B+ |
| 70% to 74% | B |
| 65% to 69% | C+ |
| 50% to 64% | 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 either one of these courses without being registered for the other course.

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)

| | | |
|-------------|------------|--|
| Monday | 9/9 | Observing the Sky (Chapters One & Two) Orbits and Gravity (Chapter Three) |
| Monday | 9/16 | Earth, Moon, and Sky (Chapter Four) Radiation and Spectra (Chapter Five) |
| Monday | 9/23 | Astronomical Instruments (Chapter Six) First Examination |
| Monday | 9/30 | Introduction to the Solar System (Chapter Seven) Earth and Other Cratered Worlds (Chs. 8 and 9) |
| Monday | 10/7 | Venus and Mars (Chapter Ten) Giant Planets, Rings, Moons (Chapters 11 and 12) |
| Monday | 10/14 | Comets, Asteroids, Samples (Chapters 13 and 14) Second Examination |
| Monday | 10/21 | The Sun (Chapters 15 and 16) Starlight and Stars (Chapters 17 and 18) |
| Monday | 10/28 | Distances. Gas & Dust in Space (Ch. 19 and 20) Star & Planet Formation (Chapter 21) |
| Monday | 11/4 | Stars' Adolescence to Old Age (Chapter 22) Death of Stars (Chapter 23) |
| Monday | 11/11 | Review of Chapters 15-23 Third Examination |
| Monday | 11/18 | Black Holes, Curved Spacetime (Chapter 24) The Milky Way Galaxy (Chapter Twenty-five) |
| Monday | 11/25 | Galaxies (Chapter Twenty-six) QSOs, Black holes, Galaxy Evolution (Chs. 27 & 28) |
| Monday | 12/2 | The Big Bang (Chapter Twenty-nine) Review of Chapters 24-29 |
| Monday | 12/9 | Fourth Examination Review of Chapters 1-29 – LAST DAY OF CLASS |
| Thurs / Fri | 12-13 Dec. | Reading Days |

Final Exam during finals week -- probably 12/16

Fall 2019 Calendar

| | | |
|------------------|-----------|--|
| Sept 3 | Tuesday | First Day of Classes |
| Sept. 13 | Friday | Last Day to Add / Drop Class |
| | | 100% Refund for Full or Partial Withdrawal |
| Sept. 16 | Monday | 90% Refund for Full or Partial Withdrawal |
| Sept. 30 | Monday | 50% Refund for Full Withdrawal |
| Oct. 21 | Monday | 25% Refund for Full Withdrawal |
| Nov. 11 | Monday | Last Day to Withdraw |
| Nov. 26 | Tuesday | Thursday Classes |
| Nov. 27 | Wednesday | Friday Classes |
| Nov. 27 – Dec. 1 | | Thanksgiving Recess |
| Dec.11 | Wednesday | Last Day of Classes |
| Dec. 12 – 13 | | Reading Days |
| Dec. 14 – 20 | | Final Exams |
| Dec. 22 | Sunday | Final Grades Due |