

Fall 2019

PHYS 202-103: Introductory Astronomy and Cosmology

George Georgiou

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Introductory Astronomy and Cosmology

Phys 202–103

Fall 2019

Tuesdays, 06:00 - 09:05 p.m. T114

Instructor

Dr. George E. Georgiou

Microelectronics Research Center, Room 207 (in bridge between FMH and ECE)

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973-596-5690

OFFICE HOURS: Tu 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	Tuesday, September 17, 2019	(15%)
Second Examination	Tuesday, October 8, 2019	(15%)
Third Examination	Tuesday, November 5, 2019	(15%)
Fourth Examination	Tuesday, December 10, 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)

Tuesday	9/3	Observing the Sky (Chapters One & Two) Orbits and Gravity (Chapter Three)
Tuesday	9/10	Earth, Moon, and Sky (Chapter Four) Radiation and Spectra (Chapter Five)
Tuesday	9/17	Astronomical Instruments (Chapter Six) First Examination
Tuesday	9/24	Introduction to the Solar System (Chapter Seven) Earth and Other Cratered Worlds (Chs. 8 and 9)
Tuesday	10/1	Venus and Mars (Chapter Ten) Giant Planets, Rings, Moons (Chapters 11 and 12)
Tuesday	10/8	Comets, Asteroids, Samples (Chapters 13 and 14) Second Examination
Tuesday	10/15	The Sun (Chapters 15 and 16) Starlight and Stars (Chapters 17 and 18)
Tuesday	10/22	Distances. Gas & Dust in Space (Ch. 19 and 20) Star & Planet Formation (Chapter 21)
Tuesday	10/29	Stars' Adolescence to Old Age (Chapter 22) Death of Stars (Chapter 23)
Tuesday	11/5	Review of Chapters 15-23 Third Examination
Tuesday	11/12	Black Holes, Curved Spacetime (Chapter 24) The Milky Way Galaxy (Chapter Twenty-five)
Tuesday	11/19	Galaxies (Chapter Twenty-six)
Tuesday	11/19	<u>QSOs, Black holes, Galaxy Evolution (Chs. 27 & 28)</u>
Tuesday	11/26	THURSDAY SCHEDULE – NO CLASS
Tuesday	12/3	The Big Bang (Chapter Twenty-nine) Review of Chapters 24-29
Tuesday	12/10	Fourth Examination Review of Chapters 1-29 – LAST DAY OF CLASS
Thurs / Fri	12-13 Dec.	Reading Days

Final Exam during finals week -- probably 12/17

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