

Summer 2023

## **PHYS 202 - 111: Introductory Astronomy and Cosmology**

George Georgiou

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### **Recommended Citation**

Georgiou, George, "PHYS 202 - 111: Introductory Astronomy and Cosmology" (2023). *Physics Syllabi*. 567.  
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## Introductory Astronomy and Cosmology

Phys 202–111 Summer1 2023

Thursday 6-9 Tier 112

**Slides and reinforcing videos, are posted before class on [canvas.njit.edu](https://canvas.njit.edu).**

### Instructor

Dr. George E. Georgiou

TIER 423E

[georgiou@njit.edu](mailto:georgiou@njit.edu) (preferred contact method)

OFFICE HOURS: MWR 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>

#### Optional paper textbook: (if do not like reading e-books)

Jeffrey Bennett, Megan Donahue, Nicholas Schneider, and Mark Voit. *The Cosmic Perspective Fundamentals*, 2<sup>nd</sup> 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 (20% each), and one Final Examination (30%).** The number grade is  $.25*(\text{exam 1}+2) + .4*\text{Final} + .1*\text{participation}$ .

The exam schedule is as follows:

First Examination	(25%)	6/5 (Monday, covers thru 6/1)
Second Examination	(25%)	6/13 (Tuesday, covers thru 6/11 )
Final Examination	(40%)	6/26 (Monday, All-inclusive)

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

85% to 100%	A
80% to 85%	B+
70% to 80%	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)

M	5/22	Observing the Sky (Chapters One & Two) Orbits and Gravity (Chapter Three)
W	5/24	Earth, Moon, and Sky (Chapter Four) Radiation and Spectra (Chapter Five)
R	5/25	Astronomical Instruments (Chapter Six) Introduction to the Solar System (Chapter Seven)
M	5/29	NO CLASS (Memorial Day)
W	5/31	Earth and Other Cratered Worlds (Chs. 8 and 9) Venus and Mars (Chapter Ten)
R	6/1	Giant Planets, Rings, Moons (Chapters 11 and 12) Comets, Asteroids, Samples (Chapters 13 and 14)
M	6/5	The Sun (Chapters 15 and 16) <b>EXAM 1 (uses Canvas, in-class)</b>
W	6/7	Starlight and Stars (Chapters 17 and 18) Distances. Gas & Dust in Space (Ch. 19 and 20)
R	6/8	Star & Planet Formation (Chapter 21) Stars' Adolescence to Old Age (Chapter 22)
M	6/12	Death of Stars (Chapter 23) Black Holes, Curved Space-Time (Chapter 24)
T	6/13	The Milky Way Galaxy (Chapter 25) <b>EXAM2 (uses Canvas, in-class)</b>
R	6/15	QSOs, Black holes, Galaxy Evolution (Chs. 27 & 28) The Big Bang (Chapter Twenty-nine)
M	6/19	??? + Review of Chapters 1-29
T	6/20	Review
<b>R</b>	<b>6/22</b>	<b>NO CLASS</b>
<b>M</b>	<b>6/26</b>	<b>FINAL EXAM 6-8:30 (uses Canvas, remote)</b>

First Summer Session: May 22, 2023 - June 26, 2023

May	22	First Summer Session Begins
May	24	Last Day to Add/Drop for First Summer Session
May	24	Last Day for 100% Refund
May	25	W Grades Posted for all Withdrawals from First Summer Session
May	25	80% Refund Begins
May	28	80% Refund Ends
May	29	Memorial Day - No Classes Scheduled. University Closed
May	29	60% Refund Begins
May	31	60% Refund Ends
Jun	1	40% Refund Begins
Jun	3	40% Refund Ends
Jun	4	20% Refund Begins
Jun	6	20% Refund Ends
Jun	10	Last Day to Withdraw from a class in First Summer Session
Jun	16	Juneteenth Holiday - No Classes Scheduled. University Closed
Jun	26	Last Day of Classes
Jun	29	Final Grades Due