

Extragalactic Astrophysics / PHYS-GA 2051 / Fall 2018 / Syllabus

This course teaches the astrophysics of galaxies and quasars at the graduate level.

A useful textbook is *Extragalactic Astronomy and Cosmology*, by Peter Schneider. A good fraction of my notes are drawn from that book.

Class meets Monday and Wednesday at 11:00am in Room 902 of 726 Broadway.

The classes will proceed as follows on the next page (subject to revision!).

Homework will be based on exercises in the notes. Please read the introduction to the notes on the web site. The answers to the exercises in the notes are not complete! Actually not complete at all. You will help complete them (with proper attribution to you of course). Each week you are to pick one of the questions in the notes we covered and submit an answer in the form of a LaTeX file or Python notebook, emailed to me.

<i>Sep. 5</i>	Inventory	
<i>Sep. 10</i>	Light	
<i>Sep. 12</i>	Telescopes & Atmosphere	
<i>Sep. 17</i>	Detectors, Images, Spectra	Exercise #1 due
<i>Sep. 19</i>	Distance Ladder	<i>MRB travel, may reschedule</i>
<i>Sep. 24</i>	Cosmology	Exercise #2 due
<i>Sep. 26</i>	Structure Formation	
<i>Oct. 1</i>	Galaxies	Exercise #3 due
<i>Oct. 3</i>	Galaxies	
<i>Oct. 9</i>	Interstellar medium	Exercise #4 due; Legislative Day
<i>Oct. 10</i>	Star clusters	<i>MRB travel, may reschedule</i>
<i>Oct. 15</i>	Stellar evolution	Exercise #5 due
<i>Oct. 17</i>	Stellar populations	
<i>Oct. 22</i>	Stellar dynamics	Exercise #6 due
<i>Oct. 24</i>	Stellar dynamics	
<i>Oct. 29</i>	Galaxy dynamics	Exercise #7 due
<i>Oct. 31</i>	Emission line spectra	
<i>Nov. 5</i>	<i>No class</i>	<i>MRB travel</i>
<i>Nov. 7</i>	Star formation	Exercise #8 due
<i>Nov. 12</i>	Nucleosynthesis	Exercise #9 due
<i>Nov. 14</i>	Chemical evolution	
<i>Nov. 19</i>	Black holes in galaxies	Exercise #10 due
<i>Nov. 21</i>	Thanksgiving Recess: no class	
<i>Nov. 26</i>	Active galactic nuclei	Exercise #11 due
<i>Nov. 28</i>	Gravitational lensing & clusters	
<i>Dec. 3</i>	Groups	Exercise #12 due
<i>Dec. 5</i>	High redshift galaxies	
<i>Dec. 10</i>	Ly- α forest	Exercise #13 due
<i>Dec. 12</i>		