



## PHYS 344 - Astronomy

<a href="#">Description</a> <a href="#">Lectures</a>	<p>Modern views on the structure of the universe. Our solar system, stars, galaxies and quasars. Astronomy as an interdisciplinary science, emphasizing the underlying physical principles.</p>
<a href="#">Assignments</a> <a href="#">Grading</a>	<p>This course includes two lectures per week, and time in the Davis Hall observatory when weather permits.</p> <p>The course will be divided into four topical areas:</p> <ol style="list-style-type: none"> <li>1. Orbital mechanics</li> <li>2. The solar system</li> <li>3. Telescopes and measurement</li> <li>4. The sun and stars</li> </ol>

Last updated February 13, 2015



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## PHYS 344 - Astronomy

[Description](#)

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### Lecture Schedule - Spring 2015 - Dr. Fortner

Lectures are MF 1:30-2:50 in room FR 237

- Required text:
  - Ryden and Peterson - Foundations of Astrophysics

Week	Date	Lecture topic	Text chapters and sections	
1. Astronomy	1/12	<a href="#">Celestial Sphere</a>	1	
	1/16	Earth's Orbit	2	
2. Kepler's Laws	1/19	holiday		
	1/23	Orbital Mechanics	3.1	
3. Solar System	1/26	Orbits	3.2 - 3.4	
	1/30	Tides	4.1 - 4.3	
4. Earth-Moon Mechanics	2/2	snow day		
	2/6	<a href="#">Eclipses</a>	4.4 - 4.6	
5. Earth-Moon Structure	2/9	<a href="#">Planet Earth</a>	9.1 - 9.3	
	2/13	<a href="#">Earth's Moon</a>	8.3, 9.4- 9.5	
6. Inner Planets	2/16	Terrestrial Planets	10.1	
	2/20	no lecture?		
7. Outer Planets	2/23	Jovian Planets	10.2 - 10.3	
	2/27	Midterm 1 (online weeks 1-5)		

8. Planetesimals	3/2	Dwarf Planets	11	
	3/6	Exoplanets	12	
9. Radiation	3/16	Photons	5.1 - 5.3	
	3/20	Blackbody Radiation	5.4 - 5.7	
10. Telescopes	3/23	Optics	6.1 - 6.3	
	3/27	Detectors	6.4 - 6.7	
11. Stars	3/30	Sun	7	
	4/3	Stars	13	
12. Energy	4/6	H-R Diagram	14	
	4/10	Stellar Interiors	15	
13. Origins	4/13	Star Formation	17	
	4/17	Midterm 2 (online weeks 6-10)		
14. Spectroscopy	4/20	Independent Project		
	4/24			
15. Endings	4/27	Remnant Stars	18	
	5/1	Reading Day		

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<a href="#">Description</a>  <a href="#">Lectures</a>  <a href="#">Assignments</a>  <a href="#">Grading</a>	<p>All student work will be submitted through Blackboard.</p> <p>Observatory hours are Thursday and Friday evening, weather permitting. Check the <a href="#">observatory</a> web page to confirm operation.</p>
	<p>Grading scale:</p> <ul style="list-style-type: none"> <li>• 3 exams - 3 problems each exam, 5 points each problem</li> <li>• 10 problem sets - 5 points each</li> <li>• Independent project - 10 points</li> <li>• Observatory visits (maximum 6) - 5 points each, replaces a homework or exam problem.             <ul style="list-style-type: none"> <li>◦ write a summary of the objects and observed and characteristics relevant to the class.</li> </ul> </li> </ul>
	<p>Grading scale:</p> <ul style="list-style-type: none"> <li>• A : 90 or more</li> <li>• B : 80-89</li> <li>• C : 70-79</li> <li>• D : 60-69</li> <li>• F : less than 60</li> </ul>

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