Syllabus

Physics 1306 Introductory Astronomy: Stellar and Galactic Astronomy

Spring 2006

Instructor: Dr. Victor Andersen **Office:** 406B S&R1 Building
Office Hours: T-Th 1:00-2:00 p.m. other times by appointment
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Text: Chaisson & McMillan, *Astronomy Today* 5th Ed. ISBN 0-13-144596-0

What You Should Bring to Class: Textbook, Notebook, Sharpened #2 pencil (the pencil sharpener in S&R1 117 sometimes doesn't work!), calculator.

Course Etiquette: In order to provide an environment conducive for learning for both you and your fellow students, there are several rules of common courtesy that must be obeyed.

1. Show up to class on time.
2. Do not leave class early, and do not rustle papers in preparation to leave before class is dismissed.
3. If you have your cell phone with you, turn it off before the beginning of class.
4. Be attentive in class: stay awake, don't read newspapers, etc.
5. If you absolutely must be late or leave or early on any particular day, sit near the door, try to enter or leave the classroom during a natural break in class, and make sure the door doesn't slam after you!

Students who do not practice common courtesy should expect their grades to be reduced substantially.

Course Grading: Your grade in this course will be determined from 5 sources: homework, 3 in class exams, and a comprehensive final exam. In addition, a small amount of extra credit will be available for participation in collaborative learning activities we will do in class throughout the semester.

Grading Scale: Your final grade will be computed using the following scale:

A	160-200 pts.
B+	156-159 pts.
B	135-155 pts.
B-	130-134 pts.
C+	126-129 pts.
C	90-125 pts.
C-	86-89 pts.
D	75-85 pts.

F 74 points or less

Important Grading Notes!

- In order to determine where you stand in the class at any time, simply add up all the points you have received from on all graded material so far, and use the above grade scale.
- The total homework grade is weighted to be equal to the value of each of the in class exams and the final exam. A maximum of 50 points is possible for the homework.
- The lowest exam grade will be dropped in determining your final grade (yes, this includes the final exam!)
- If you believe a grade on an in class exam does not reflect your knowledge of the subject matter, you may take an oral makeup exam that will replace the grade on the in class exam. You may also take an oral exam if you miss an in class for any reason.
- All makeup exams must be scheduled ahead of time with me, and must be completed before the next in class exam occurs. If you sign up for a makeup exam and miss your appointment, you forfeit the right to take a makeup exam.
- No makeup exams will be given for Exam 3 or the Final Exam!

Important Note About Homework: The best way for you to learn the material in this course is to use it. The homework assignments are designed to do just that: allow you to practice the course material by answering specific questions using the facts and concepts we cover in this course. Do not be deceived by the fact that the homework questions are multiple choice. Most successful students find they must spend an average of 6 to 9 hours a week to complete the homework for this class. *Most students who receive D's or F's in this course have completed little, if any, of the homework.*

A Warning and A Promise:

The warning: Astronomy is a demanding course. We will cover many important concepts from physics, and we will occasionally use some simple mathematics (nothing beyond high school algebra). The course will move quickly, and each new topic will build upon concepts covered previously. If you fall behind at any time, you will find it extremely difficult to get caught back up.

The promise: Few topics have inspired humans throughout the ages so much as the mysteries of the heavens. This class offers you the opportunity to explore these mysteries in depth, learning both about our tremendous modern understanding of the universe and about the mysteries that remain. If you work hard and learn the material well, this class will be one of the most rewarding classes of your college career.

Tentative Course Schedule

Date	Subject	Reading
1-18	Course Introduction	
1-20	Early Cosmology	Text 2.1-2.4; Notes 1
1-23	Modern Science	Text 1.1-1.2; Notes 2
1-25	Light and Matter	Text 3.1, 3.2, 4.1, 4.2 ; Notes 3
1-27	Light and Matter	
1-30	Light and Matter	
2-1	Telescopes	Text 5 ; Notes 4
2-3	Telescopes	
2-6	Basic Physics	Text 2.7; Notes 5
2-8	Basic Physics	Text 3.3, 3.4. 3.5; Notes 6
2-10	Stellar Properties	Text 1.7, 4.4, 17; Note 7
2-13	Stellar Properties	
2-15	Stellar Properties	
2-17	TBD	
2-20	**Exam 1**	
2-22	The Sun	Text 16.1-16.4; Notes 8
2-24	The Sun	
2-27	The Sun	
3-1	Stellar Evolution	Text 19; Notes 9
3-3	Stellar Evolution	Text 20; Notes 9
3-6	Stellar Evolution	Text 20; Notes 9
3-8	Stellar Endpoints	Text 21; Notes 10
3-10	Stellar Endpoints	Text 22; Notes 10
3-13	Spring Break	
3-15	Spring Break	
3-17	Spring Break	
3-20	Stellar Endpoints	
3-22	Stellar Endpoints	
3-24	TBD	
3-27	**Exam 2**	
3-29	The Milky Way	Text 23; Notes 11
3-31	The Milky Way	
4-3	The Milky Way	
4-5	Galaxies	Text 24.1-24.3; Notes 12
4-7	Galaxies	Text 25.1, 25.5; Notes 12
4-10	Galaxies	
4-12	AGN	Text 24.4, 24.5, 25.4; Notes 13
4-14	Cosmology	Text 26; Notes 14
4-17	Cosmology	Text 27.1-27.4 ; Notes 14
4-19	Cosmology	
4-21	Cosmology	
4-24	Galaxy Formation	Text 23.4, 25.3, 27.5; Notes 15
4-26	Intelligent Life in the Universe	Text 15.5, 15.6, 28; Notes 16
4-28	TBD	

5-1 **Exam 3**

Final Exam: Monday, May 8, 11 a.m.