

PHY150 – Astronomy
Spring 2009
SUNY College at Cortland - Physics Department

Course Description

This course is an introduction to astronomy. We will discuss the night sky and learn about the stars and constellations, the Sun and the ecliptic, the Moon and its phases. We will study the formation of the Solar System and learn about different objects that are in the Solar System such as planets and their moons, asteroids and comets. We will also take a close look at our star, the Sun. Depending on the interest and progress of the class we may cover some additional material such as stars and galaxies. Several observing sessions using telescope may be scheduled depending on seeing conditions. We will have several class activities that are mini-lab activities to better understand some of the concepts, we will also have planetarium sessions to learn about the sky.

Please keep current with the reading assignments and homeworks. Do not fall behind the class. If you need extra help please come and see me.

Course Textbook

The textbook is “Astronomy, The Solar System and Beyond” 5th edition, by Michael A. Seeds (Thomson Brooks/Cole).

Course Information

Tue, Thu 2:50-4:05pm, Bowers 136
3 credit hours

Course Webpage

Check eLearning to find the syllabus, course calendar including exam dates and chapters, reading assignments for each week, homework assignments and due dates, lecture notes and more information on the course. Check it frequently for updates and important notices.

Lecture notes will be posted on eLearning the day before each class (i.e., on Mondays and Wednesdays), print them out and bring them with you to class. Lecture notes will not be distributed in class so bring your own copy to follow the lecture and add any additional necessary notes to them.

Professor Information

Dr. Aphrodite Ahmadi, Assistant Professor of Physics
Office: Bowers 133
Phone: (607) 753-2919 (EMERGENCY ONLY)
Email: Aphrodite.Ahmadi@cortland.edu
Office Hours: Mon, Wed 10:30-11:30am and 12:00-1:00pm or by appointment.

Grading

5 Midterm Exams (1 lowest grade will be dropped)	15% each
Final Exam (comprehensive)	20%
Homeworks, in-class activities and presentations	20% total

You need 60% to pass, tentative grading scale:

90-100	A
80-89	B
70-79	C
60-69	D
Below 60	F

Midterm Exams dates:

Tuesday, Feb. 3	EXAM I (Chapters: 1, 2, 3)
Thursday, Feb. 19	EXAM II (Chapters: 4, 5)
Thursday, Mar. 5	EXAM III (Chapters: 7, first part of 8)
Tuesday, Mar. 31	EXAM IV (Chapters: second part of 8, 9, 10)
Tuesday, Apr. 21	EXAM V (Chapters: 11, 12, 13)

Final Exam date (comprehensive):**Monday, May 11****8:00-10:00am****Homework Assignments:**

They will be always due one week from the day they are handed out. You will have one full week to work on your problem sets, late homeworks will lose 10% per day of class.

Project Presentations:

They will be decided on Thursday Feb. 5 so everybody must attend the class on Thursday Feb 5, and the presentations will start from the week after the Spring Break, Tuesday Mar. 17. There will be groups of 2 students who will prepare a presentation of 10-15 minutes with a 2-3 pages written paper about their project **due at 10am the day of the presentation**, late papers will lose 10% per hour. A variety of project subjects depending on the students major and field of study will be suggested to the class.

Attendance Policy

Class attendance is very important and affects your grade. You are responsible for everything discussed and assigned in class. We will frequently have in-class activities which is part of your grade. The exams cover everything discussed in class and material may be covered in class that are not in the textbook, so attendance is highly recommended. Questions during lectures are welcome and have positive effect on your grade.

Extra Assistance

Please feel free to see me during office hours or by appointment to discuss any difficulties or questions you may have about the lectures, material in your textbook and/or homeworks.

Working with Friends

In general, I encourage you to work with friends and learn together with classmates. The preparation of the written assignments, however, must be individual work. Do it ALONE. It is easy to detect copying on the homeworks. Attached is a part of chapter 340 of the college handbook on academic integrity:

340.01 STATEMENT OF ACADEMIC INTEGRITY

The College is an academic community whose mission is to promote scholarship through the acquisition, preservation and transmission of knowledge. Fundamental to this goal is the institution's dedication to academic integrity. Providing an atmosphere that promotes honesty and the free exchange of ideas is the essence of academic integrity. In this setting all members of the institution have an obligation to uphold high intellectual and ethical standards.

It is the responsibility of the faculty to impart not only knowledge but also respect for knowledge. It is also the professional responsibility of all faculty members to explain the importance of honesty and respect for knowledge in order to ensure an academic environment that encourages integrity. To establish such an environment, students must recognize that their role in their education is active; they are responsible for their own learning. Specifically, it is the responsibility of students to protect their own work from inappropriate use by others and to protect the work of other people by providing proper citation of ideas and research findings to the appropriate source. This includes the obligation to preserve all educational resources, thereby permitting full and equal access to knowledge.

This academic community takes seriously its responsibilities regarding academic honesty. Academic integrity is absolutely essential to ensure the validity of the grading system and maintain high standards of academic excellence. In addition, all members of the academic community must exhibit behavior exemplifying academic honesty and encourage such behavior in others.

(For instances of violations of academic integrity and procedures for handling academic dishonesty please read the entire chapter 340 of the college handbook.)

Students with Disability

If you are a student with a disability and wish to request accommodations, please contact the Office of Student Disability Services located in B-40 Van Hoesen or call (607) 753-2066 for an appointment. Information regarding your disability will be treated in a confidential manner. Because many accommodations require early planning, requests for accommodations should be made as early as possible.

PHY150 - Astronomy
Tentative Course Calendar, Spring 2009

Date	Topic
Thursday, Jan. 22	Introduction, Powers of 10, Scientific notation, Night Sky: Stars and Constellations, Sun and the Ecliptic, Zodiac constellations (Chapters 1, 2, 3)
Tuesday, Jan. 27	Celestial sphere, Seasons (Chapters 2, 3)
Thursday, Jan. 29	Moon and its phases, Eclipses (Chapter 3)
Tuesday, Feb. 3	EXAM I (Chapters: 1, 2, 3)
Thursday, Feb. 5	History of Astronomy, Project Assignments (Everybody must attend class) (Chapter 4)
Tuesday, Feb. 10	Newton and his Laws, Orbital motion, Satellites (Chapter 4)
Thursday, Feb. 12	Gravity, Tides, Planetarium Show (Chapter 4)
Tuesday, Feb. 17	Light and Telescope (Chapter 5)
Thursday, Feb. 19	EXAM II (Chapters: 4, 5)
Tuesday, Feb. 24	Overview of the Solar System (Chapter 7)
Thursday, Feb. 26	Formation of planets (Chapter 7)
Tuesday, Mar. 3	Terrestrial planets: Earth and the Moon (Chapter 8)
Thursday, Mar. 5	EXAM III (Chapters: 7, first part of 8)
Tuesday, Mar. 10	Spring Break
Thursday, Mar. 12	Spring Break
Tuesday, Mar. 17	Terrestrial planets: Mercury, Venus and Mars (Chapter 8)
Thursday, Mar. 19	Jovian planets: Jupiter and Saturn, and their moons (Chapter 9)
Tuesday, Mar. 24	Jovian planets: Uranus, Neptune and Pluto (Chapter 9)
Thursday, Mar. 26	Meteorites, Asteroids and Comets (Chapter 10)
Tuesday, Mar. 31	EXAM IV (Chapters: second part of 8, 9, 10)

Thursday, Apr. 2	The Sun: The Solar Atmosphere (Chapter 11)	
Tuesday, Apr. 7	The Sun: The Sun's Core and Activity (Chapter 11)	
Thursday, Apr. 9	Stars: Their Properties (Chapter 12)	
Tuesday, Apr. 14	Stars: The H-R Diagram (Chapter 12)	
Thursday, Apr. 16	Formation of Stars (Chapter 13)	
Tuesday, Apr. 21	EXAM V (Chapters: 11, 12, 13)	
Thursday, Apr. 23	Death of Stars: White Dwarfs, Planetarium Show (Chapter 14)	
Tuesday, Apr. 28	Death of Stars: Neutron Stars (Chapter 15)	
Thursday, Apr. 30	Death of Stars: Black Holes (Chapter 15)	
Tuesday, May 5	REVIEW FOR FINAL EXAM	
Monday, May 11	FINAL EXAM (comprehensive)	8:00-10:00am