Duquesne University
Department of Physics

UCOR 125-01 CORE ASTRONOMY

Term: Summer 2017
Fisher Hall: 600
M T W Th 6:00-8:50 PM (F 7/21 tentative)

Instructor: Dr. Patrick Cooper
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Office Hours: Thursday 4:30-5:30 PM
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Course Description: Introduction to methods of astronomical observation, history of astronomy, the solar system and the question of life in the universe, with limited context-building discussion of stars and galaxies. Focus may alternate between planetary geology and astrophysics. Delivery is straightforwardly descriptive without complex mathematics. No science or mathematics background presumed. Does not meet requirements of physics or astronomy programs. 3 credits. Lecture, Core Science.

Objectives: The objective of this class is to familiarize the student with the methods and objectives of science. Students will learn how the scientific process is used to study and explain the natural mechanisms that are active in our Solar System. There will be an emphasis on exploring relevant concepts via classroom discussions. Students are encouraged to be active in this environment and to participate through questions and open-mindedness regarding their peers' questions.

Learning Outcomes: By the end of this class, students will be able to articulate the scientific principles that govern our Solar System an describe the properties of its astronomical bodies.

Prerequisites: There are no prerequisites for this course.

Text: "Astronomy Today" 8th edition by Chaisson and McMillan (Pearson / Addison Wesley).

Blackboard Site: This course will feature a Blackboard site where the relevant course information and assignments will be posted. Students will be notified when an assignment is posted, but they are responsible for accessing and completing this material on their own.

Academic Integrity Policy: Students in the Bayer School or students taking classes in the Bayer School are responsible for maintaining academic integrity with respect to class assignments, examinations, and any other requirements related to their course of study. Violations of academic integrity include instances of cheating, plagiarism, deceit in academic matters, misuse of documents, and assistance in any such instances. Violations of academic integrity are subject to academic sanctions. Please consult the text of the BSNES document on academic integrity, which is available at: **http://www.duq.edu/academics/schools/natural-and-environmental-sciences/academic-integrity-policy**

Students with Disabilities: Duquesne University is committed to providing all students with equal access to learning. In order to receive accommodations in their courses, students who have a disability of any kind must register with the Office of Freshman Development and Special Student Services in 309 Duquesne Union (412-396-6657). Once a disability is officially documented, the office of Special Student Services will meet you to determine what accommodations are necessary. With your permission, your instructors will receive letters outlining the reasonable accommodations they are required to take.

Once I have received this letter, you and I should meet to coordinate the way these accommodations will be implemented in this course. For more information, go to **http://www.duq.edu/special-students**.

Grading:

20% - 3 Assignments (Each of equal value)
40% - 2 Midterms (20% each)
20% - Comprehensive Final Exam - Mandatory - Thursday August 3rd During Class
20% - Participation (In-class Worksheets and Discussions)

Course Grades:

A	**93-100**
A-	**90-92**
B+	**87-89**
B	**83-86**
B-	**80-82**
C+	**77-79**
C	**70-76**
D	**60-69**
F	**<60**

Exams: The two midterm exams will cover only the lecture material assigned prior to the scheduled exam date. The final exam will be cumulative. The format for all exams will include multiple choice, and sometimes essay questions.

Late Assignments: Assignments are due at or prior to the start of class on the due date. Late assignments will lose a full letter grade for each day they are late. Assignments received more than 3 days late will not receive any credit. Every day of the week (including Saturdays and Sundays) will be counted towards the total number of days that the assignment is considered late.

Attendance: Some material discussed in class may not be available on Blackboard. Various opportunities (e.g. in-class worksheets and discussions) to earn credit for this class will occur during class sessions, so attendance and active participation are important components of this class. Make up assignments will be allowed only in instances of medical or family emergencies and may include class presentations or written assignments.

Statement on Classroom Recording: To ensure the free and open discussion of ideas, students may not record classroom lectures, discussion and/or activities without the advance written permission of the instructor, and any such recording properly approved in advance can be used solely for the student's own private use.

Class Schedule:

Date	Lecture	Chapter
7/10 (M)	Course Overview + Foundations of Astronomy	1
7/11 (T)	History of Astronomy, Kepler's Laws, Newton's Laws	2
7/12 (W)	Radiation, Spectroscopy	3/4
7/13 (Th)	Spectroscopy, Telescopes	4/5
7/17 (M)	Exam 1 **(Assignment 1 DUE)**	3
7/18 (T)	Earth, The Moon, Mercury	7/8
7/19 (W)	Venus and Video: The Green House Effect	9
7/20 (Th)	Mars, Jupiter	10/11
7/21 (F)	Saturn, Uranus, Neptune	12/13
7/24 (M)	Exam 2 (**Assignment 2 Due)**	
7/25 (T)	Cosmic Debris	14
7/26 (W)	The Sun	16
7/27 (Th)	Stars	17/18
8/2 (W)	The Cosmic Distance Ladder	18
8/3 (Th)	**Final Exam** (**Assignment 3 Due)**	