PHYSICS 1130 Introductory Astronomy
Fall 2010, Instructor: Mike Corwin
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TEXT AND REQUIRED MATERIAL:

- PRS Audience Feedback Transmitter (your clicker). New or used, available at the bookstore.

BRING YOUR CLICKER TO CLASS EVERY DAY

GRADING:

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>In-class Clicker Quizzes</td>
<td>15%</td>
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<tr>
<td>Three In-class Exams</td>
<td>60%</td>
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<tr>
<td>Comprehensive Final Exam</td>
<td>25%</td>
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THERE ARE NO MAKE UP EXAMS OR QUIZZES. NO EXCEPTIONS. For a missed exam that has been excused before the exam, your grade on the other two will be averaged in place of the missed exam. Several of your lowest clicker grades will be dropped to allow for missed classes.

ACADEMIC INTEGRITY

All UNC Charlotte students have the responsibility to be familiar with and to observe the requirements of The UNC Charlotte Code of Student Academic Integrity (see the Catalog). This Code forbids cheating, fabrication or falsification of information, multiple submission of academic work, plagiarism, abuse of academic materials (such as Library books on reserve), and complicity in academic dishonesty (helping others to violate the Code). Any further specific requirements or permission regarding academic integrity in this course will be stated by the instructor, and are also binding on the students in this course. Students who violate the Code can be punished to the extent of being permanently expelled from UNC Charlotte and having this fact recorded on their official transcripts. The normal penalty is zero credit on the work involving dishonesty and further substantial reduction of the course grade. In almost all cases, the course grade is reduced to "F." If you do not have a copy of the Code, you can obtain one from the Dean of Students Office or access it online at http://www.legal.uncc.edu/policies/ps-105.html. Standards of academic integrity will be enforced in this course. Students are expected to report cases of academic dishonesty they become aware of to the course instructor who is responsible for dealing with them.

Academic honesty and integrity are essential to the existence and growth of an academic community. Without maintenance of high standards of honesty, members of the instructional faculty are defrauded, students are unfairly treated, and society itself is poorly served. Maintaining the academic standards of honesty and integrity is ultimately the formal responsibility of the instructional faculty; and this responsibility is shared by all members of the academic community.

UNC Charlotte strives to create an academic climate in which the dignity of all individuals is respected and maintained. Therefore, we celebrate diversity that includes, but is not limited to ability/disability, age, culture, ethnicity, gender, language, race, religion, sexual orientation, and socio-economic status.
PHYS 1130 - INTRODUCTORY ASTRONOMY
Tentative Schedule

Part 1: The sky, seasons, phases, eclipses, history of astronomy, how science works, light and telescopes
- scientific notation, scale of the universe, Earth’s rotation, time zones, the Celestial Sphere, seasons
- phases of the Moon, eclipses, history of astronomy: the Greeks, Copernicus, Tycho, Kepler
- history of astronomy: Galileo, Newton, tides, how science works; the nature of light, telescopes

In-Class Exam 1: Part 1

Part 2: Earth and the Solar System
- Solar System: introduction, formation, planets around other stars, Earth as a planet
- Venus, Mars, Earth’s Moon, Mercury, satellites, asteroids
- Jupiter to Neptune, Pluto, Kuiper belt, Oort cloud, comets

In-Class Exam 2: Part 2

Part 3: Physics of light, stars
- our Sun, how astronomers use spectra to learn about stars
- Stars: distance, luminosity, mass, star formation, the HR diagram, energy generation, main sequence life
- Stars: life from main sequence to white dwarf, death — supernovae, neutron stars, black holes

In-Class Exam 3: Part 3

Part 4: Galaxies, cosmology
- Our Galaxy — the Milky Way, Galaxies: properties, clusters of galaxies, dark matter
- Galaxies: evolution, distances, expansion of Universe, active galaxies, supermassive black holes
- Cosmology: Big Bang, evolution of the Universe, fate of the Universe

Final Exam: Parts 1 – 4, with emphasis on Part 4

PRS Personal Response System (Your Clicker)

We will be using PRS RF (radio frequency) clickers. We will NOT be using the old PRS IR (infrared) style clickers.

Clickers will be used extensively during class, and clicker responses are graded. Each student in the course must have his or her own clicker, and each student must register his or her clicker in order to get course credit for using it. New or used clickers can be purchased from the bookstore.