

Syllabus	PHYS 105 Ideas in Astronomy	UMBC 2015 Spg
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Credits 3 credits
Alt. Title The Universe Past, Present & Future
Prerequisite None, but Mathematical ability at the level of high school algebra, geometry and trigonometry
Corequisite None
Lectures Tu,Th 10:00-11:15 in Sherman Hall Rm 150

Texts “*The Cosmic Perspective* (7th Edition)” by Bennett et al. (Addison-Wesley) plus accompanying *MasteringAstronomy* (7th Edition) Student access kit.

Materials Scientific Calculator (non-programmable)

Instructor Dr. Ian M George

Office	Physics Room 410
Office Hours	Tu, Thu 11:30-12:30
Phone	1-410-455-1518
E-mail	ian.george@umbc.edu

T.A./Grader None

Course Overview A general-interest course that covers observations, models and theories of the solar system, the stars and the galaxies. Students also will become acquainted with the history of astronomy. Prerequisite: Mathematical ability at the level of high school algebra, geometry and trigonometry.

Course Objectives The main objectives of the course are for students to be able to understand and put in context media reports of the latest “space-related” results.

Thus the students need students to become familiar with the latest ideas in planetary science, astronomy and cosmology. These include the size and contents of the universe, our (human/Earth) origin & place within the current paradigm, our understanding of how planets, stars, & galaxies etc came to be/work, and of course such that they can understand and put in context media reports of the latest astronomical results.

- Detailed Objectives* By the end of the course, successful students will be able to:
1. Describe the general scale of the Universe and human's place within it.
 2. Understand the key underlying physical concepts, including the laws of motion, gravitation and the nature of light & matter
 3. Have an overview of
 - a. The various objects in the solar system, and how it formed
 - b. The life & death of stars
 - c. The Milky Way and other Galaxies
 - d. The latest ideas in Cosmology, including the evidence for Dark Matter and Dark Energy
 - e. The search for terrestrial life

<i>Grading Summary</i>	Final Exam	30%
	Mid-Term#1	10%
	Mid-Term#2	20%
	Homework	40%

A detailed (provisional) week-by-week schedule of classes will be posted in the first week of the semester.