

## MASTER SYLLABUS: PHY 107

### 1. Course Information

**College:** College of Science and Mathematics  
**Department:** Physics  
**Course Title:** Stars, Galaxies and Cosmos  
**Course Designation and Number:** PHY 107  
**GE Area(s):** Area V - Natural Sciences

Writing Intensive: \_\_\_ Yes x No

Method(s) of Instruction: x Lecture  
x Discussion  
\_\_\_ Web-enhanced  
\_\_\_ Web-only  
\_\_\_ Other

Includes Lab: x Yes \_\_\_ No  
Three hours lecture, two hours lab

Prerequisites: None

### 2. Objectives

#### **GE Program Objectives:**

Sharpen critical thinking, problem solving and communication skills.  
Learn about the aesthetic, ethical, moral, social, and cultural dimensions of human experience needed for participation in the human community.  
Increase knowledge and understanding of the past, of the world in which we live, and of how both past and present have an impact on the future.

#### **GE Area Five Objectives:**

Area Five courses emphasize scientific inquiry as a way to discover the natural world, and they explore fundamental issues of science and technology in human society.

#### **Course Objectives and GE Learning Outcomes:**

The course will help students understand fundamental information about the universe. Topics include: the life cycle of stars, galaxy formation, and historical perspectives on discoveries that lead to our current understanding of the universe.

Understand the experimental basis of scientific inquiry  
Understand the importance of model building for understanding the natural world  
Understand the theoretical, practical, creative and cultural dimensions of scientific inquiry  
Discuss some of the fundamental theories underlying modern science  
Understand the dynamic interaction between society and the scientific enterprise  
Recognize appropriate ethical uses of knowledge in the natural sciences

### 3. Suggested Course Materials

Text: *Stellar Astronomy* by Impey & Hartman  
Class notes available on-line  
Lab Manual: *Stars, Galaxies, and the Cosmos* (Department of Physics publication)

### 4. Suggested Methods of Evaluation

Three tests and two quizzes  
Comprehensive Final Exam is required

**5. Grading Policy**

All GE courses are graded A-F

Grading scales will be announced after each exam. Grades will be assigned on the basis of total points earned during the quarter.

**6. Suggested Weekly Course outline Including Typical Assignments**

Wk 1: Introduction Detecting Radiation In Space (Ch10)

Wk 2: Read Ch 11 The Sun

Wk 3: Read Ch 12, Properties of Stars

Wk 4: Read Ch 13 Birth of Stars

Wk 5: Read Ch 13 Death of Stars

Wk 6: Read Ch 13 Death of StarsCh 14 Milky Way Galaxy

Wk 7: Read Ch 14 Milky Way Galaxy

Wk 8: Read Ch 15 Expanding Universe

Wk 9: Read Ch 17 Cosmology

W 10: Finish Ch10 Cosmology

**7. Other**

Syllabus distributed to students should employ the format approved by UCAPC and must include:

- Instructor name, office hours, and contact information
- Office of Disability Services information
- Information on how grades will be determined
- Attendance policy