OFFICIAL COURSE OUTLINE INFORMATION

Students are advised to keep course outlines in personal files for future use.

Shaded headings are subject to change at the discretion of the department and the material will vary; see course syllabus available from instructor.

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<th>FACULTY/DEPARTMENT:</th>
<th>PHYSICS 103</th>
<th>Science/Physics</th>
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<tbody>
<tr>
<td>COURSE NAME/NUMBER</td>
<td>Astronomy: The Solar System</td>
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<td>FORMER COURSE NUMBER</td>
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<td>UCFV CREDITS</td>
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CALANDAR DESCRIPTION:

This introductory course in astronomy focuses on the solar system. Topics include a brief history of astronomy, Newton’s laws, gravity, orbits, eclipses, and seasons. It includes a discussion of the nature of light and other electromagnetic radiation, relativity and quantum theory, and a description of modern astronomical instruments. The second half of the course describes the geology, geography, and climates of the nine planets in the solar system, along with their moons and the asteroids. The origin of the solar system is discussed.

PREREQUISITES: Principles of Math 11, or Applications of Math 11 with at least a C

COREQUISITES:

SYNONYMOUS COURSE(S):
(a) Replaces:  
(b) Cannot take:  

SERVICE COURSE TO:

TOTAL HOURS PER TERM: 73

STRUCTURE OF HOURS:
Lectures: 43 Hrs
Seminar:  Hrs
Laboratory: 30 Hrs
Field Experience:  Hrs
Student Directed Learning:  Hrs
Other (Specify):  Hrs

MAXIMUM ENROLLMENT: 36

EXPECTED FREQUENCY OF COURSE OFFERINGS: Every 2nd or 3rd year

WILL TRANSFER CREDIT BE REQUESTED? (lower-level courses only) □ Yes □ No
WILL TRANSFER CREDIT BE REQUESTED? (upper-level requested by department) □ Yes □ No
TRANSFER CREDIT EXISTS IN BCCAT TRANSFER GUIDE: □ Yes □ No

AUTHORIZATION SIGNATURES:

Course Designer(s): T. Cooper; revised P. Mulhern  
Chairperson: A. Last; revised E. Camm (Curriculum Committee)

Department Head: A. Last; revised P. Mulhern  
Dean: J.D. Tunstall; revised J. Snodgrass

PAC Approval in Principle Date: PAC Final Approval Date: December 14, 2001
LEARNING OBJECTIVES / GOALS / OUTCOMES / LEARNING OUTCOMES:

1. To present a living science in action.
2. To introduce the student to the frustrations and rewards of doing their own experiments, thereby get a ‘hands on’ feel for the capabilities and limitations of science.
3. To show how we have learned an enormous amount of information about the universe by the scientific method.
4. To familiarize the student with the world around them and how it is an integral part of the solar system.
5. To peak the student’s interest in science and encourage them to pursue this interest in other science courses.

METHODS:

Lecture, demonstration, small group practice, discussion, audiovisual presentation, use of models and charts.

PRIOR LEARNING ASSESSMENT RECOGNITION (PLAR):

Credit can be awarded for this course through PLAR (Please check :)  ☒ Yes  ☐ No

METHODS OF OBTAINING PLAR:

Initial oral discussion
Successful completion of a final exam

TEXTBOOKS, REFERENCES, MATERIALS:

[Textbook selection varies by instructor. An example of texts for this course might be:]

Astronomy: Journey to the Cosmic Frontier  John D. Fix
Any first year astronomy text

SUPPLIES / MATERIALS:

STUDENT EVALUATION:

[An example of student evaluation for this course might be:]

Laboratory Work  20%
Assignments  20%
Midterm  25%
Final  35%

COURSE CONTENT:

[Course content varies by instructor. An example of course content might be:]

Week 1.  Chapter 1,2  Early astronomy
Week 2.  Chapter 3  Gravitation, action at a distance
Week 3.  Chapter 4,5  Gravitation in the planetary system, celestial clockwork
Week 4.  Chapter 6  The Moon and Planets in the sky
Week 5.  Chapter 7  Light
Week 6.  Chapter 8  Special relativity
Week 7.  Chapter 9,10  Optical astronomy, New windows on universe
Week 8.  Chapter 11  The planetary system
Week 9.  Chapter 12  The earth as a planet
Laboratory Experiments

Between 7 and 9 experiments will be performed. It is anticipated that the other lab periods will be for sky observing should the clouds allow.