PHY 1060 Astronomy

I. College/School: CoSM / WSU
   Department: Physics

II. Course Information
   Course Title: Astronomy
   Course Abbreviation and Number: PHY 1060
   Course Cross Listing(s) Abbreviation and Number:
   Check (“x”) all applicable:
   General Education Course X Writing Intensive Course_____ Service Learning Course_____
   Laboratory Course_____ Ohio TAG (Transfer Assurance Guide) Course ____
   Ohio Transfer Module Course______ Others (specify)_____

III. Course Registration
   Prerequisites: none
   Corequisites: PHY 1060L
   Restrictions: none
   Other: none

IV. Student learning outcomes
   • To gain an understanding and appreciation of the scale and workings of the universe and of the
     physical laws that govern it.
   • To learn how this information was deduced in the past and is being obtained now.
   • To gain an understanding of how physics is used in astronomy and how astronomy enriches physics.
   • To develop the vocabulary, concepts and background knowledge needed to appreciate current research on
     physics and astronomy.

   The General Education Element 6 learning outcomes also apply:
   a. Understand the nature of scientific inquiry
   b. Critically apply knowledge of scientific theory and methods of inquiry to evaluate information from a variety of sources
   c. Distinguish between science and technology and recognize their roles in society
   d. Demonstrate an awareness of theoretical, practical, creative and cultural dimensions of scientific inquiry
   e. Discuss fundamental theories underlying modern science

V. Suggested Course Materials (required and recommended)
   Textbook: Cosmos: Astronomy in the New Millennium, 3rd Edition, by Pasachoff and Filippenko,
   (ISBN-10: 049501303X and Published in 2007)
   Selected Articles and Videos on current topics
   Internet Resources from NASA, ESA and other sited will be utilized
   Computer Programs on the Internet will be used in the labs and for interactive homework

VI. Suggested Method of Instruction
   Lecture (with co-requisite lab)

VII. Suggested Evaluation and Policy
   3 Tests for 40%, 6 Quizzes for 30%, Final Exam for 20%, Attendance and Participation Policy 10% based
   on ‘clickers’ taken at each lecture

VIII. Suggested Grading Policy
   90-100% = A, 80-89% = B, 70-79% = C, 60-69% = D, < 60% = F

IX. Suggested Assignments and Course Outline

<table>
<thead>
<tr>
<th>Week</th>
<th>Topics</th>
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<tbody>
<tr>
<td>1</td>
<td>Intro. and the Modern View of the Cosmos</td>
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<td>2</td>
<td>Observing the Stars and Planets</td>
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<td>3</td>
<td>Early History of Astronomy</td>
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<td>4</td>
<td>Light, Matter, and Energy and Telescopes</td>
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<td>5</td>
<td>The Solar System I: Planets</td>
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<td>6</td>
<td>The Solar System II: Solar System Formation</td>
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<td>7</td>
<td>The Sun</td>
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<td>Stars</td>
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<td>Life cycle of Stars</td>
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<td>10</td>
<td>Neutron Stars and Black Holes</td>
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<td>11</td>
<td>The Milky Way</td>
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<td>12</td>
<td>Galaxies and Active Galaxies</td>
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<td>13</td>
<td>Cosmology</td>
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<td>14</td>
<td>Earthlike Planets</td>
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<tr>
<td>Finals</td>
<td>Final Exam</td>
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X. Other Information

none.

This is a course guideline syllabus. Course materials, method of instruction, evaluation and policy, grading policy, assignments, and other course matters can differ by specific course sections and individual professors. Additional information can be obtained by contacting the appropriate college and department.