PHYSICS 181 – Astronomy
Spring 2007-2008

Course Description:
Provides an overview of modern astronomy, including the scientific method; telescopes; stars and star clusters; stellar evolution; galaxies and the large-scale structure of the universe; and the Big Bang. May also include a visit to the university observatory and/or the Franklin Institute.

Course Objectives:
The main objective of this course is to gain practical knowledge of astronomy.

Course Number and Section:   PHYS 181
Meeting Times and Place:  Thursday
07:00 pm - 09:50 pm   Straton 101

Credits: 3 credits

Prerequisites:
May not be enrolled in the following Program Level:
Continuing Education
May not have the following Classification(s):
Freshman

Course Schedule: See attached calendar.

Contact Information:
Adjunct Professor: Dr. Joseph J. Trout
st9217c3@drexel.edu   joetrou@comcast.net

Cell Phone: 610-348-6495
Office: Physics Department Office . Disque 816
Website:  www.physics.drexel.edu/~joetrou
Office Hours:
Monday 5:00 – 6:00
<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Topic</th>
<th>Chapter</th>
<th>Readings</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>03/31/08</td>
<td>Introduction &amp; Constellations</td>
<td>Chapter E,</td>
<td>E1,E2,E5, Appendix 1,2, S-9 (18 pages)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Appendix</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>04/07/08</td>
<td>Earthly Phenomena: Seasons, Lunar Phases,</td>
<td>Chapter E,</td>
<td>E2, E3, 5.2 (12 pages)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Eclipses, Tides</td>
<td>Chapter 5</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>04/14/08</td>
<td>Light, Cameras, Telescopes</td>
<td>Chapters 2 &amp; 3</td>
<td>2.3, 2.4a, 2.4c, 2.5a, 2.5b (~9 pages) 3.1-3.3, [3.4-3.5] (13+10 pages)</td>
</tr>
<tr>
<td>4</td>
<td>04/21/08</td>
<td>Solar System Intro: Killer Asteroids &amp;</td>
<td>Chapters 4 &amp; 8</td>
<td>4.1, 4.2, 8.5, 8.6, 4.4 (24 pages)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pluto's Exit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>04/28/08</td>
<td>The Planets</td>
<td>Chapters 5, 6, 7</td>
<td>6.1-6.8 (22 pages); 5.1, 5.6-8 (10 pages) 7.1-4 (9 pages); 8.1, 8.4 (10 pages)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&amp; 8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>05/05/08</td>
<td>Stars &amp; Stellar Evolution</td>
<td>Chapters 9, 10 &amp;</td>
<td>9.1, 9.4, 9.5a (10 pages); 10.3, 10.5 (6 pages) 12.1-3 (10 pages)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>We are Stardust</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>05/12/08</td>
<td>Black Holes</td>
<td>Chapters 12 &amp; 13</td>
<td>12.4-6, 12.8 (10 pages) 13.1-2, 13.5-8 (17 pages)</td>
</tr>
<tr>
<td>8</td>
<td>05/19/08</td>
<td>Galaxies</td>
<td>Chapters 14 &amp; 15</td>
<td>14.1-3, 14.5-7 (19 pages) 15.1, 15.3 (9 pages)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ours and Others</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>05/26/08</td>
<td>Clusters, Quasars, and &quot;Dark Matter&quot;</td>
<td>Chapters 15 &amp; 16</td>
<td>15.2b, 16.5a, 16.5b, 16.3 (7 pages); 15.4, 16.4 (13 pages) 16.1, 16.5d (4 pages)</td>
</tr>
<tr>
<td>10</td>
<td>06/02/07</td>
<td>Cosmology</td>
<td>Chapter 17</td>
<td>17.1-8 (24 pages)</td>
</tr>
<tr>
<td>11</td>
<td>06/09/07</td>
<td>Final</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Reading Assignments:** Read chapter prior to class.

**Lectures/Help Sessions:**
Attendance at all lectures is required. Please notify Dr. Trout if you anticipate missing a scheduled lecture.

**Description of Major Assignments:**

**Hourly Exams:** There will be 1 hourly midterm exam, as listed on the course calendar. There are no make up exams.

**Quizzes:** There will be eight ten minute quizzes, one a week with the exception of the first week and the week of the midterm. The lowest score will be dropped from your overall quiz average. If you miss a quiz, that quiz will count as the quiz that is dropped. There are no make-ups for the quizzes.

**Homework:** There will be no formal, graded homework.

**Final Exam:** A cumulative final will be given during finals week. The date will be announced during the course of the term.
**Course Grading:**

1 Hourly Exams 30%
Quizzes 20%
Final Exam (cumulative) 50%

A+ 98 - 100
A 93 – 97
A- 90 – 92
B+ 87 – 89
B 83 – 86
B- 80 – 82
C+ 77 – 79
C 73 – 76
C- 70 – 72
D+ 67 – 69
D 63 – 66
D- 60 - 62
F 59 and below.

**Academic Policies:**

Attendance is required. If you must miss class due to work, personal illness or injury, or family illness, injury or death, please e-mail me as soon as possible. Attendance will be taken. Lateness cannot be tolerated. It disrupts class and will also disrupt your academic achievement. In regards to civility, this is a college course and you will be expected to act accordingly. There will be no fowl language or disrupting other students or the class. Class participation will be expected, but not graded. There will be no make-up for missed assignments. Assignments will be turned in on time. Problems due to personal injury/sickness or family injury/sickness will be handled on a case-by-case basis. Academic Integrity is the same as is expected in any academic environment. No cheating or copying of assignments or answers to test will be tolerated. Any cheating will result in an F in the course.

*Please feel free to call or email me with any questions or concerns regarding the class at any time. I will do my best to bet back to you as soon as possible. I prefer that you talk to me directly if you are experiencing any difficulties with any of the material.*