Mathematics and Natural Sciences-Department of Chemistry and Physics

PHYSICS 1404                        Astronomy-SOLAR SYSTEM
INSTRUCTOR                           Dr. Mike Broyles
Office: J139 SCC  tel (972) 881-5882
email: mbroyles@collin.edu  use cougar email
website: see Professor’s websites
Office hrs: MWF 10:00-11:00 AM, TR 11:30 AM-
12:30 PM, or by appointment.

CLASS MEETS:                           TR: 10:00 AM-11:15 AM in H227 (S01)
LAB MEETS                               T:  4:00 PM-6:50 PM in H130 (S1L)
                                         M:  7:00 PM-9:50 PM in H130 (S7L)
TEXT                                      Astronomy Today Volume 1 The Solar System by
LAB MANUAL
SUPPLIES                                Your lab instructor will provide
                                       more information regarding supplies for the lab.

Spring 2010
Week                                            Text Chapter for Lecture
1                                                     Introduction and Chapter 1
2                                1, 2
3                                2, 3
4                                3, 4
5                                4, 5
6                                             **************UNIT 1**************
7                                      5, 6
8                                      7
9                                      8
9                                      9
**************UNIT 2**************
10                                 10
11                                 11
12                                 12, 13
**************UNIT 3**************
13                                 13, 14
14                                 14, 15
15                                 16
**************UNIT 4**************

Exam dates
Unit 1 Exam  Chapters 1-4        Week 5 in class (Scantron form needed)
Unit 2 Exam  Chapters 5-8        Week 8 in class (Scantron form needed)
Unit 3 Exam  Chapters 9-12        Week 12 in class (Scantron form needed)
Unit 4 Exam  Chapters 13-16 on  Tuesday 5/12/10 from 10:00 AM-Noon in class
Also bring a Scantron form for Exam 4-The Final Exam.
EVALUATION METHODS

The following procedure will be used to determine grades. Note that there are two columns, one for the maximum number of points possible and another column for you to enter the actual number of points that you earned on that component.

A. Exams (4)  

<table>
<thead>
<tr>
<th>Component</th>
<th>Possible Points</th>
<th>Actual Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit 1 Exam</td>
<td>100</td>
<td>_____</td>
</tr>
<tr>
<td>Unit 2 Exam</td>
<td>100</td>
<td>_____</td>
</tr>
<tr>
<td>Unit 3 Exam</td>
<td>100</td>
<td>_____</td>
</tr>
<tr>
<td>Unit 4 Exam</td>
<td>100</td>
<td>_____</td>
</tr>
<tr>
<td>Total Exam</td>
<td>400</td>
<td>_____</td>
</tr>
</tbody>
</table>

Please note again that all exams are given in class. Bring a Scantron Form for all exams. Exams are multiple choice and average between 40-60 questions. Class notes are permitted for all exams (textbooks are not allowed). You must take the exams on time or face a minimum 10% deduction from your score. Testing dates will be announced in class and exams missed are subject to penalty deductions.

B. Laboratory Exercises. Your laboratory grade is part of your overall grade for this course. Your laboratory instructor will assign you laboratory exercises to be completed during that lab period. You will be graded on a point scale for each lab. The total number of points possible for the laboratory is 300. Multiply your laboratory grade average percentage times 300 to obtain your lab score.

Possible Points | Actual Points
---|---
300 | _____

C. Research Paper or Project: You may do either a research paper or project for this course. If you do a research paper you must include the following:

1. Paper must be typed (handwritten is not acceptable), double spaced, 5-10 pages not including the title page.
2. Paper must have an attached bibliography or list of references, not all of which are from the internet.
3. Paper must be written in your own words or paraphrased, you need to use quotes or footnotes for proper reference.
4. Paper must be over an appropriate topic in astronomy, the topic should not be too broad; these titles are not acceptable, “The Planets of the Solar System”, “History of the U.S. Space Program”.
5. You may give a Power Point presentation to the class in lieu of a conventional paper. Proper credits or works cited need to be included in the presentation. Present by the last week of regular class.

If you would rather do a project instead, use the following guidelines:

1. Build something that you can bring to class, for example a working sundial, telescope, model of a planet or solar system.
2. If you submit a project, you will still need to document your efforts with a 2-3 page typed report with an attached bibliography of not less than 3 references.

The paper or project will be due on 5/06/10; you will need to plan this work some time in advance so you have enough time to complete it. We have an excellent selection of astronomy books and journals here at the LRC at CCCC for your research efforts. If you need help see a reference librarian.

Possible Points | Actual Points
---|---
100 | _____
D. Homework (4) at 10 points per assignment

<table>
<thead>
<tr>
<th>Possible Points</th>
<th>Actual Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hw 1 10 pts</td>
<td></td>
</tr>
<tr>
<td>Hw 2 10 pts</td>
<td></td>
</tr>
<tr>
<td>Hw 3 10pts</td>
<td></td>
</tr>
<tr>
<td>Hw 4 10 pts</td>
<td>40</td>
</tr>
</tbody>
</table>

E. Attendance points (you must be in class on time to receive credit for these points). Attendance points cannot be made up for any reason and you must sign-in on the Attendance sheet to receive credit. If you late to class, that is, come in after the lecture has started you will not get credit for attendance unless you have a valid excuse. **Do not sign in for anyone else but yourself on this attendance list.**

<table>
<thead>
<tr>
<th>Possible Points</th>
<th>Actual Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>30</td>
<td></td>
</tr>
</tbody>
</table>

F. Extra Credit. There are additional bonus points that you may earn in the class with extra initiative. A maximum of 50 points are possible in a variety of different categories. Note that there is a maximum number of extra credit points that you may earn in each category. Please keep all of your extra credit in a notebook.

1. Magazine or newspaper articles. Write a one paragraph summary of the article that you have read and attach to the article. You may make a photocopy copy of the article. **DO NOT CLIP OR CUT ANY ARTICLES FROM MAGAZINES OR NEWPAPERS IN LIBRARY OR LRC.** You may bring in a summary of each article for 2 pts/article for a maximum of 5 articles. Do not bring them in all at one time. I want you to keep these summaries in a notebook. 10 possible points

2. View a video or a program on astronomy either at home or the LRC. Write a 1-2 paragraph summary of each video. You may receive credit for up to 5 video at 2 pts/video. 10 possible points.

3. An attempt at astrophotography. Bring in the developed photographs. 5 points per project attempt and 10 points possible for this category. Photos must be of a different object on different dates.

4. Observation of planets or Moon with a short summary of your observations. 5 observations possible at 2 pts per observation for 10 possible points. Your observations should be of different objects or under different conditions.

5. A building or construction project such as a telescope or other device that you did not previously receive credit for. 10 points possible.

6. An oral report to the class. This should take a minimum of 5 minutes and include visual aids. 10 points possible per talk, you may present one talk, time permitting.

7. Other extra credit assignments will be announced periodically in class.

8. Service Learning Project –15 hours required and 15 possible points. At the end of the semester all of your points will be added up and the following scale will be used to determine grades. Note that your lecture and lab grades will be combined to give a total grade for the course.

For the extra credit category, space out your extra-credit assignments with no more than 10 points per week, unless you are in category #8 above.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Points Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>870-783</td>
</tr>
<tr>
<td>B</td>
<td>696-782</td>
</tr>
<tr>
<td>C</td>
<td>609-695</td>
</tr>
<tr>
<td>D</td>
<td>522-608</td>
</tr>
<tr>
<td>Not passing</td>
<td>Below 521</td>
</tr>
</tbody>
</table>

Grand Total of All Your Points _____
NOTE THAT ALL WORK THAT YOU TURN IN FOR CREDIT MUST BE RECEIVED BY 5/6/10. NO WORK WILL BE ACCEPTED DURING FINALS WEEK EXCEPT THE FINAL EXAM AND HOMEWORK 4. ALL WORK THAT YOU WANT GRADED SHOULD BE TURNED IN TO ME PERSONALLY; DO NOT ATTEMPT TO PLACE OR SLIDE ASSIGNMENTS UNDER MY OFFICE DOOR. ALSO NOTE THAT THE LAST DAY TO WITHDRAW FROM A COURSE FOR THE SPRING IS 3/12/10. THE INSTRUCTOR CANNOT DROP A STUDENT, STUDENTS MUST WITHDRAW THEMSELVES.

PLEASE TURN OFF YOUR CELL PHONE IN THE LECTURE AND LAB. THESE CAN BE VERY DISRUPTIVE TO THE ENTIRE CLASS.

PLEASE OBTAIN THE CONSENT OF THE INSTRUCTOR IF YOU INTEND TO RECORD ANY LECTURE OR LABORATORY FOR USE OUTSIDE OF THE CLASSROOM OR LABORATORY.