Elements of Astronomy w/ Laboratory
PHY 150
Northern Virginia Community College
Alexandria Campus

Fall 2015

Instructor: Dr. Cathy Bunge
Email: cbunge@nvcc.edu
Phone: 703-845-6349 x17297
Office Hours: 10:10 – 10:25 PM Monday, Wednesday
7:10 – 7:25 PM Monday and Wednesday in Bisdorf 483
Appointments recommended

Text: Explorations An Introduction to Astronomy 7th edition Arny & Schneider
http://highered.mcgraw-hill.com/sites/0073512222/student_view0/index.html

Lecture: Wednesday 7:30 – 10:10 PM
Room: Bisdorf 441
Laboratory: Monday 7:30 – 10:10 PM
Room: Bisdorf 385

COURSE POLICY:
Each student is responsible for learning the required material for the course. The student is responsible for reading the assigned chapters for the next class period.

You should bring paper, pencil/pen, and scientific calculator to class each day.

Students are responsible for checking their student email on a regular basis.

GRADING POLICY:
There are 4 one-hour exams, a laboratory component, 4 homework assignments and a final exam. The grade weight for each item is listed below:

<table>
<thead>
<tr>
<th>Item</th>
<th>Weight</th>
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<tbody>
<tr>
<td>Exam 1</td>
<td>10%</td>
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<tr>
<td>Exam 2</td>
<td>10%</td>
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<tr>
<td>Exam 3</td>
<td>10%</td>
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<tr>
<td>Exam 4</td>
<td>10%</td>
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<tr>
<td>Homework</td>
<td>10%</td>
</tr>
<tr>
<td>Laboratory</td>
<td>27.5%</td>
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<tr>
<td>Final Exam</td>
<td>22.5%</td>
</tr>
</tbody>
</table>

Total 100%

A ≥ 90% B= 80% to 89% C= 70% to 79% D= 60% to 69% F < 60%

EXTRA CREDIT: Students can earn up to 2 points extra credit by attending a Northern Virginia Astronomy Club public observing event and submitting a one-page report on their experience. Information about these events is on Blackboard. Students can also earn extra credit by submitting a one-page report for other astronomy related events/exhibits provided they get prior permission from the instructor. There are sometimes opportunities to earn extra credit during lab. Students can earn up to 1 point extra credit for pop quizzes.

Students cannot make up the Final Exam. Students may make up Exams 1-3 within 2 weeks of missing them and Exam 4 within 1 week of missing it if they can provide documentation excusing their absence — after that their grade becomes a 0. It is the student’s responsibility to make arrangements to make up an exam in a timely manner.

If the instructor suspects that you are participating in cheating on an Exam or a Lab or a homework assignment, you will receive a 0 for that Exam or Lab or Homework.

Subject to change by the Instructor
You are responsible for withdrawing yourself from the course. If you fail to do so and do not attend the class, you will receive a failing grade. The last day to withdraw with tuition refund is September 10. The last date to drop without grade penalty is November 3. **If you plan to audit this course, you must communicate this decision to the instructor before the census date of September 10, 2014. No audits can be granted after this date.**

**LABORATORY COMPONENT:**

**Laboratories cannot be made up.** Your lowest laboratory grade will be dropped.

27.5% of your final course grade is determined from your laboratory grade. The labs consist of computer labs and outdoor observing labs depending on the weather. Each lab you should be dressed appropriately for an outdoor laboratory in case we do go outside—dress for the weather! Students may wish to bring a clip board. If you have any personal binoculars or telescope equipment, you are welcome to bring it along to lab for your own personal use.

**SPECIAL NEEDS AND ACCOMMODATIONS:**

Please address with the instructor any special problems or needs at the beginning of the semester. If you are seeking accommodations based on a disability, you must provide a disability data sheet. This sheet can be obtained from the counsellor for special needs located in Room 193 of the Bisdorf Building—telephone number is 703-933-1840.

**Lecture Policy:**

- Silence your cell phones.
- No talking during lecture unless you are asking a question or participating in a class discussion.
- Remain in your seat unless you have a health issue that requires you to leave the room.

If a student disrupts class in any way, the instructor will ask him/her to leave. If he/she continues to disrupt class the instructor will deduct 2 points from his/her final grade. (A break will be provided during the middle of the class when students can check their messages, make phone calls, use the restroom, get a drink or snacks, and talk to their classmates.)

Students are allowed to be tardy for lecture four times during the semester. If a student is tardy more than four times, the instructor will deduct 2 points from his/her final grade.

**SCHEDULE:** The calendar, homework assignments, and more information regarding extra credit are on blackboard. The calendar gives the reading assignments for this course.

**Topics to be covered:**

- Cycles of the Sky
- The Origin of Modern Astronomy
- Light and Telescopes
- Atoms and Starlight
- The Sun
- The Formation and Structure of Stars
- The Death of Stars
- Neutron Stars and Black Holes
- The Milky Way Galaxy
- Galaxies
- Active Galaxies & Supermassive Black Holes
- Cosmology
- The Origin of the Solar System
- Planets
- Dwarf Planets, Meteorites, Asteroids and Comets
- Life on Other Worlds

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