

## PHYS 103 Elementary Astronomy

FALL 2009

**Instructor:** Dr. Robert H. Gowdy, 710 W Grace St. 2409, Tel: 828-1821, email: rhgowdy@vcu.edu.

**Class Schedule:** TR 11am-12:15pm Grace Harris Hall 0101

**Office hours:** MW 11am-5pm R 1pm-5pm F 11am-1pm

**Optional Textbook:** *Astronomy: A Beginners Guide...* (3<sup>rd</sup>, 4<sup>th</sup>, 5<sup>th</sup> or 6<sup>th</sup> Ed.) by Chaisson/McMillan.

**Open Website:** The course will be taught from notes on the open World Wide Web. From the VCU home page (<http://www.vcu.edu>), follow the links:

Faculty → Faculty/Staff Web Pages → Robert H. Gowdy → P103

To go directly to the primary site, use the URL: <http://www.courses.vcu.edu/PHY-rhg/astron/>

The Open Website is accessible to anyone and will remain available to you after you have completed the course.

**Blackboard Website:** Our course also has a website on Blackboard. No course materials are presented there, but the Blackboard website provides access to our Astronomy Help Forums, online tests, a summary of your grades, and a place to turn in project materials for grading. It may be accessed only by students who are currently enrolled in this course.

**Material:** Chapters P; 1-18 in textbook. Modules 1-29 in notes on the open web page.

**Projects:** Up to 5% **extra credit** may be earned by completing the Moon Observation Project. See the project instructions for details.

**Pre- and Post-Tests:** Up to 1% **extra credit** may be earned by taking the online Science Literacy Assessment exam as a pre-test at the start of the semester and as a post-test at the end of the semester. These tests will be available at our Blackboard web site and are announced through your VCU email.

**Exams:** Each hour exam is approximately 60 multiple choice questions with questions on each module covered. The hour exams will be given in class on the following dates :

Sep 22	Lecture Weeks	1,2,3,4,5
Oct 20	Lecture Weeks	6,7,8,9
Nov 24	Lecture Weeks	10,11,12,13

The **final exam** is comprehensive and consists of approximately 120 multiple choice questions with at least one question on each module covered.

The final will be given on December 10, 2009 **starting at 8:00am** in Grace Harris Hall 0101.

**You must take the final exam!**

**Last Day to Drop with a W:** October 30, 2009

**Quizzes:** The questions in the notes will be used to give quizzes during most lectures. After a major point is covered or reviewed, a question about that point will be displayed and you will be asked to indicate your answer on a remote keypad. Those keypads may be purchased at the VCU Bookstore. The CPS enrollment codes needed to activate them may be purchased online (using a credit card) or you may buy one for cash at the Bookstore. Use the "Tools" | "CPS Connection" link on our **Blackboard website** to register your keypad for use in this course.

**Forum Participation:** An on-line discussion forum, the **Astronomy Forum**, is available from the Blackboard website. Each contribution to the forum, whether a question or an answer, whether right or wrong, adds seven points to the sum of all your quiz grades. Since a perfect quiz adds 100 points, you need about 15 contributions to make up for missing an entire class. You can make these contributions at any time, but note the following restrictions:

- Dumping large numbers of contributions onto the forum all at once is not allowed because it makes give-and-take discussions impossible. Only your first 10 contributions will be counted for credit on any one day.
- Contributions made after midnight on December 4, 2009 will not be counted.
- You may use forum contributions to get your overall quiz average up to 100%, however you cannot go over 100%.
- Contributions will be deleted (and thus not counted) if they are duplicates, plagiarized, on the Frequently Asked Questions List, fail to address a question in specific terms or otherwise violate the Forum Guidelines.

**Grading:** Each exam and quiz has a maximum score of 100. Compute your final score from your four exam scores (3 hour exams and a final) and quiz average as follows:

1. Total the highest three exam scores.
2. Add twice the final exam score.
3. Add the in-class-quiz average.
4. Divide the result by six.
5. Add any extra credit points

Your score determines your letter grade: **A=90.0-100.0, B=80.0-89.9, C=69.5-79.9, D=59.5-69.4**

**Make-up Policy:** If you know that you cannot take an exam on the scheduled date, arrange to take a make-up **before** the scheduled date. **Makeup exams will not ordinarily be given after the scheduled exam dates.**

Makeup final exams will be given only in conjunction with requests for grades of incomplete.

**In-class quizzes may not be made up** but you can use participation in the Astronomy Forum to compensate for missing quiz grades. Some form of class participation, either real or virtual, is a requirement of this course.

#### Tentative Schedule of Topics

Week/	Date	Modules	Topics
1	Aug 20	1	Syllabus, Sky Motions,
2	Aug 25,27	2,3,4	Scientific Models, Modelling The Earth and Planets
3	Sep 1,3	5,6,7	Science and Model Building
4	Sep 8,10	8,9,10	Models of Motion and Gravity, Solar System Overview
5	Sep 15,17	11	Terrestrial Planets
6	Sep 22,24	12	Exam 1, Jovian Planets
7	Sep 29, Oct 1	12,13,14	Jovian Planets,Comets, Formation of the Solar System
8	Oct 6,8	15,16,17	Atmosphere and Interior of Earth, Earth Impacts
9	Oct 13	18	Requirements for Life
10	Oct 20,22	19	Exam 2, Search for Life
11	Oct 27,29	20,21	Measuring Stars (Distances and Velocities)
12	Nov 3,5	22,23,24	Classifying Stars (The Hertzsprung-Russell Diagram)
13	Nov 10,12	25,26	The Births and Deaths of Stars
14	Nov 17,19	27	Supernovas
15	Nov 24	-	Exam 3
16	Dec 1,3	28	Neutron Stars and Black Holes
Final	Dec 10		All Topics Covered

## Accommodations for the Disabled

Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990 require Virginia Commonwealth University to provide an 'academic adjustment' and/or a 'reasonable accommodation' to any individual who advises us of a physical or mental disability. If you have a physical or mental limitation that requires an academic adjustment or an accommodation, please arrange a meeting with me at your earliest convenience. Additionally, if your coursework requires you to work in a lab environment, you should advise the instructor or department chairperson of any concerns you may have regarding safety issues related to your limitation(s).

Note: Please contact the appropriate Coordinator of Services for Students with Disabilities to obtain an official memo detailing the academic adjustments or accommodations which you need.

## VCU Honor System

All VCU students are presumed upon enrollment to have acquainted themselves with and have an understanding of the Honor System. Therefore, it is a student's responsibility to ask course instructors to clarify expectations for each assignment in order to be in compliance with the Honor System. The 2007 - 9 VCU Honor System policy statement and purpose is located at

[http://www.provost.vcu.edu/pdfs/Honor\\_system\\_policy.pdf](http://www.provost.vcu.edu/pdfs/Honor_system_policy.pdf)

You are required to be familiar with and follow the VCU Honor System. Should I become convinced that a violation (such as cheating) has occurred, I will not give a warning or ask for an explanation. Instead, I will file a formal charge to the Office of Judicial Affairs & Academic Integrity.

You are encouraged to give and receive help on projects and quizzes but the project reports and quiz answers should be your own. **Duplicate project reports and responding with another student's CPS keypad will be regarded as honor code violations.**

## What to Know and Do To Be Prepared for Emergencies at VCU

1. Sign up to receive VCU text messaging alerts (<http://www.vcu.edu/alert/notify>). Keep your information up-to-date.
2. Know the safe evacuation route from each of your classrooms. Emergency evacuation routes are posted in on-campus classrooms.
3. Listen for and follow instructions from VCU or other designated authorities.
4. Know where to go for additional emergency information (<http://www.vcu.edu/alert>).
5. Know the emergency phone number for the VCU Police (828-1234). Report suspicious activities and objects.

## Student Conduct

Students should familiarize themselves with the guidelines for appropriate student conduct as outlined in the VCU 2008-2009 Resource Guide (on web at [www.students.vcu.edu/rg/](http://www.students.vcu.edu/rg/)). During class it is expected that inappropriate electronic devices (cell phones, pagers, etc.) are turned off.