

Astronomy 103 - Survey of Astronomy

Fall 2014

Lectures: MWF in Physics 137, 09.00 – 09.50 am
Instructor: Ralf Kotulla
Office: Physics 122
Phone: (414) 229-3655
Email: kotulla@uwm.edu
Office Hours: Monday, 1-2 pm & Wednesday, 10am-11am, and by appointment

REQUIREMENTS

1. Please see instructions in this syllabus about accessing the course's web page on Desire2Learn (D2L). You should become familiar with D2L to take the quizzes and homework assignments. Please set your preferred email address as soon as possible.
2. The textbook is *Astronomy: A beginners guide to the Universe* by Chaisson & McMillan, 7th Edition, Addison-Wesley ISBN: 978-0-321-81535-4; Price: \$144.45 New, \$99.65 Used. You can get by with the 6th edition which is cheaper.
3. You are required to have access to the internet to take online quizzes, do the problem sets, and receive updates on the class from the instructor.

COURSEWORK

- **Problem sets and quizzes**

Homework assignments and quizzes will be given every week on D2L. There will be 17 problem sets and 14 quizzes. **The best 12 problem sets and best 9 quizzes will be used for your grade.** This is to take into account that you could potentially have an Internet or D2L issue. You can do the problem sets an unlimited number of times and the highest score will be used. The quiz will have questions taken from the problem sets with numbers changed in questions that involve a calculation. You must get a score of 85% to pass the quiz, but you can take the quiz 4 times. The grades for a passed quiz start at B+.

Quizzes and problem sets must be completed by the end date indicated on D2L.

Quizzes are DUE every Monday at 11:59 pm!

- **Planetarium assignment**

Attend the planetarium show (across the hall from PHY 137) during class time on November 22nd and write a 100-150 word typed summary based on the show you attend. This summary must contain at least one fact you learn during the show. Don't forget to sign into the show since attendance counts toward your grade on this assignment.

- **Exams**

Three midterm exams will be given: your lowest midterm score will be dropped. Since the lowest midterm will be dropped, **no make up of a missed midterm exam will be allowed except for medical emergencies.** The final exam will be cumulative with emphasis on the material since the last midterm. There will be no make up of the final exam except in cases of emergency or by prior arrangement.

- **Optional: Extra-credit assignments**

There will be several opportunities for extra credit. These will be announced in class and on D2L throughout the semester.

EVALUATION

SCALE:

Problem sets (12 best)	10%	A: 90-100
Planetarium (show & summary)	5%	B: 80-89
Quizzes (9 best)	25%	C: 70-79
Midterm (2 best)	30%	D: 60-69
Final exam	30%	F: 0-59

EXAM SCHEDULE

All exams will be during class except for the final.

1st midterm: Wednesday October 1

2nd midterm: Wednesday October 29

3rd midterm: Wednesday November 26

Final: 10:00-12:00 Noon Wednesday December 17

POLICIES:

- Feel free to study with other students but **submit your own work.**
- **Please feel free to ask questions in class or office hours.**
- No makeup midterms will be given since you can drop your worst midterm.
- Students with disabilities: if you need special accommodations in order to meet any of the course requirements, please contact me as soon as possible.
- I reserve the right to modify the syllabus if necessary. You will be informed of any changes.
- Any concerns about your attendance, quizzes or assignments should be brought to my attention within 2 weeks of the final grade being posted or the issue may not be addressed.

EXPECTED AVERAGE STUDENT TIME INVESTMENT

Lectures	$50/60 \times 40 = 33$ hours
Assigned reading	15×2 hours = 30 hours
Homework assignments	24×1.5 hours = 36 hours
Quizzes	14×2 hours = 28 hours
Review for exams	6×3 hours + 10 hours
Midterms	$50/60 \times 3 = 2.5$ hours
Final exam	2 hours
Total	159.5 hours (53 hours per credit)
Weekly Average	10.6 hours

GENERAL EDUCATION REQUIREMENT (GER-NS)

Astronomy 103 meets the following Natural Sciences Divisional Criteria: 1) understand and apply the major concepts of a natural science discipline, including its breadth and its relationship to other disciplines; 2) explain and illustrate the relationships between experiments, models, theories and laws; 4) discuss and assess the limitations of data and the possibility of alternative interpretations.

The course also addresses the following UW System Shared Learning Goals: 1) Knowledge of the Natural World including breadth of knowledge and the ability to think beyond one's discipline, major, or area of concentration. 2) Critical and Creative Thinking Skills including inquiry, problem solving, and higher order qualitative and quantitative reasoning. 3) Effective Communication Skills including listening, speaking, reading, writing, and information literacy.

STUDENT LEARNING OUTCOMES

Active participation in this course will enable students to:

1. Distinguish between scientific theories, hypotheses, and observations, and understand how scientists combine observation, theory and testing to understand the Universe.
2. Describe the scale, structure and motions of the solar system, how it may have formed and outline the properties known planets beyond our solar system.
3. Understand how astronomers use mathematics and graphical representations of data to determine properties, such as temperature, size, mass and composition, of stars, planets and other objects in the Universe.
4. Describe the levels of structure in the Universe in order of increasing size and describe the observational evidence in support of the Big Bang theory of the expanding Universe.

ASSESSMENT

The student learning outcomes will be assessed using multiple-choice questions on the homework assignments, quizzes, mid-term exams, and the final. Questions relating directly to student learning outcomes will be identified before the students complete the specific task: student performance on these questions will provide a quantitative measure of progress.

ASSESSMENT RUBRIC

Homework Assignments: the target for an initial first pass is that 60% or more of the students have correct answers to all the assessment questions.

Quizzes: 65% or more of the students should correctly answer to all such questions

Midterms: 75% or more of the students should correctly answer to all such questions.

Final: 75% or more of the students have correct answers to all such questions.

Using UW-Milwaukee Desire2Learn (D2L) course web sites

Materials for this course are available on a Desire2Learn (D2L) course web site. Students may see these materials there anytime using a standard web browser.

Recommended browsers: A complete and up-to-date list of recommended browsers and settings can always be found at: <http://kb.wisc.edu/helpdesk/page.php?id=3210>. Please contact the UWM Help Desk, as described at the bottom of this page, with any questions about these requirements.

To find and browse the D2L course web site:

1. Go directly to the D2L Landing page at <http://D2L.uwm.edu>.
2. On the D2L Landing page, choose the button labeled [UWM ePanther].
3. On the next page, type in your ePanther Username (your ePanther campus email, but without the "@uwm.edu") and Password (the same password you use for PantherLink and PAWS). Then hit [Login].
 - You may bookmark the D2L.UWM.edu landing page, if you wish.
 - To prevent failed log-ins, please DO NOT BOOKMARK the UWM ePanther login page.
4. The D2L MyHome screen, find the area called My Courses. You'll see your active courses here, arranged by Semester, with the newest semester at the top.
5. Click any course title to see the Course Home page. Click [Content] in the navigation bar to begin exploring the site.
6. If you have any difficulty getting into the course web site, please close down your web browser completely and open it up again. Then try logging on again, using the instructions above. If you do not know your ePanther username or password, please get help as indicated below.
7. When you are finished looking around your D2L course sites, always click on [Logout]. This is especially important if you are in a computer lab. Otherwise, the next person who uses the machine will be using your D2L account!

What to do if you have problems with Desire2Learn (D2L)

If you have any difficulties with D2L, including problems with your login (e.g., you forgot your password, or if you just can't get on), please contact the UWM Help Desk as follows:

- Report the problem via online web form at GetTechHelp.uwm.edu
- Call the UWM Help Desk at 414.229.4040 if you are in Metro Milwaukee
- Go to Bolton 225 (this lab is not open all day or on weekends - call 414.229.4040 for specific hours)
- From outside the 414 or 262 area codes, but from within the USA, you may call the UWM Help Desk at 1.877.381.3459