

SCI 238: Introductory Astronomy (Spring 2016)

This is a survey course that covers the entire breadth of modern astronomy. A breakdown of topics appears in the course outline below. In broad brushstrokes, the course includes the development of modern astronomy from its roots in ancient Greece, through its creation as a true science beginning in 17th-century Europe, and into the modern age of huge and sophisticated detectors on the ground and in space. Besides getting a clear sense of the sorts of things that astronomers know, and don't know, about our Universe, students will understand the value of astronomy not just as a science, but as one of the great intellectual adventures of humankind. Astronomy is also one of our best reminders that, despite how much scientists have figured out, the Universe remains a deeply mysterious place. In addition to learning about astronomy, students will learn about science in general: what motivates scientists, how science is done, and what scientists can learn about nature.

Instructor: Dr. Richard Epp

Email: rjepp@uwaterloo.ca

Office/Hours: Physics 241 / Wed & Fri 3:00–4:00 pm, or drop by my office / email me anytime.

TA: Paul Charlton

Email: pcharlto@uwaterloo.ca

Office/Hours: Will be posted on LEARN the second week of classes

Note: Contact the TA for **all** questions regarding the weekly **MasteringAstronomy** quizzes

Lectures: Wed/Fri 11:30 am – 12:50 pm in OPT 347, starting May 4th

Textbook: *The Cosmic Perspective 8th Edition* by Bennet *et al* with **MasteringAstronomy** access code

Other Materials: Lecture PowerPoint slides, weekly reading assignments, course announcements, etc., will be posted on LEARN

Topics: The course will cover most of the textbook, but not necessarily in the chapter/section order given in the textbook. The lectures will address the key concepts and most important points. However, to do well on the quizzes you will also need to keep up with the weekly reading assignments. **The pace of the lectures will be quick: about 1 chapter per lecture.**

Grading Scheme:

1. 20%: Weekly online quizzes (through the MasteringAstronomy website)
2. 30%: Midterm test
3. 50%: Final exam (you must pass the final exam to pass the course)

Course Outline (a rough guide, subject to change):

Weeks 1, 2:	Cosmic Perspective [Chapters 1 – 3, S1]
Weeks 3, 4:	Gravity & Light [Chapters 4 – 6]
Weeks 5, 6, 7:	The Solar System [Chapters 7 – 13]
Weeks 8, 9:	Stars & Stellar Evolution [Chapters 14 – 18]
Weeks 10, 11, 12:	Galaxies & Cosmology [Chapters 19 – 24]

Notes on MasteringAstronomy (for quizzes) & Textbook

Options at the UW bookstore:

1. MasteringAstronomy + eText + Soft Cover Textbook = \$187.95
2. MasteringAstronomy + eText + Loose Leaf Textbook = \$117.77
3. MasteringAstronomy + eText = \$85
4. MasteringAstronomy = \$50

Instructions for using Mastering Astronomy (MA):

(Additional instructions on LEARN, in the Supplementary Materials folder)

1. Each of the above options will have a MA access code.
2. Go to the MA website (www.masteringastronomy.com) and register. You will need:
 - a. An email address to which the instructor can send MA-related messages
 - b. Course ID = EPP51544
 - c. MA access code (may look something like: SIMPLE-FRILL-TONLE-WEIRS-CHOIR-FLEES)
 - d. Student ID = Your UW student number
3. A new quiz will be posted each Friday, due at midnight the Monday after the following Friday (one week plus two weekends), that will be based on the reading assignment for that week. The first quiz will be assigned Friday, May 6th, and will be due Monday, May 16th. There is an "Introduction to MasteringAstronomy" quiz (not worth marks) that you are encouraged to work through in order to help familiarize yourself with the system.
4. For any questions about MA, please contact the TA: Paul Charlton, pcharlto@uwaterloo.ca. He is responsible for running the MA system, and knows more about the system than the instructor.

Used Textbook Option: If you are purchasing MA only, you may wish to purchase a used introductory astronomy textbook or borrow one from the library (almost any will do) to help with the reading assignments and preparing for the quizzes.

The Fine Print

Work Expected:

1. Attend lectures and take appropriate notes. You are responsible for everything presented.
2. Keep up with the reading assignments and complete the quizzes on time.
3. Sit the midterm test and final exam.

No exceptions will generally be made for students who submit quizzes late, or who are absent from the midterm test or final exam. The weekly work-load for the course should be 3 hours of lectures, about 4-5 hours of reading and studying, and about 1 hour for the weekly quiz. Students should also check the LEARN course website regularly for course announcements.

Notes on Quizzes:

1. Register for *MasteringAstronomy* as early as possible. First quiz due Monday, May 16th.
2. The weekly quizzes are to be done on your own to maximize their benefit to you.
3. See previous page for more details.

Notes on Midterm Test and Final Exam:

1. No form of collaboration, copying, discussion or use of notes or aids other than those provided by the instructor is allowed on the midterm test or final exam.
2. Attendance at the test and exam is mandatory, and they will not be rescheduled. In the case of absence from the test (accompanied by a Verification of Illness (VIF) form) the weight of the test will be shifted to the exam.
3. For information on academic offenses and types of penalties, students should refer to UW Policy #71, Student Academic Discipline, <http://www.adm.uwaterloo.ca/infosec/Policies/policy71.htm>.

Drop-dates:

Students concerned about the level of the course, course requirements, or their performance should keep in mind cut-off dates for dropping courses without penalty.

The following statements MUST be included in all course outlines and/or websites:

Academic integrity: In order to maintain a culture of academic integrity, members of the University of Waterloo community are expected to promote honesty, trust, fairness, respect and responsibility. [Check the Office of Academic Integrity for more information.]

Grievance: A student who believes that a decision affecting some aspect of his/her university life has been unfair or unreasonable may have grounds for initiating a grievance. Read Policy 70, Student Petitions and Grievances, Section 4. When in doubt, please be certain to contact the department's administrative assistant who will provide further assistance.

Discipline: A student is expected to know what constitutes academic integrity to avoid committing an academic offence, and to take responsibility for his/her actions. [Check the Office of Academic Integrity for more information.] A student who is unsure whether an action constitutes an offence, or who needs help in learning how to avoid offences (e.g., plagiarism, cheating) or about "rules" for group work/collaboration should seek guidance from the course instructor, academic advisor, or the undergraduate associate dean. For information on categories of offences and types of penalties, students should refer to Policy 71, Student Discipline. For typical penalties, check Guidelines for the Assessment of Penalties.

Appeals: A decision made or penalty imposed under Policy 70, Student Petitions and Grievances (other than a petition) or Policy 71, Student Discipline may be appealed if there is a ground. A student who believes he/she has a ground for an appeal should refer to Policy 72, Student Appeals.

Note for students with disabilities: AccessAbility Services, located in Needles Hall, Room 1401, collaborates with all academic departments to arrange appropriate accommodations for students with disabilities without compromising the academic integrity of the curriculum. If you require academic accommodations to lessen the impact of your disability, please register with AccessAbility Services at the beginning of each academic term.