

# ASTRONOMY 2232G: Sun, Earth and Planets

## 2010-2011: winter term

### General information:

- **Lectures:**  
Tuesday & Thursday from 11.30am to 12.30pm, B&GS-0165
- **Instructor:**  
Prof. Els Peeters  
Rm 207 PAB  
phone: 661-2111 extension 80973
- **Office hours:**  
Wednesday 2.30-3.30pm or by appointment (e-mail preferred).
- **Teaching assistant:**  
Scott Jones
- **Course website:**  
WebCT OWL: <http://owl.uwo.ca>
- **Course e-mail:**  
a2232-at-uwo.ca
- **Required textbook:**  
“An introduction to the solar system” by P.A. Bland, N. McBride, E.A. Moore, M. Widdowson and I. Wright, eds. N. McBride and I. Gilmour, 1<sup>st</sup> co-published, edition 2004. Available in the UWO bookstore. The textbook is on reserve in the Allyn & Betty Taylor library.

### Course description:

- **Calendar description:**  
A survey of the contents of the solar system and space science phenomena, with emphasis on processes that are common to planets and solar system bodies. Advances in solar system understanding and space science will be highlighted with particular attention to recent results from space missions and contemporary ground-based observations.
- **Prerequisite/Antirequisite:**  
Antirequisite(s): Astronomy 2201A/B.  
Prerequisite(s): 1.0 university course in Mathematics, Chemistry, Computer Science, Earth Sciences or Physics.  
It is your responsibility to make sure you either comply with the prerequisites/antirequisites for this course or have written special permission from your Dean to enroll in it. If not, you may be removed from this course and it will be deleted from your record. This decision may not be appealed. You will receive no adjustment to your fees in the event that you are dropped from a course.

- **Course outline:**

The course is intended to offer a detailed survey of what is presently known about the solar system and its constituents. We will cover the following topics:

1. A tour of the solar system
2. The internal structure of the terrestrial planets
3. Planetary volcanism
4. Planetary surface processes
5. Atmospheres of terrestrial planets
6. The giant planets
7. Minor bodies in the solar system
8. The origin of the solar system
9. Meteorites: a record of formation
10. Extra-solar planets

Course content may vary.

Some of the course material will be descriptive. This is partly because a descriptive knowledge of what is known is a necessary background for understanding how objects in the solar system have formed and changed. It is also partly because much of this material is in itself quite interesting; it is hard to imagine here on earth the variety of bodies found orbiting our sun. However, you should always focus your attention particularly on the aspects of the material that require understanding. An important objective of the course is to gain skill at reading critically the scientific literature at the level of Scientific American.

- **Lectures slides:**

Much of the material provided in the lectures will be posted on the course website for ease of future reference. You will still be expected to take notes during the class which will cover the numerous discussion topics/informational tidbits not found in the formal class presentations.

- **Mark distribution:**

- Assignments (2): 20%
- Midterm: 30%
- Final exam: 50%

**A student whose weighted average of the midterm and the final exam is less than 50% cannot obtain a passing grade for the course.** In this case, the final mark will be set to 40% if the obtained mark for this course (combining the exams and the assignments) is greater than 40%.

- **Description of examinations:**

- One 50 minutes midterm (multiple-choice, short answer questions, essay questions; closed book)
- One 3-hour final exam (multiple-choice, short answer questions, essay questions; closed book; cumulative)

- **Course calendar:**

- Assignment due dates on Jan. 25 or Feb. 3 and, March 22 or 31.
- Midterm: February 15 during class hours in Rm B&GS-0165.
- Final exam: during April exam period. Details to be announced.
- Last day to drop this course: February 15
- Last day to add this course: January 11

## Course policies & friendly reminders from UWO:

- **Assignments:** Assignments must be submitted *both* by hardcopy and electronically on the requested date **before** 12pm, i.e. they have the same deadline. The electronic copy must be submitted through WebCT. The hardcopy must be turned in at the main office of Physics and Astronomy (Rm 113, PAB). There is no grace period: missing either the hardcopy deadline or the electronic submission deadline will result in mark of zero.
- **Missed mid-term exam:** The Department will provide one make-up exam that may be written only with the permission of the Associate Dean, Faculty of Science (or the Associate Dean of your faculty). At any time, you must contact your instructor immediately.
- **Missed final exam:** In accordance with Senate Policy, a Special Examination will be held within thirty days of the regular final examination for students who are unable to write the regular examination for medical or other documented reasons. Requests for such a Special Examination must be made to the Associate Dean, Faculty of Science (or the Associate Dean of your faculty). Note that if you fail to write a scheduled Special Examination, permission to write another Special Examination will be granted only with the permission of the Dean in exceptional circumstances and with appropriate supporting documents. In such a case, the date of this Special Examination normally will be the scheduled date for the final exam the next time the course is offered. At any time, you must contact your instructor immediately.

- **Travel:** Students needing to make travel arrangements are advised to book a travel date after the end of the examination period. No make-up exams will be given to accommodate travel!

- **Medical or other serious circumstances:** If you are unable to meet a course requirement due to illness or other serious circumstances, you must provide valid medical or other supporting documentation to the academic counselors in your faculty as soon as possible and contact your instructor immediately. It is the student's responsibility to make alternative arrangements with their instructor once the accommodation has been approved and the instructor has been informed. In the event of a missed final exam, a Recommendation of Special Examination form must be obtained from the Deans office immediately. For further information please see:  
<http://www.uwo.ca/univsec/handbook/appeals/medical.pdf>.

A student requiring academic accommodation due to illness, should use the Student Medical Certificate when visiting an off-campus medical facility or request a Records Release Form (located in the Deans Office) for visits to Student Health Services. The form can be found here:  
[https://studentservices.uwo.ca/secure/medical\\_document.pdf](https://studentservices.uwo.ca/secure/medical_document.pdf).

- **Exam policy:**

- No electronic devices, no extra sheets, no calculator will be allowed during the exams.
- The exams are based on the material covered in class, all of the class slides, the corresponding textbook sections and distributed course notes whenever appropriate. Material from the textbook that is not discussed in class or in the notes will not be tested on any exam.
- All exams in this course may contain multiple-choice questions. Since the scantron forms used for these exams are computer-marked and cannot be processed when filled out in ink, you should bring a pencil to the exams.

- **Academic misconduct:**

**Cheating:** Scholastic offenses are taken seriously and students are directed to read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offense, at the following Web site:  
[http://www.uwo.ca/univsec/handbook/appeals/scholastic\\_discipline\\_undergrad.pdf](http://www.uwo.ca/univsec/handbook/appeals/scholastic_discipline_undergrad.pdf)

**Plagiarism:** Students must write their essays and assignments in their own words. Whenever students take an idea, or a passage from another author, they must acknowledge their debt both by

using quotation marks where appropriate and by proper referencing such as footnotes or citations. Plagiarism is a major academic offence (see Scholastic Offence Policy in the Western Academic Calendar).

All required papers will be subject to submission for textual similarity review to the commercial plagiarism detection software under license to the University for the detection of plagiarism. All papers submitted for such checking will be included as source documents in the reference database for the purpose of detecting plagiarism of papers subsequently submitted to the system. Use of the service is subject to the licensing agreement, currently between The University of Western Ontario and Turnitin.com (<http://www.turnitin.com>).

Computer-marked multiple-choice exams will be subject to submission for similarity review by software that will check for unusual coincidences in answer patterns that may indicate cheating.

- **Religious holidays:** When scheduling unavoidably conflicts with religious holidays which a) require an absence from the University or b) prohibit or require certain activities (i.e., activities that would make it impossible for the student to satisfy the academic requirements scheduled on the day(s) involved), no student will be penalized for absence because of religious reasons, and alternative means will be sought for satisfying the academic requirements involved. If a suitable arrangement cannot be worked out between the student and instructor involved, they should consult the appropriate department chair and, if necessary, the student's Dean.

It is the responsibility of such students to inform themselves concerning the work done in classes from which they are absent and to take appropriate action.

A student who, for either of the situations outlined in paragraph one above (a or b), is unable to write examinations and term tests on a Sabbath or Holy Day in a particular term shall give notice of this fact in writing to his or her Dean as early as possible, but not later than November 15 for mid-year examinations and March 1 for final examinations, i.e., approximately two weeks after the posting of the mid-year and final examination schedule respectively. In the case of mid-term tests, such notification is to be given in writing to the instructor within 48 hours of the announcement of the date of the mid-term test. If a Special Examination is offered as an alternative means to satisfy the academic requirements, the instructor(s) in the case of mid-term tests and the dean in the case of mid-year and Spring final examinations will arrange for special examination(s) to be written at another time. In the case of mid-year and Spring final examinations, the accommodation must occur no later than one month after the end of the examination period involved. It is mandatory that students seeking accommodations under this policy give notification before the deadlines and that the Faculty accommodate these requests. For purposes of this policy the University has approved a list of dates which are recognized religious holidays which require members of those religions to be absent from the University; this list is updated annually and is available at Departmental, Deans' and Faculty advising offices.

- **Accessibility:** Please contact the course instructor if you require material in an alternate format or if any other arrangements can make this course more accessible to you. You may also wish to contact Services for Students with Disabilities (SSD) at 661-2111 x 82147 for any specific question regarding an accommodation.
- **Course website:** The course website will be the only medium where course materials are distributed, where announcements are made, where you can access your marks for various components of this course. It is your responsibility to check the course website frequently.
- **Classroom conduct:** Disruptive behavior will not be tolerated in class or on the course website. Please respect the rights of your classmates to benefit from the lecture by limiting your conversations to those essential to the class. Students who persist in loud, rude or otherwise disruptive behavior will be asked to leave.

- **Contact us:** The simplest way to contact us outside of lectures is via your UWO e-mail account and the course e-mail address. Please allow 2-3 working days for a response. We will not respond to emails from addresses that do not end in @uwo.ca or to emails that are not sent to the course email address.