



UNIVERSITY OF CALGARY
 FACULTY OF SCIENCE
 DEPARTMENT OF PHYSICS & ASTRONOMY
 COURSE OUTLINE

1. **Course:** ASTR 207, IntroToAstrl-TheSolarSystem -- Spring 2018

Instructor Name	Email	Phone	Office	Hours
L01: (TR 12:00 - 14:45 in ENG 60) Denis Leahy	leahy@ucalgary.ca	403-220-7192	SB 529	2:45-4:00 pm TR

Course Site:

D2L: ASTR 207 L01-(Spring 2018)-IntroToAstrl-TheSolarSystem

Department of Physics & Astronomy:

Office: Science B 605
 Phone: 403 220-5385
 Email: office@phas.ucalgary.ca

Note:

Students must use their U of C account for all course correspondence.

2. **Requisites:**

See section [3.5.C](#) in the Faculty of Science section of the online Calendar.

No prerequisites. Not open to students with credit in ASTR 205 or ASTR 213, or ASPH 213. Not recommended for physical science majors.

3. **Grading:**

The University policy on grading and related matters is described in [F.1](#) and [F.2](#) of the online University Calendar. In determining the overall grade in the course the following weights will be used:

Component(s)	Weighting %
Homework (Mastering Astronomy)	30
Midterm 1	17.5
Midterm 2	17.5
Final Examination	35

Each piece of work (reports, assignments, quizzes, midterm exam(s) or final examination) submitted by the student will be assigned a grade. The student's grade for each component listed above will be combined with the indicated weights to produce an overall percentage for the course, which will be used to determine the course letter grade.

The conversion between a percentage grade and letter grade is as follows.

	A+	A	A-	B+	B	B-	C+	C	C-	D+	D
Minimum % Required	95 %	90 %	85 %	80%	75%	70 %	65 %	60%	55%	50 %	45 %

This course has a registrar scheduled final exam.

The midterm exams will be written during regular class time in the regular lecture room. They will be multiple-choice tests with a writing time of 60 minutes. The percentage score is calculated as the number of correct answers, divided by the number of questions on the test, expressed as a percentage. The scores for the tests are used in the calculation of the final course grade according to the weights listed above. University of Calgary exam regulations

apply during the in-class tests. The tests are closed-book. Use of a calculator is recommended.

The Final Exam will be scheduled by the registrar. The final exam will be a 2-hour multiple-choice exam. The score for the final exam will be calculated as the number of correct answers divided by the number of questions on the exam, expressed as a percentage. The percentage grade for the final exam will be used in the calculation of the course grade with the weight given above. The exam is closed-book. Use of a calculator is recommended.

Homework. There will be six web-based homework assignments in Mastering Astronomy. Late Assignments will be awarded a zero grade. There will be a 24 hour period after the due date over which the maximum obtainable grade will decrease to zero. Extensions of the due date require justification in the form of a doctor's note or equivalent.

Students are responsible for accurately and completely entering their personal information in the Mastering Astronomy system. Failure to do so may result in a delay of posting the course grade or a zero grade for the assignments.

In-class participation. We will use the TopHat system during class time for in-class questions that will only be open to submit answers during the lecture in which they are presented. In-class participation is not marked.

4. Missed Components of Term Work:

The regulations of the Faculty of Science pertaining to this matter are found in the Faculty of Science area of the Calendar in [Section 3.6](#). It is the student's responsibility to familiarize himself/herself/themselves with these regulations. See also [Section E.3](#) of the University Calendar.

5. Scheduled out-of-class activities:

There are no scheduled out of class activities for this course.

6. Course Materials:

Recommended Textbook(s):

Bennett, Donahue, Schneider & Voit, *The Cosmic Perspective - The Solar System, 8th edition*: Addison-Wesley. .

Homework assignments are completed using Mastering Astronomy. Students can obtain access to the Mastering Astronomy system in one of three ways:

1. Normal access. Purchase a new textbook at the Campus Bookstore. An Access code for Mastering Astronomy will be included. You will have access to the full Mastering Astronomy website including assignments, E-text and study centre.
2. Electronic Text. Purchase an electronic version of the text plus access to Mastering Astronomy. You will have access to the full Mastering Astronomy website including assignments, E-text and study centre.
3. Assignment only access. Access only the Mastering Astronomy homework assignments, free of charge. You will not have access to the E-text or to the study centre. The instructions for this option will be given in class and posted on the ASTR207 D2L website.

7. Examination Policy:

No aids except a calculator are allowed on tests or examinations.

Students should also read the Calendar, [Section G](#), on Examinations.

8. Approved Mandatory and Optional Course Supplemental Fees:

There are no mandatory or optional course supplemental fees for this course.

9. Writing across the Curriculum Statement:

For all components of the course, in any written work, the quality of the student's writing (language, spelling, grammar, presentation etc.) can be a factor in the evaluation of the work. See also Section [E.2](#) of the University Calendar.

10. Human studies statement:

Students will not participate as subjects or researchers in human studies.

See also [Section E.5](#) of the University Calendar.

11. Reappraisal of Grades:

A student wishing a reappraisal, should first attempt to review the graded work with the Course coordinator/instructor or department offering the course. Students with sufficient academic grounds may request a reappraisal. Non-academic grounds are not relevant for grade reappraisals. Students should be aware that the grade being reappraised may be raised, lowered or remain the same. See [Section I.3](#) of the University Calendar.

1. **Term Work:** The student should present their rationale as effectively and as fully as possible to the Course coordinator/instructor within **15 days** of either being notified about the mark, or of the item's return to the class. If the student is not satisfied with the outcome, the student shall immediately submit the Reappraisal of Graded Term work form to the department in which the course is offered. The department will arrange for a re-assessment of the work if, and only if, the student has sufficient academic grounds. See sections [I.1](#) and [I.2](#) of the University Calendar
2. **Final Exam:** The student shall submit the request to Enrolment Services. See [Section I.3](#) of the University Calendar.

12. OTHER IMPORTANT INFORMATION FOR STUDENTS:

- a. **Misconduct:** Academic misconduct (cheating, plagiarism, or any other form) is a very serious offence that will be dealt with rigorously in all cases. A single offence may lead to disciplinary probation or suspension or expulsion. The Faculty of Science follows a zero tolerance policy regarding dishonesty. Please read the sections of the University Calendar under [Section K](#). Student Misconduct to inform yourself of definitions, processes and penalties. Examples of academic misconduct may include: submitting or presenting work as if it were the student's own work when it is not; submitting or presenting work in one course which has also been submitted in another course without the instructor's permission; collaborating in whole or in part without prior agreement of the instructor; borrowing experimental values from others without the instructor's approval; falsification/fabrication of experimental values in a report. **These are only examples.**
- b. **Assembly Points:** In case of emergency during class time, be sure to FAMILIARIZE YOURSELF with the information on [assembly points](#).
- c. **Academic Accommodation Policy:** Students needing an accommodation because of a disability or medical condition should contact Student Accessibility Services in accordance with the procedure for accommodations for students with disabilities available at [procedure-for-accommodations-for-students-with-disabilities.pdf](#).

Students needing an accommodation in relation to their coursework or to fulfill requirements for a graduate degree, based on a protected ground other than disability, should communicate this need, preferably in writing, to the Associate Head of the Department of Physics & Astronomy, Dr. David Feder by email dfeder@ucalgary.ca or phone 403-220-3638. Religious accommodation requests relating to class, test or exam scheduling or absences must be submitted no later than **14 days** prior to the date in question. See [Section E.4](#) of the University Calendar.
- d. **Safewalk:** Campus Security will escort individuals day or night (See the [Campus Safewalk](#) website). Call [403-220-5333](tel:403-220-5333) for assistance. Use any campus phone, emergency phone or the yellow phones located at most parking lot pay booths.
- e. **Freedom of Information and Privacy:** This course is conducted in accordance with the Freedom of Information and Protection of Privacy Act (FOIPP). Students should identify themselves on all written work by placing their name on the front page and their ID number on each subsequent page. For more information, see [Legal Services](#) website.
- f. **Student Union Information:** [VP Academic](#), Phone: [403-220-3911](tel:403-220-3911) Email: suvpaca@ucalgary.ca. SU Faculty Rep., Phone: [403-220-3913](tel:403-220-3913) Email: sciencerep@su.ucalgary.ca. Student Ombudsman, Email:

- g. **Internet and Electronic Device Information:** Unless instructed otherwise, cell phones should be turned off during class. All communication with other individuals via laptop, tablet, smart phone or other device is prohibited during class unless specifically permitted by the instructor. Students that violate this policy may be asked to leave the classroom. Repeated violations may result in a charge of misconduct.
- h. **Surveys:** At the University of Calgary, feedback through the Universal Student Ratings of Instruction ([USRI](#)) survey and the Faculty of Science Teaching Feedback form provides valuable information to help with evaluating instruction, enhancing learning and teaching, and selecting courses. Your responses make a difference - please participate in these surveys.
- i. **SU Wellness Center:** The Students Union Wellness Centre provides health and wellness support for students including information and counselling on physical health, mental health and nutrition. For more information, see www.ucalgary.ca/wellnesscentre or call [403-210-9355](tel:403-210-9355).

Course Syllabus:

May 15: Course Day 1

- 1.1 The Scale of the Universe
- 1.2 The History of the Universe/ 1.3 Spaceship Earth

May 17: Course Day 2

- 14.1 The Sun
- 2.1 Patterns in the Night Sky/ 2.2 The Earth's Seasons/ 2.3 The Moon

Ass'n 1 due May 20: 23:59

May 22: Course Day 3

- 2.4 The Ancient Mystery of the Planets
- 3.1 Ancient Roots of Science/ 3.2 Greek Science / 3.3 The Copernican Revolution

May 24: Course Day 4

- 3.4 The Nature of Science/ 3.5 Astrology
- S1.1 Astronomical Time Periods
- 4.1 Describing Motion / 4.2 Newton's Laws

Ass'n 2 due May 27: 23:59

May 29: Course Day 5

- In-class midterm (length: 60 minutes)
- Test debrief / General discussion / Example problems (75 minutes)

May 31: Course Day 6

- 4.3 Conservation Laws/ 4.4 Law of Gravitation/ 4.5 Orbits and Tides
- 7.1 The Solar System

Ass'n 3 due June 3: 23:59

June 5: Course Day 7

- 7.2 Patterns in the Solar System
- 5.1, 5.2, 5.3 Properties of Light and Matter
- 5.4 Learning from Light

June 9: Course Day 8

- 6.1 Eyes and Cameras/ 6.2 Telescopes/ 6.3 Telescopes and the Atmosphere
- 6.4 Telescopes and technology

Ass'n 4 due June 10: 23:59

June 11: Course Day 9

- 7.3 Spacecraft exploration of the solar system
- 8.1 The Search for Origins / 8.2 Explaining Features of the Solar System
- 9.1 Planetary Interiors and Surfaces

June 13: Course Day 10

In-class midterm (length: 60 minutes)
Test debrief / General discussion / Example problems (75 minutes)

Ass'n 5 due June 17: 23:59

June 19: Course Day 11
9.2 Shaping Planetary Surfaces, 9.6 Geology of the Earth
10.1 Atmosphere Basics

June 21: Course Day 12
10.2 Weather and Climate
11.1 Jovian Planets
12.1 Asteroids

Ass'n 6 due June 24: 23:59

June 26: Course Day 13
12.2 Meteorites/ 12.3 Comets/ 12.4 Pluto and the Kuiper Belt
12.5 Cosmic Collisions

June 28-30: exam period
ASTR 207 final exam (2 hours)

Department Approval:

Electronically Approved

Date: 2018-04-27 19:22

Course Outcomes

- Students will be able to describe the features of the solar system and the formation process of the solar system.
- Students will be able to explain how ideas have changed from ancient times to today.
- Students will be able to describe the electromagnetic spectrum; telescopes and detectors, and explain the basic properties of laws of planetary motion; planets, asteroids, comets, and the Sun.