



### COURSE OUTLINE

1. **Course:** ASTR 207, Introduction to Astronomy I - The Solar System - Fall 2021

Lecture 01:

Instructor	Email	Phone	Office	Hours
Dr. Denis Leahy	leahy@ucalgary.ca	403 220-7192	SB 529	2-3:30pm Tues.

**Online Delivery Details:**

This course does not follow a scheduled meeting pattern.

Lectures will be delivered as video recordings posted on the course D2L website.

Assignments will be completed online by students using the Mastering Astronomy website.

Midterm exams will be completed online using D2L.

**Course Site:**

D2L: ASTR 207 L01-(Fall 2021)-Introduction to Astronomy I - The Solar System

**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 (6) Mastering Astronomy	40	Sep 26, Oct 10, Oct 24, Nov 7, Nov 21, Dec 5 at 11:59 PM Calgary time
Midterm 1 (online)	15	Sep 29
Midterm 2 (online)	15	Oct 22
Midterm 3 (online)	15	Nov 15
Midterm 4 (online)	15	Dec 8

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
<b>Minimum % Required</b>	95 %	90 %	85 %	80%	75%	70 %	65 %	60%	55%	50 %	45 %

No rounding of grades is done in converting to letter grades. Example: 74.99 converts to B-, 75.00 converts to B.

The midterm exams will be online, with a 24-hour window open for students to start the exam. The exams will consist of multiple-choice questions with a writing time of 75 minutes. This includes the pre-Covid19 time of 50 minutes plus the extra 50% contingency of 25 minutes. The 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 midterm tests are used in the calculation of the final course grade according to the weights listed above.

Additional time will be granted to SAS students, and other accommodation will be done on a case-by-case basis in case of conflict.

Homework. There will be six web-based homework assignments in Mastering Astronomy. 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.

Students are responsible for accurately and completely entering their personal information, including UCID number, in the Mastering Astronomy system. Failure to do so may result in a zero grade for the assignments.

The University of Calgary offers a [flexible grade option](https://science.ucalgary.ca/current-students/undergraduate/program-advising/flexible-grading-option-cg-grade), Credit Granted (CG) to support student's breadth of learning and student wellness. Faculty units may have additional requirements or restrictions for the use of the CG grade at the faculty, degree or program level. To see the full list of Faculty of Science courses where CG is not eligible, please visit the following website: <https://science.ucalgary.ca/current-students/undergraduate/program-advising/flexible-grading-option-cg-grade>

#### 4. **Missed Components Of Term Work:**

The university has suspended the requirement for students to provide evidence for absences. Please do not attend medical clinics for medical notes or Commissioners for Oaths for statutory declarations.

In the event that a student legitimately fails to submit any online assessment on time (e.g. due to illness etc...), please contact the course coordinator, or the course instructor if this course does not have a coordinator to arrange for a re-adjustment of a submission date. Absences not reported within 48 hours will not be accommodated. If an excused absence is approved, one possible arrangement is that the percentage weight of the legitimately missed assignment could also be pro-rated among the components of the course. This option is at the discretion of the coordinator and may not be a viable option based on the design of this course.

#### 5. **Scheduled Out-of-Class Activities:**

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

#### 6. **Course Materials:**

Required Textbook(s):

Bennett, Donahue, Schneider & Voit, *The Cosmic Perspective - The Solar System, 9th edition*. Addison-Wesley..

Homework assignments are completed using Mastering Astronomy. All students will be provided with a course ID, which is one requirement to register into the Mastering Astronomy system. In addition to the course ID, there are 3 options to access the Mastering Astronomy system:

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 code to Mastering Astronomy. You will have access to the full Mastering Astronomy website including assignments, E-text and study centre.
3. Assignment only option. Access is given only to the Mastering Astronomy homework assignments for those presenting evidence of financial need. You will not have access to the E-text or to the study centre. The instructions for this option will be posted on the ASTR207 D2L website.

In order to successfully engage in their learning experiences at the University of Calgary, students taking online, remote and blended courses are required to have reliable access to the following technology:

- A computer with a supported operating system, as well as the latest security, and malware updates;
- A current and updated web browser;
- Webcam/Camera (built-in or external);
- Microphone and speaker (built-in or external), or headset with microphone;

- Current antivirus and/or firewall software enabled;
- Stable internet connection.

For more information please refer to the UofC [ELearning](#) online website.

## 7. Examination Policy:

The exams will be held online using the D2L website. They will be timed exams and will consist of multiple choice questions.

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.

- Term Work:** The student should present their rationale as effectively and as fully as possible to the Course coordinator/instructor within **ten business 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 submit the Reappraisal of Graded Term work form to the department in which the course is offered within 2 business days of receiving the decision from the instructor. The Department will arrange for a reappraisal of the work within the next ten business days. The reappraisal will only be considered if the student provides a detailed rationale that outlines where and for what reason an error is suspected. See sections [I.1](#) and [I.2](#) of the University Calendar
- 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:

- Mental Health** The University of Calgary recognizes the pivotal role that student mental health plays in physical health, social connectedness and academic success, and aspires to create a caring and supportive campus community where individuals can freely talk about mental health and receive supports when needed. We encourage you to explore the mental health resources available throughout the university community, such as counselling, self-help resources, peer support or skills-building available through the SU Wellness Centre (Room 370, MacEwan Student Centre, [Mental Health Services Website](#)) and the Campus Mental Health Strategy website ([Mental Health](#)).
- SU Wellness Services:** For more information, see [www.ucalgary.ca/wellnesscentre](http://www.ucalgary.ca/wellnesscentre) or call [403-210-9355](tel:403-210-9355).
- Sexual Violence:** The Sexual Violence Support Advocate, Carla Bertsch, can provide confidential support and information regarding sexual violence to all members of the university community. Carla can be reached by email ([syasa@ucalgary.ca](mailto:syasa@ucalgary.ca)) or phone at [403-220-2208](tel:403-220-2208). The complete University of Calgary policy on sexual violence can be viewed at (<https://www.ucalgary.ca/legal-services/sites/default/files/teams/1/Policies-Sexual-and-Gender-Based-Violence-Policy.pdf>)
- Misconduct:** Academic integrity is the foundation of the development and acquisition of knowledge and is based on values of honesty, trust, responsibility, and respect. We expect members of our community to act with integrity. Research integrity, ethics, and principles of conduct are key to academic integrity. Members of our campus community are required to abide by our institutional [Code of Conduct](#) and promote academic integrity in upholding the University of Calgary's reputation of excellence. Some examples of academic

misconduct include but are not limited to: posting course material to online platforms or file sharing without the course instructor's consent; submitting or presenting work as if it were the student's own work; submitting or presenting work in one course which has also been submitted in another course without the instructor's permission; borrowing experimental values from others without the instructor's approval; falsification/fabrication of experimental values in a report. Please read the following to inform yourself more on academic integrity:

[Student Handbook on Academic Integrity](#)  
Student Academic Misconduct [Policy](#) and [Procedure](#)  
[Research Integrity Policy](#)

Additional information is available on the [Student Success Centre Academic Integrity page](#)

e. **Academic Accommodation Policy:**

It is the student's responsibility to request academic accommodations according to the University policies and procedures listed below. The student accommodation policy can be found at: <https://www.ucalgary.ca/legal-services/sites/default/files/teams/1/Policies-Student-Accommodation-Policy.pdf>

Students needing an accommodation because of a disability or medical condition should communicate this need to Student Accessibility Services in accordance with the Procedure for Accommodations for Students with Disabilities: <https://www.ucalgary.ca/legal-services/sites/default/files/teams/1/Policies-Accommodation-for-Students-with-Disabilities-Procedure.pdf>.

Students needing an accommodation in relation to their coursework or to fulfil requirements for a graduate degree, based on a Protected Ground other than Disability, should communicate this need, by filling out the [Request for Academic Accommodation Form](#) and sending it to Dr. David Feder by email [phas.ahugrd@ucalgary.ca](mailto:phas.ahugrd@ucalgary.ca) preferably 10 business days before the due date of an assessment or scheduled absence.

f. **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.

g. **Student Union Information:** [VP Academic](#), Phone: [403-220-3911](tel:403-220-3911) Email: [suvpaca@ucalgary.ca](mailto:suvpaca@ucalgary.ca). SU Faculty Rep., Phone: [403-220-3913](tel:403-220-3913) Email: [sciencerep@su.ucalgary.ca](mailto:sciencerep@su.ucalgary.ca). [Student Ombudsman](#), Email: [ombuds@ucalgary.ca](mailto:ombuds@ucalgary.ca).

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. **Copyright of Course Materials:** All course materials (including those posted on the course D2L site, a course website, or used in any teaching activity such as (but not limited to) examinations, quizzes, assignments, laboratory manuals, lecture slides or lecture materials and other course notes) are protected by law. These materials are for the sole use of students registered in this course and must not be redistributed. Sharing these materials with anyone else would be a breach of the terms and conditions governing student access to D2L, as well as a violation of the copyright in these materials, and may be pursued as a case of student academic or [non-academic misconduct](#), in addition to any other remedies available at law.

## Course Syllabus:

ASTR207 Fall 2021 Schedule: Updates will be posted on D2L

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Schedule of topics and online lectures:

Course delivery is asynchronous: all lectures are posted online.  
The lectures will be posted on D2L prior to or on the dates given below.

Sep 7-10: Course Week 1

1.1 The Scale of the Universe

1.2 The History of the Universe

### 1.3 Spaceship Earth

#### Sep 13-17: Course Week 2

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

#### Sep 20-24: Course Week 3

- 2.4 The Ancient Mystery of the Planets
- 3.1 Ancient Roots of Science
- 3.2 Greek Science

#### Sep 27- Oct 1: Course Week 4

- 3.3 The Copernican Revolution
- 3.4 The Nature of Science
- 3.5 Astrology
- S1.1 Astronomical Time Periods

#### Oct 4-8: Course Week 5

- 4.1 Describing Motion
- 4.2 Newton's Laws
- 4.3 Conservation Laws

#### Oct 12-15: Course Week 6

- 4.4 Law of Gravitation
- 4.5 Orbits and Tides
- 7.1 The Solar System

#### Oct 18-22: Course Week 7

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

#### Oct 25-29: Course Week 8

- 5.4 Learning from Light
- 6.1 Eyes and Cameras
- 6.2 Telescopes

#### Nov 1-5: Course Week 9

- 6.3 Telescopes and the Atmosphere
- 6.4 Telescopes and technology
- 7.3 Spacecraft exploration of the solar system

#### Nov 8-12: November term break

#### Nov 15-19: Course Week 10

- 8.1 The Search for Origins
- 8.2 Explaining Features of the Solar System
- 9.1 Planetary Interiors and Surfaces

#### Nov 22-26: Course Week 11

- 9.2 Shaping Planetary Surfaces
- 9.6 Geology of the Earth
- 10.1 Atmosphere Basics

#### Nov 29- Dec 3: Course Week 12

- 10.2 Weather and Climate
- 11.1 Jovian Planets
- 12.1 Asteroids
- 12.2 Meteorites

#### Dec 6-8: Course Week 13

- 12.3 Comets
- 12.4 Pluto and the Kuiper Belt
- 12.5 Cosmic Collisions

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Assignment Schedule:

Assignment 1 due Sep 26: 23:59

Assignment 2 due Oct 10: 23:59  
Assignment 3 due Oct 24: 23:59  
Assignment 4 due Nov 7: 23:59  
Assignment 5 due Nov 21: 23:59  
Assignment 6 due Dec 5: 23:59

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Test Schedule:

Sep 29: Online midterm #1  
Oct 22: Online midterm #2  
Nov 15: Online midterm #3  
Dec 8: Online midterm #4

**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.

Electronically Approved - Sep 06 2021 08:49

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**Department Approval**

Electronically Approved - Sep 07 2021 14:00

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**Associate Dean's Approval**