ASTR 102: Exploring the Cosmos

An overview of our place in the cosmos intended for non-science students. Starting from human's fascination of the night sky, we will cover a variety of topics from all scales of the Universe — quantum mechanics, our solar system, stars, exoplanets, galaxies, and cosmology.

Class information

Class times: Mondays & Thursdays from 13:00 to 14:20
Material: Available on the course page on BrightSpace (bright.uvic.ca)
Textbook: *Stars and Galaxies* by Seeds & Backman (any edition - find a cheap one).
Textbook is not required (but is recommended for supplementary reading and additional questions/exercises to help you study!)
Lectures: In person. Slides will be uploaded onto BrightSpace, but may not fully replicate the discussion that occurs in class. (We may try recording lectures, but don't rely on it).
Add/Drop dates: (uvic.ca/calendar)

Contact information for instructor

Office: Elliott 138b
Email: chrismann@uvic.ca
Office hours: Drop-ins available Mondays & Thursdays from 11:00 am to 12:30 pm (before lecture) in my office. Other times may be available by request for in-person or virtual meetings.

Lab information

You MUST pass the lab component to pass the course!
Sign up for one lab section in addition to this lecture.
Purchasing the lab manual is **required**.
Lab coordinator: Erica Franzmann (astrolabs@uvic.ca)

Grading

Final grades will be determined based on the following:

Homework quizzes:	15%
Class quizzes:	10%
Midterm exam:	15%
Lab component:	20%
Final exam:	40%

Homework quizzes: There will be one quiz per week to be completed on Brightspace. Each quiz will have 10 questions with a time limit of 15 minutes*. The questions will be similar to what you will see on the midterm and final exams.

Class quizzes: For each lecture, there will be a 2-3 question quiz with a time limit of 5 minutes*. These can be completed during our mid-class break time or after class (deadline: 23:59 on the day of the lecture). These will be simple questions based on the core concepts of the lecture. The grade for these quizzes will be based on the top 75% of answered questions (in other words: you can miss a couple quizzes or get some answers wrong, and still receive 100% in this component).

Midterm exam: This will be on Thursday, October 17, 2024 with a time limit of 80 minutes*.

Lab component: **You must pass the labs to pass the course!** There are five labs in total, offered every other week. We start with a "night lab" which replaces the regular lab that week. Failure to pass the lab component will result in a grade of "N" regardless of the cumulative percentage on rest of the course. "N" is a failing grade that factors into your GPA as a value of 0.

Final exam: Date and time TBD. Please consulting the final exam schedule before making holiday travel plans!

Plagiarism

Plagiarism is unacceptable. Your work must be your own, but discussions with classmates are fine (and encouraged!). Never copy another person's work. See more details on the plagiarism policy here: http://www.uvic.ca/library/research/citation/plagiarism/

*Academic Accommodations

Through the UVic Centre for Accessible Learning (CAL), students can register for academic concession and accommodations. Please familiarize yourself with the information (regulations and guidelines). If you plan make use of any of these policies, please let your instructor know.

Tentative lecture schedule with supplementary sections from textbook

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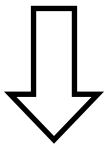

Tentative lecture schedule with supplementary sections from textbook

Lecture	Date	Topic(s)	Supplementary reading sections
1	September 5	Course introduction & the role of astronomy	2.1-2.3, 3-1-3.2, 4.1
2	September 9	Scientific method & telescopes	6.2-6.5
3	September 12	Properties of light and particles I	6.1, 7.1-7.3
4	September 16	Properties of light and particles II	6.1, 7.1-7.3
5	September 19	Revisiting the history of astronomy	4.2-4.5
6	September 23	Laws of motion & gravity	5.1-5.3
7	September 26	Measures of distance	1, 9.1
	September 30	No class (Truth and Reconciliation Day)	
8	October 3	The Sun	8.1-8.3
9	October 7	Our solar system	
10	October 10	The interstellar medium	10.1-10.3
	October 14	No class (Thanksgiving)	
	October 17	Midterm exam	
11	October 21	Star and planet formation	11
12	October 24	Stellar evolution	12, 13
13	October 28	Extreme stars and extrasolar planets	14
14	October 31	HR and colour-magnitude diagrams	9.2-9.6
15	November 4	The Milky Way galaxy	15
16	November 7	Our galactic neighbourhood	
	November 11	No class (Remembrance Day)	
17	November 14	Galaxy evolution I	16
18	November 18	Galaxy evolution II	17
19	November 21	The Big Bang & first stars and galaxies	18.2
20	November 25	Cosmology I	18.1
21	November 28	Cosmology II	18.3, 18.4
	December 2	Review	