

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, galaxies, and cosmology.

Class information

Class times: Mondays and Thursdays from 13:00-14:20 in Elliott 167.

Material: See course page on Brightspace (bright.uvic.ca).

Textbook: Seeds & Backman Stars and Galaxies (any edition). Recommended for supplementary reading, but not required!

Lectures: All lectures will be recorded and uploaded onto Brightspace. *Please inform me if you have concerns on privacy issues with the recordings.*

Contact information for course

Office: Elliott 138 (office b)

E-mail: trystynb@uvic.ca

Office hours: Upon request only! Virtual or in-person meetings.

Lab information

You MUST pass the lab component to pass the course

Sign up for one lab section. Must purchase lab manual.

Contact: Karun Thanjavur (BWC A115; karun@uvic.ca)

Grading

1. Homework quizzes:	15%
2. Class quizzes:	10%
3. Midterm exam (October 20 th):	15%
4. Lab component:	20%
5. Final exam:	40%

1. Weekly timed homework quizzes of 10 questions in 15 minutes to be done on Brightspace. Questions will be similar to those on midterm and final exams.

2. Timed quiz of two or three questions in 5 minutes to be done during class break or after class (deadline – 23:59 the day of the class). Simple questions to take away key concepts from lecture. Will take top 75% of answered questions to compose grade.

3. Midterm exam on October 20th 2022.

4. Must pass the labs to pass the course. 5 labs total.

5. Final exam (date TBD).

Plagiarism

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

Tentative lecture schedule and supplementary reading from Seeds & Backman

Lecture	Date	Topic	Supplementary reading
1	September 8	Introduction + The Role of Astronomy	2.1-2.3, 3.1-3.2, 4.1
2	September 12	Scientific method and Telescopes	6.2 – 6.5
3	September 15	Properties of light and particles I	6.1, 7.1-7.3
	September 19	Class Cancelled	
4	September 22	Properties of light and particles II	6.1, 7.1-7.3
5	September 26	Revisiting the history of astronomy	4.2 – 4.5
6	September 29	Laws of motion and gravity	5.1 – 5.3
7	October 3	Measures of distance	1, 9.1
8	October 6	The Sun	8.1 – 8.3
	October 10	Thanksgiving -- No class	
9	October 13	Our Solar System	
10	October 17	The interstellar medium	10.1 – 10.3
	October 20	Midterm exam	
11	October 24	Star and planet formation	11
12	October 27	Stellar evolution	12, 13
13	October 31	Extreme stars and extrasolar planets	14
14	November 3	HR and colour magnitude diagrams	9.2–9.6
15	November 7	The Milky Way Galaxy	15
	November 10	Reading break -- No class	
16	November 14	Our local Galactic neighbourhood	
17	November 17	Galaxy Evolution I	16
18	November 21	Galaxy Evolution II	17
19	November 24	The Big Bang + first stars and galaxies	18.2
20	November 28	Cosmology I	18.1
21	December 1	Cosmology II	18.3, 18.4
	December 5	Review	