Astronomy 150

First half: Dr. Sara Ellison

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Monday 2:30 – 3:30pm, or by appointment
Astronomy 150

Second half:  Dr. Falk Herwig

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TBD (see Course Spaces for updates)
Course outline: Concepts in Modern Astronomy

• The night sky: What we observe, how and why
• Classical astronomy: From the Greeks to Newton
• Properties of the stars: How we measure cosmic quantities
• The solar system and other worlds
• Galaxies: 100 years of progress
• Stellar evolution: Gravity, energy, black holes and Einstein
• Cosmology: The Big Bang, dark matter/energy, the expanding universe
Course Materials

Materials/announcements from this course are posted on Course Spaces.

Figures from lectures available on website; these are NOT lecture notes!

There is no compulsory text book. If desired you could:

• Rent a copy of Astronomy Today by Chaisson & McMillan from the bookstore

• Buy a second hand copy of Astronomy Today (bookstore/Amazon)

• Buy a different first year astronomy text (most have similar content)

• Use the free Open Stax astronomy book

• Use copies of various books on reserve for ASTR 150 at the library
Lecture style/preparation

Course is designed as an introduction for both students pursuing an astronomy degree, and as a general science elective.

Additional examples and math derivations done in class.

“Astronomy Today” (optional) text book chapter noted at the start of each lecture section for optional reference.

Explore online demos that we do in class.

Anything we discuss in class is examinable (including APODs, guest lectures, interactive web demos etc.)

No cell phones please.
Assessment

7 assignments due on Tuesdays by midnight. All are Course Spaces, check for dates; submissions rejected after deadline (no late marks). Count 20%.

Mid-term 20% in class before reading break (Feb 13).

Labs count 20%, but you must pass the lab to pass the course. There are no late marks.

Final exam, date TBD, worth 40%.

Formula sheet will be available for all exams (see website)
Check CourseSpaces for dates – you are responsible for being aware of deadlines.

- You are allowed re-do questions. 10% penalty for each incorrect answer for numerical questions (max 4 attempts), 50% penalty for each incorrect multiple choice (i.e. only 2 attempts).

- Variables are randomized.

- Multi-part questions re-generate variables for practice.

- Be very careful with units. Questions often given in a mix of units, and constants maybe in other units (e.g. a distance in km, but you use speed of light in m/s).

- Don’t round up until the end. Answers usually require a relative precision of 1%, so quote your answers to at least that accuracy.

- Scientific notation can be used, e.g. for 2 million both 2e6 or 2*10^6 should work.

- No credit for late assignments.

- Recommend keeping a copy of your working on paper for reference.
More on labs

Labs happen in room SCI A109. You have to sign up for a lab section separately from the course - make sure you’re signed up to one!

Lab manual (and report book) is available in the book store.

Check the CourseSpaces for lab schedule (also posted here: https://www.uvic.ca/science/physics/current/undergraduate/time_tables/index.php)

Dress warm for the visual lab (outdoors).

For any questions about labs, see Karun Thanjavur (karun@uvic.ca), SCI A115, 721-7750.