

PHYSICAL SCIENCE – ASTRONOMY



Survey of astronomy to include historical development of the universe, Earth as a planet, Earth's moon, planets of the solar system, the Sun, stars, and galaxies. It is a one-term survey course that may be included as part of a year's sequence in General Science for college transfer credit. Taught by an enthusiastic life-long astronomer. ☺

GS-107, CRN #<TBA>, 4 credits. Lecture and Laboratory, plus a field trip to the OMSI-Planetarium.

Dates: <TBA> nights, 6 pm – 8:50 pm, **Summer Quarter 2022**, 10 weeks (starting June 27th).

Where: PCC-Southeast Campus, SE Division and SE 82nd, SCOM Building - Room 308 (face-to-face sessions)

Textbook: **Astro3**, 3rd edition (2017), by Seeds & Backman (ISBN 978-1337097505)

Instructor: Prof. Kyle Dittmer, office phone (503) 731-1314, email: kyle.dittmer@pcc.edu

TOPICS

Introduction

- Viewing the Sky; Celestial Sphere
- Cycles of Moon, Sun
- Eclipse of the Sun, Moon

History of Astronomy

- Ancient Times – Aristotle, Ptolemy
- Renaissance Era – Galileo, Kepler, Newton
- Modern Era – Einstein, Sagan, Hawking

Instruments of Astronomy

- Radiation, Light Waves
- Telescopes...Optical, Radio, UV
- Observatories...Land, Air, Space

The Sun

- Solar Science
- Sun's Atmosphere, Structure
- Solar Activity

Planets

- Terrestrial (inner), Outer
- Origin of the Solar System, Earth
- Asteroids (Nat. Geographic film), Comets, Meteors

Stars – Stellar Astronomy

- Distance and Luminosity, Classification
- Structure, Birth-Evolution-Decline (NG film)
- Death (Neutron Stars, Black Holes)

Galaxies

- Milky Way Galaxy (NG film)
- Galactic Properties, Structure
- Classification, Evolution

Cosmology

- The “Big Bang” Theory
- Structure of the Universe (NG film)

Life on Other Worlds and other topics

- Life beyond Earth; Ethno/Archaeo Astronomy
- *Student-chosen* Astronomy topics ☺
- Student-project: Astronomy Inspiration Project

It's easy to register! To register online, go to: <http://www.pcc.edu/enroll/registration/>.

You can also register by calling 971-722-8888. You will need to know the 5-digit CRN for the class you want to take.



You May Be Eligible for a Tax Credit

Based on the Taxpayer Relief Act of 1997, you may qualify for an educational tax credit. For more information, please contact a tax advisor, call the IRS at 1-800-829-1040 or visit the PCC web site at: www.pcc.edu/enrolling/tax.htm

Portland Community College is an Affirmative Action, Equal Employment Opportunity Institution.

If you have a disability that requires any special materials, services, or assistance, please contact the Office for Students with Disabilities, 503-977-4341, TTY 503-977-4877, at least 72 hours prior to the first class so we may arrange appropriate accommodations. For general information via TTY, call 503-977-4877.

