

COURSE DESCRIPTION
A2310, GENERAL ASTRONOMY
Spring 2014

Lecture: Tue. – Thurs. 11:00am – 12:15 am, PS 227
Discussion: Tues. 3:10 – 4:00 pm, Classroom Building 103
Laboratory: Thurs. 7:10 – 9:00 pm, PS 132

Instructor: Professor: Michael J. Pierce
Office: Physical Science Rm. 206
Office Hours: Tues. 1:30 – 3:30 pm, & by arrangement
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Lab & Discussion: TA: Earl Wood
Office: Physical Science Rm. 109
Office Hours: TBD
Phone: 766 – 3162
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Text: *Foundations of Astrophysics* by B. Ryden & B. Peterson

Class Web Page: <http://www.physics.uwyo.edu/~mpierce/A2310>

Prerequisite: Trigonometry, Calculus I, and Physics I, or their High School equivalents.

Course content: A2310 is the first of a two-semester, introductory survey of quantitative astronomy, intended for physical science majors. In A2310 we will try and cover: early astronomy & celestial motion, orbital mechanics & the solar system, the nature of light and the interaction with matter, telescopes, the Sun & planets. A2320 (second semester) will cover the rest of astronomy: stars, galaxies and cosmology. We must cover a chapter each week so please keep up with the reading. This will help with the lab material too.

Exams: Mid-term Exams (**Thurs. Feb. 13; Thurs. Apr. 3**): 30%
Homework (weekly problem sets): 25%
Lab (weekly lab projects): 25%
Final Exam (**Tues. May 6, 10:15 – 12:15 pm**): 20%

In-class exams will include a combination of multiple-choice, fill in the blank, short answers. A take-home portion will be comprised of problems to be worked and returned at the beginning of the next class.

Homework: Homework will include weekly problem sets assigned on Tuesday and will usually cover material from the text and presented in class. These assignments will typically be due the second class period after they are handed out (*i.e.*, the next Tuesday), at the beginning of class. *Late assignments will be accepted for only one day*, but the lowest homework grade will be dropped.

Lab and Discussion: No text, weekly handouts in class Tues. for Lab on Thurs.

Note: Labs will normally be due one week after being assigned, *i.e.*, the next Thurs. during lab.

Observing Activities: An important aspect of the lab involves night-time observing at either the STAR rooftop observatory or at the Red Buttes Observatory (RBO), south of town. These will be scheduled during the lab but are subject to the weather.

Tentative Schedule (subject to change)

Week	Subject	Chapters
Week 1 (Jan. 14,16)	Early Astronomy & Celestial Motion	1
Week 2 (Jan. 21, 23)	Emergence of Modern Astronomy	2
Week 3 (Jan. 28, 30)	Orbital Mechanics – I	3
Week 4 (Feb. 4, 6)	Orbital Mechanics – II	3
Week 5 (Feb. 11, 13)	The Earth-Moon System Test 1 (Thurs., February 13)	4
Week 6 (Feb. 18, 20)	Interaction of Radiation & Matter – I	5
Week 7 (Feb. 25, 27)	Interaction of Radiation & Matter – II	5
Week 8 (Mar. 4, 6)	Astronomical Detection of Light	6
Week 9 (Mar. 11, 13)	The Sun	7
Week 10 (Mar. 18, 20)	No Class: Spring Break	
Week 11 (Mar. 25, Mar. 27)	Overview of the Solar System	8
Week 12 (Apr. 1, Apr. 3)	The Earth and Moon Test 2 (Thurs., Apr. 3)	9
Week 13 (Apr. 8, 10)	The Terrestrial Planets	10
Week 14 (Apr. 15, 17)	The Jovian Planets	10
Week 15 (Apr. 22, 24)	Small Bodies in the Solar System	11
Week 16 (Apr. 29, May 1)	Origin of the Solar System & Exoplanets	12
	Final Exam: Tuesday, May, 6, 10:15 am – 12:15 pm	