

DeAnza College
Physical Science, Mathematics & Engineering Division

Winter Quarter 2015

Astronomy 04: "The Solar System"

Class Times Section 4 Call No. 00189 1:30-3:45 p.m.

Location: The Fujitsu Planetarium on Tue and Forum 1 on Thu

Instructor: Paul J. Olejniczak (Oles)

Office: S48A

Phone: 408-864-8676

Email: olejniczakpaul@deanza.edu

Office Hours: 9:30-10:15 a.m. MTWThF

Textbook: "The Solar System" by Michael A. Seeds, Latest Edition

Web Page: olespaul.com

Description:

Astronomy 4 is an introductory-level course, which concentrates on the Sun and the family of objects that orbit it including the planets, their satellites, asteroids, comets, meteoroids and Kuiper Belt Objects.. The course will focus on what we have learned about them in the past five decades since the advent of humanity's ability to explore space. The course has no astronomy, physics or math prerequisites and is taught in a "non-mathematical" manner.

Objectives:

To provide the student with as comprehensive an account of the modern field of planetary astronomy as possible.

To create an increased sense of place and scale in the universe and a sense of how our species reached its current understanding of our world's place in the larger scheme of things.

To acquaint the student with the appearances and other physical characteristics of the major planets, especially as they have been revealed by space probes over the last generation.

To generate a familiarity with the various modes of research, which astronomers use to investigate other planets, including (but not limited to) various types of automated spacecraft.

Evaluation:

A student's final grade will be based upon four (4), fifty (50) questions each, objective-type exams including a comprehensive final examination. The lowest of the first three test scores will be dropped and the final grade will be a simple average of the remaining two (2) exams and the final exam. Sample exams from previous quarters are posted online.

Make-up examinations will not be administered. A missed test – for any reason - will be counted as the student's one allowed dropped test.

There will be no exceptions. Students missing two tests must withdraw before the final withdrawal date or receive an “F” grade for the class.

- o Last day to drop a class with no record of grade is Mon Jan 19
- o Last day to drop with a "W" is Fri Feb 27

Notes regarding examinations:

Scantron test forms (brown or green) and #2 pencils are required for all examinations. It is the responsibility of the student to mark answers clearly and to fully erase mismarked answers. Scantron forms will not be rescored.

Graded Scantron forms should be retained by students until their grades are formally posted by the College.

Letter Grades:

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|---|-----------|
| A | = 89% + |
| B | = 79-88% |
| C | = 69-78%% |
| D | = 59-68% |
| F | = 0-58% |

Extra Credit:

Extra credit questions will be provided on each examination and will be drawn from material in instructional videos presented during class.

Optional extra credit assignments and projects will be also be offered during the quarter.

Important

Dates: Jan 6 Tue Class begins

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|--------|-----|-------------------------------------|
| Feb 3 | Tue | Test 1 On Chapters 1, 2, 3, 4 & 5.1 |
| Feb 19 | Thu | Test 2 on Chapters 6, 8, 19 & 20 |
| Mar 12 | Thu | Test 3 on Chapters 21, 22, 23 & 24 |
| Mar 26 | Thu | Final Exam from 1:45-3:45 p.m. |

Class and Lecture Schedule (date indicates "The Week of Tuesday.....")

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|-------------|-----------|--|
| Jan 6 & 8 | Tue/Thu | Orientation & Review of Class Roster <u>Chapters 1: "The Scale of the Cosmos"</u> Digital System : "Passport to the Universe" |
| Jan 13 & 15 | Tue/Thu | <u>Chapter 2: "The Sky"</u> Coast Tele-course Video: "The Sky" |
| Jan 20 & 22 | Tue/Thu | Chapter 3: "Cycles of the Moon" Coast Tele-course Video: "Cycles of the Sky" Chapter 4.1: "The Roots of Astronomy" Coast Tele-course Video: "The Origin of Astronomy" |
| Jan 27 & 29 | Tue & Thu | Chapter 4 & 5.1: "The History of Astronomy" Cosmos Video: "Harmony of the Worlds" Review for Test 1 (Chapters 1 through 5.1) |
| Feb 3 & 5 | Tue & Thu | Test 1 on Chapters 1,2,3,4 & 5.1 Return and Review Test 1 Chapter 6: "Light & Telescopes" Coast Tele-course Video: "The Tools of Astronomy" |
| Feb 10 & 12 | Tue & Thu | <u>Chapter 8: "The Sun"</u> |

PBS Video "Solar Blast"

Chapter 19: "The Origin of the Solar System"

Coast Tele-course Video: "The Origin of the Solar System"

Feb 17 & 19 Tue & Thu

Chapter 20: "Planet Earth"

Review for Test 2 (Chapters 6,8,19 & 20)

Test 2 on Chapters 6,8,19 & 20

Return and Review Test 2

Chapter 21: The Moon"

BBC Video: 'The Moon"

Feb 24 & 26 Tue & Thu

Chapter 21: "The Moon - Part 2

Chapter 21.2 & 22.1: "Mercury & Venus"

Chapter 22.2 & 22.3 "Mars and its Moons"

Mar 3 & 5 Tue & Thu

Chapter 22: "The Exploration of Mars"

The Martian Rovers

Chapter 23: "Jupiter & Saturn"

BBC Video Volume #2: "Giants"

Mar 10 & 12 Tue & Thu

Chapter 24: "Uranus, Neptune and Pluto"

Review for Test 3

Test 3 on Chapters 21-24

Return and Review Test 3

Mar 17 & 19 Tue/Thu

Chapter 25: "Meteorites, Asteroids and Comets"

Coast Tele-course Video: #25 "Meteorites, Comets and

Asteroids”

National Geographic Video: “Asteroids: Deadly Impact”

Mar 26

Thu

Final Exam from 1:45-3:45 p.m.

Rules & Regulations:

Regular class attendance is required. Class attendance will be recorded each class period. Students missing three (3) consecutive classes will be dropped from the class.

The use of cell phones or pagers is strictly forbidden during class unless prior arrangements have been made with the instructor.

No food or drinks of any kind are permitted in Planetarium.
