

ASTR1 - Astronomy

Course Syllabus Fall 2017

Instructor/Course Info: Jorge Ramirez Instructor of Mathematics, Physics and Astronomy
Long Beach City College Department of Mathematics & Physical Science
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Office Hours - M: 10am-12pm, T: 11am-1pm, W: 9:30-10:30 - V219
ASTR1 – Astronomy (70199) M/W 8:00am – 9:25am LAC-D326

Prerequisite: There are no prerequisite requirements. Algebra will be helpful for several assignments but is not essential as this will be a non-mathematical approach to astronomy. Reading of the text and efficient study habits are vital. Although not required students will benefit from READ and/or LEARN courses to assist with successful study skill techniques.

Course Description: This course is an introduction to astronomy. Topics to be covered include the physical nature of the solar system, stars and stellar systems, galaxies and the universe as a whole, including not only their current state, but also theories of their origin and evolution.

Student Learning Outcomes (SLO):

1. Synthesize a cosmic perspective- a broad understanding of the nature, scope, and evolution of the Universe, and where the Earth and Solar System fit in.
2. Examine a limited number of crucial astronomical quantities, and analyze both the nature, and subject, of appropriate physical laws.
3. Examine the history of astronomy and the evolution of scientific ideas.

Text: *The Essential Cosmic Perspective*, By Bennett, Donahue, Schneider & Volt, 7th edition.

Grading Criteria:

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|---------------------------------|-------------------|
| Homework/Activities | 200 points |
| <u>Exams - 4 (100 pts. ea.)</u> | <u>400 points</u> |
| Total 600 points | |

Grade Scale:

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|---------------------------|-----|
| “A” ≥ 540 | 90% |
| 539 \geq ”B” ≥ 480 | 80% |
| 479 \geq ”C” ≥ 420 | 70% |
| 419 \geq ”D” ≥ 360 | 60% |
| 359 \geq ”F” | |

Homework will be checked prior to each exam. Students are encouraged to work together on discussion questions and will be required to collaborate in groups for activities. However, each student must right up solutions in their own words.

Extra Credit opportunities will be possible by visiting one observatory such as Griffith, Mount Wilson, Palomar or the Rio Hondo College observatory. You must submit a one-page write up on the object observed, telescope and what you learned.

Make-up Policy: The simplified version is **No make-ups** on short notice or after the due date. The formal policy is as follows, Make-up policy for Exams: Prior arrangements must be made at least 2 weeks in advanced with instructor, if the student has a serious and compelling reason (documentation is required). If any of the above requirements is not met, a score of zero will be issued for the missed exam. Make-up policy for assignments and activities: No make-up for in-class activities; zero to half credit for late homework may be given with prior notification.

Attendance policy: Attendance is the responsibility of the student. Students are expected to demonstrate respect for the instructor and other students. This includes but is not limited by interfering with the rights of others to listen and participate or harassing others in anyway. Additionally, No cell phone use during class, No entrance/exit while planetarium projector is in use and No food/drinks/gum allowed with the exception of bottled water. Absences do not excuse due dates (See make-up policy). A little Advice: Show up, take notes and do the homework.

Disabilities: If a student has a college verified disability, it is the responsibility of the student to notify the instructor in advance for any needs to be accommodated. In the case of a physical disability an alternative extra credit assignment can be arranged with instructor approval.

Cheating/Plagiarism:

The Long Beach Community College District maintains an environment in which academic honesty is expected; academic dishonesty, cheating and plagiarism are not tolerated. Please see Administrative Regulations on Academic Honesty, section 4018. Any student in violation of this code and policy in any assignment or examination related to this course shall be subject to the options specified in the policy statement. DON'T DO IT; STUDY, STUDY, STUDY and you will be fine.

ASTR1 - Astronomy

Course Schedule Fall 2017

Weekly **PROJECTED** Schedule*

Part I&II History & The Night Sky

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|------------------------|-----------------------------|--|
| Week 1 (Aug. 28/ 30): | 1.1-1.2 / 1.3, 2.1-2.3 | CH1 Modern View + CH2 Sky |
| Week 2 (Sept. 4/ 6): | Holiday / 2.4, 3.1-3.3 | CH3 History of Astronomy |
| Week 3 (Sept. 11/ 13): | 3.4, 4.1-4.3 / 4.4, 5.1-5.3 | CH4 Laws of Physics + CH5 Light |
| Week 4 (Sept. 18/ 20): | Discussion/ Exam 1 | Exam 1: PartI&II Ch 1-5 (W, Sept. 20) |

Part III The Solar System

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|------------------------|----------------------------|--|
| Week 5 (Sept. 25/ 27): | 6.1-6.3 / 6.4, 7.1-7.2 | CH6 Solar System Formation + CH7 |
| Week 6 (Oct. 2/ 4): | 7.3-7.5 / 8.1-8.3 | CH7 Terrestrial Planets + CH8 Jovian Planets |
| Week 7 (Oct. 9 /11) | 9.1-9.4 / 10.1-10.3 | CH9 Outer S.S + CH10 Extra-Solar Planets |
| Week 8 (Oct. 16/ 18): | Discussion / Exam 2 | Exam 2: PartIII Ch 6-10 (W, Oct. 18) |

Part IV Stars

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|----------------------------|----------------------------|---|
| Week 9 (Oct. 23/ 25): | 11.1-11.3 / 12.1-12.3 | CH11 Sun + CH12 Stars |
| Week 10 (Oct. 30/ Nov. 1): | 13.1-13.2 / 13.3-13.4 | CH13 Life of Stars |
| Week 11 (Nov. 6/ 8): | 14.1-14.2 / 14.3-14.4 | CH14 Stellar Graveyard |
| Week 12 (Nov. 13/ 15): | Discussion / Exam 3 | Exam 3: PartIV Ch 11-14 (W, Nov. 15) |

Part V Galaxies & Cosmology

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|------------------------|----------------------------------|--|
| Week 13 (Nov. 20/ 22): | 15.1-15.3 / 15.4, 16.1-16.3 | CH15 Milky Way + CH16 Galaxies |
| Week 14 (Nov. 27/ 29): | 16.4, 17.1-17.2/ 17.3-17.4, 18.1 | CH17 Origins of the Universe + CH18 |
| Week 15 (Dec. 4/ 6): | 18.2-18.3 / Topics in CH19 | CH18 Dark Matter & Dark Energy + CH19 Life |
| Week 16 (Dec. 11/ 13): | Discussion/ Exam 4 | Exam 4: PartV Ch 15-18 (W, Dec. 13) |

***This guideline is an estimate and subject to change. Any modifications will be discussed in class. If you do not attend class it is your responsibility to obtain any changes from the instructor or a classmate.**

Important dates

Final Exam Date: Wednesday December 13th 8:00 AM – 9:25 AM

Drop deadlines:

September 9, 2017: last day to **Drop** without a “W” appearing on transcript

November 11, 2017: last day to **Drop** a class with a “W”.

Classmate Info

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- 4.