

El Paso Community College

Syllabus

Part II

Official Course Description

SUBJECT AREA	<u>Physics</u>
COURSE RUBRIC AND NUMBER	<u>ASTR 1303</u>
COURSE TITLE	<u>Stars and Galaxies (Lecture) (C) (MNS)</u>
COURSE CREDIT HOURS	<u>3 3 : 0</u> Credits Lec Lab

I. Catalog Description

Study of stars, galaxies, and the universe outside our solar system. May not be counted as physics credit toward a major or minor in physics, but may be counted as science credit for non-science majors.

Prerequisite: Placement at College Level Reading or Writing by TSIA or equivalent; OR completion with a “C” or better or concurrent enrollment in the following: INRW 0311 or INRW 0312 or ESOL 0340. Corequisite: ASTR 1103. (3:0).

II. Course Objectives

Upon completing this course, the student will be able to:

- A. Understand the basic properties of stars: distance, spectral class, motion, magnitude, composition and parallax.
- B. Discuss the classification scheme of stars as to spectral classes.
- C. Understand the Hertzsprung – Russell diagram and how it relates to stellar evolution.
- D. Know the stages of stellar evolution as to the birth, life and death of any size star.
- E. Explain the interstellar medium and how it relates to atoms, molecules, dust and nebulae.
- F. Identify the classification scheme for binary stars, the importance of binary stars to astronomy and the origin and evolution of binary systems.
- G. Describe the various types of natural star groupings in our galaxy and how they evolved.
- H. Know the structure of our galaxy (both historical and modern) and the galactic coordinate system.
- I. Describe the two major stellar population types and their characteristics.
- J. Identify the Hubble classification scheme of galaxies and our local group of galaxies.
- K. Describe the Doppler shift as it relates to astronomical objects.
- L. Describe Hubble’s Law and its implication for an expanding universe.
- M. Understand quasars.
- N. Explain the cosmological principle.
- O. Identify current astronomical beliefs about the nature and origin of the universe.
- P. Understand the nature of life and be aware of the possibilities of life on other planets in the universe.
- Q. **Critical thinking skills:** students will engage in creative thinking, innovation, inquiry, and analysis, evaluations, and synthesis of information.
- R. **Communication skills:** students will demonstrate effective written, oral, and/or visual communication.
- S. **Teamwork skills:** students will demonstrate the ability to consider different points of view and to work effectively with others to support a shared purpose or goal.

- T. **Empirical and quantitative skills:** students will demonstrate the ability to formulate an inquiry and then identify and follow an investigative process using empirical and/or qualitative/quantitative reasoning to satisfy the inquiry.

III. Evaluation

- A. Pre-assessment

There is no pre-assessment for this course.

- B. Post-assessment

The scheduling of examinations, homework, and quizzes will be the sole prerogative of the instructor. The manner, frequency and extent of these instruments will be indicated to the student in the course syllabus that is distributed at the beginning of the semester. The philosophy of the college endorses frequent evaluation.

- C. Remediation

The instructor may provide a student with a means of improving a grade. The timing, form and method of remediation will be determined by the instructor and included in the course syllabus.

- D. Grading

All grading will follow current EPCC Catalog standards. The assignment of letter grades to percent scores obtained in various class activities will be determined by the instructor and included in the course syllabus.

IV. Disability Statement (Americans with/Disabilities Act [ADA])

EPCC offers a variety of services to persons with documented sensory, mental, physical, or temporary disabling conditions to promote success in classes. If you have a disability and believe you may need services, you are encouraged to contact the Center for Students with Disabilities to discuss your needs with a counselor. All discussions and documentation are kept confidential. Offices located: VV Rm C-112 (831-2426); TM Rm 1400 (831-5808); RG Rm B-201 (831-4198); NWC Rm M-54 (831-8815); and MDP Rm A-125 (831-7024).

V. 6 Drop Rule

Students who began attending Texas public institutions of higher education for the first time during the Fall 2007 semester or later are subject to a 6-Drop limit for all undergraduate classes. Developmental, ESL, Dual Credit and Early College High School classes are exempt from this rule. All students should consult with their instructor before dropping a class. Academic assistance is available. Students are encouraged to see Counseling Services if dropping because exemptions may apply. Refer to the EPCC catalog and website for additional information.

VI. Title IX and Sex Discrimination

Title 9 (20 U.S.C. 1681 & 34 C.F.R. Part 106) states the following "No person in the United States shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any educational program or activity receiving Federal financial assistance." The Violence Against Women Act (VAWA) prohibits stalking, date violence, sexual violence, and domestic violence for all students, employees and visitors (male and female). If you have any concerns related to discrimination, harassment, or assault (of any type) you can contact the Assistant to the Vice President for Student and Enrollment Services at 915-831-2655. Employees can call the Manager of Employee Relations at 915-831-6458. Reports of sexual assault/violence may also be reported to EPCC Police at 915-831-2200.