NORTHWEST FLORIDA STATE COLLEGE

Course Syllabus

Course Name: Descriptive Astronomy
Course Number: AST1002
Section: 20495
Credit Hours: 3
Instructor Name: Dr. Christopher Sweeney
Instructor Office Location: 350 Niceville Campus
Instructor Email: sweeneyc@nwfsc.edu

Course Curriculum

This course provides a comprehensive look at modern astronomy, emphasizing the use of the scientific method and the application of physical laws to understand the Universe. Throughout this course, students will develop the ability to discern scientific knowledge from non-scientific claims by using critical thinking.

Goals

- Students will understand the size and age of the Universe.
- Students will understand the history of Astronomy.
- Students will understand the rational and empirical basis of modern science.
- Students will understand qualitative aspects of both classical and modern Physics necessary for the comprehension of Astronomy.
- Students will understand the basics of planetary science, both solar and extrasolar.
- Students will understand the essentials of stellar structure and evolution.
- Students will understand the principles of galactic structure.
- Students will understand how the Universe began, and how its beginning relates to the history of the Universe.
- Students will understand our current conception of the major unresolved problems in Astronomy, and how they potentially relate to the long-term future of the Universe.

Objectives

• Students will define terms used to measure and describe the universe.
• Students will explain the processes involved in the formation and evolution of celestial bodies over astronomical time according to different models and theories.
• Students will describe how scientific theories evolve in response to new observations and critically evaluate their impact on society.
• Students will formulate empirically testable hypotheses derived from the study of physical processes and phenomena.
• Students will apply logical reasoning skills through scientific criticism and argument to separate science from non-science.

• Students will gather and analyze astronomical data and communicate results in graphical and written forms.

Expectations of the Student

Office Hours: The instructor will be available a minimum of six hours a week outside class to answer questions and address concerns of student.

The Use of Canvas as a Learning Management System: All courses utilize Canvas as an online class component. Students can access the course syllabus and their grades at any time and may be required to submit coursework through Canvas. Access to a computer with internet connectivity is therefore required for the course. Students have free access to computers at all campus centers.

Email Response Time of the Instructor: Students can expect responses to email inquiries with one or two business days. (Note: The College is closed on Fridays and on weekends.)

How Student Performance Will be Measured

Student performance will be measured by one or more of the following methods:

- Examinations
- Homework assignments
- Term Paper(s)
- Quizzes