ASTRONOMY - AST 1002 sec 001 FALL SEMESTER 2022

Lecture: Tuesday and Thursday 9:30 AM-10:45 AM UNIVERSITY COMMONS Rm 110
FAMU CANVAS: AST1002_001_2223
ATTENDANCE FORM

Main Text:
UNDERSTANDING OUR UNIVERSE, 1st, 2nd or 3rd Edition, Palen, et. al., W. W. Norton Publishers

Other Useful Reading:
ORIGINS, Neil DeGrasse Tyson, Donald Goldsmith
DEATH BY BLACK HOLE, Neil DeGrasse Tyson
A BRIEF HISTORY OF TIME, Stephen Hawking
THE UNIVERSE IN A NUTSHELL, Stephen Hawking
THE FIRST THREE MINUTES, Steven Weinberg
THE INFLATIONARY UNIVERSE, Alan Guth
THE LIGHTNESS OF BEING, Frank Wilczek
THE FABRIC OF THE COSMOS, Brian Greene
NOTHINGNESS: The Science of Empty Space, Henning Genz
STARGAZER: The Life and Times of the Telescope, Fred Watson

ASTRONOMY ON THE WEB:
A GENERIC COMPLETELY FREE TEXT BOOK
http://www.astronomynotes.com

Instructor:
Ray H. O'Neal, Jr., Ph.D.
Associate Professor
Florida A&M University
Department of Physics

Office Hours:
ZOOM or FSHSR Room 419 Times: TBD

Office and other contact info:
Office FSHSR 301A,
Research Lab APCRDRDL FSHSR 420
MOBILE (voice or text): 850-366-8793 ← BEST WAY TO CONTACT ME

Lecture: The lectures will have the following format:
1. Live stand-up lectures. During such lectures demonstrations, audio visual aids and class discussions may be employed to facilitate your understanding of the subject matter.

2. Various tools, tutorials may be available via http://astro.unl.edu/animationsLinks.html
3. YOU MUST:
    - BRING YOUR ***FULLY CHARGED*** MOBILE INTERNET ACCESSIBLE DEVICES TO **ALL** CLASS MEETINGS (Lecture AND Discussion/Lab).

Lab/Discussion meeting: Will be used primarily to review homework assignments, exam reviews, in-class (i.e. virtual lab) activity. We may also review for exams or discuss homework (problem sets).

After completing this course you should be able to (at a minimum)

- identify or state and compare the relative sizes and scales of objects and distances between objects in the universe
- use simple geometry and the properties of light to perform simple calculations determining distance, temperature, composition and motion of astrophysical objects
- describe the role of gravity, angular momentum, and thermodynamics in the stability and evolution of stars and planetary systems, and in the evolution of the universe
- describe the motion of planets and the phases of the moon
- list and describe the various technologies used to observe the universe
- correctly order the chronology of events in the evolution of the universe
- recognize the scientific method
- understand how we know what we think we know about the nature of the universe

Academic Learning Compacts available here.

ADDITIONAL INFORMATION ON HOMEWORK, LECTURE ATTENDANCE and EXAM POLICY:
There will be no makeup homework for missed assignments. HOMEWORK ASSIGNMENTS or ACTIVITIES WILL NOT BE ACCEPTED AFTER THE DUE DATE AND TIME FOR ANY REASON. Attendance taking during the semester will occur at random, sometimes at the start of lecture, sometimes at the end of lecture, sometimes during lecture. Attendance may also be taken multiple times during lecture. Any student with more than four unexcused absences may receive a grade of F. Exams will occur on the first Thursday of every month AFTER the first month of the semester, unless otherwise stated. There will be NO MAKEUP EXAMS FOR MISSED EXAMS FOR ANY REASON. Your exam average will be determined from your available exam scores: i.e. if you miss exam 3, exam score average = (exam 1 score + exam 2 score + 0)/3.

Grading Scale:

A	>=87%
B	>= 75%

C	>= 65%
D	>= 50%
F	<50%

Grading Distribution:

Homework and In-Class Activity or Lecture "Clicker" Quizzes 50%
Exams (3) 30%
Final Exam 20%
Total 100%

$$\text{Course Score} = 0.5 \times \left[\left(\frac{N_H}{N_H+N_A}\right)\underline{H} + \left(\frac{N_A}{N_H+N_A}\right)\underline{A}\right] + 0.3 \times \underline{E} + 0.2 \times \text{FINAL EXAM SCORE}$$

$\underline{H}$ =Average of Problem Set Scores, $\underline{A}$= Average of Activity Scores, $\underline{E}$= Average of Exam Scores, N_H = Number of Homework Assignments, N_A = Number of In-Class Activities & Clicker Quizzes. (spreadsheet for calculating current course score at any time during the semester). In class exams will occur on the 1st Thursday of Feb, Mar, Apr.

FAMU Student Code of Conduct Policy: Basically, the University will not tolerate any form of disrespectful or disruptive conduct in class or cheating in this (or any other) class at any time for any reason. Please see the "FANG" and other relevant rules of the College of Science and Technology and the University. Violations will be referred to the university judicial officer.

Policy Statement on Non-Discrimination

It is the policy of Florida Agricultural and Mechanical University to assure that each member of the University community be permitted to work or attend classes in an environment free from any form of discrimination including race, religion, color, age, disability, sex, marital status, national origin, veteran status and sexual harassment as prohibited by state and federal statutes. This shall include applicants for admission to the University and employment.

Academic Honor Policy

The University's Academic Honor Policy is located in the FANG Student Handbook, under the Student Code of Conduct- Regulation 2.012 section, beginning on page 55-56. Govern yourself accordingly.

ADA Compliance

To comply with the provisions of the Americans with Disabilities Act (ADA), please advise instructor of accommodations required to assure participation in this course. Documentation

of disability is required and should be submitted to the Learning Development and Evaluation Center (LDEC). For additional information please contact the LDEC at (850) 599-3180.

THIS SYLLABUS SUBJECT TO CHANGE BY INSTRUCTOR