Course Title: AST 180 Introduction To Astronomy
Term: Summer 2023
Instructor: TBA
Course Credit: 3
Mode of Instruction: Online

Course Description:

The course is an introduction to the field of astronomy, including diurnal motion, motion of solar system objects on the background of stars, light rays and spectra, the planets, Kepler's laws, space travel, coordinates and time, the moon and eclipses, meteors, comets and the sun, stars, stellar distances and stellar evolution, galactic structure, galaxies, quasars, and the big bang universe. Other topics such as telescopes, black holes, Milky Way, cosmology will be also involved.

Course Prerequisites:

N/A

Learning Outcomes:

By the end of the course, the student should be able to:

A. Gain the basic knowledge of the history and current situation of the astronomy;

B. Describe and compare the features of each planet in the solar system;

C. Interpret the phases of the moon and the relationship between the Earth and the moon, the Sun and the moon;

D. Describe the evolution of stars, from their birth through to their death as white dwarfs, neutron stars or black holes.

E. Know how to use telescopes to see deeper into the universe and observe the main stars in the night and day sky.

Course Material:

Explorations: Introduction to Astronomy, Schneider Stephen E, Mcgraw Hill Book Co, 2009.

Evaluation:

- 2 Assignments [10%]
- 2 Quizzes [20%]
- Term Essay [15%]
- Mid-term Exam [20%]
- Final Exam [35%]

Description of the Evaluation tasks:

Assignment/ Essay/...: During the term, students will be required to finish several evaluation tasks within due date. All the tasks are linked with specific course topics/outcomes and will adequately assess students' competence and learning outcomes. Students are encouraged to meet with instructor about these tasks at any point.

Mid-term/ Final Exams/ Quiz/...: There may be periodic quizzes given at the beginning of lecture sessions; the feedback from these quizzes will monitor the progress of the learners and help to set learning priorities. There will be mid-term exam/ final exam for the course. They are the basic criteria for the evaluation of students' learning outcomes and final grade.

Grading Policy:

Students are supposed to finish each online lecture. Prior to each class, students should finish the required readings. During the class time, students are encouraged to make use of all relevant online course resources and communicate with the instructor. Students' grades are accumulated based on the cumulative evaluations.

Students' letter grade will be assigned according to the following scale:

A+ 90-100	A 85-89	A- 80-84
B+ 77-79	B 73-76	B- 70-72
C+ 67-69	C 63-66	C- 60-62
D+ 57-59	D 53-56	D- 50-52
F < 50		

Academic Integrity:

Students must strictly adhere to the university's academic integrity rule; and all essays, exams and any other form of academic assignments must adhere to these rules. Any form of plagiarism, cheating, or misappropriation of materials will be considered a violation of academic integrity and will be punishable by the university.

Withdrawal from the Course(s):

Students will be able to apply for a transfer or withdrawal within 3 days of the starting date of the course. If a withdrawal is applied for within 3 working days, the tuition fee will be fully refunded. After 3 days, the tuition fee will not be refunded. If a withdrawal is applied for in the first two weeks, it will be recorded as W (Withdraw) on the course transcript. After this initial two-week period, the class will be recorded as F (Fail).

Tentative Schedule:

1	The Cosmic Landscape
2	The Cycles of the Sky
3	The Rise of Astronomy
4	Gravity and Motion **Assignment 1**
5	Light and Atoms

6	Telescopes
7	The Earth
8	The Moon **Quiz 1**
9	Survey of Solar Systems
10	The Terrestrial Planets
11	**Midterm Test**
12	The Outer Planets
13	Meteors, Asteroids, and Comets
14	The Sun
15	Our Star **Assignment 2**
16	Measuring the Properties of Stars
17	Stellar Evolution
18	Stellar Remnants: White Dwarfs
19	Neutron Stars **Quiz 2**
20	Black Holes
21	The Milky Way Galaxy
22	Galaxies
23	Galaxies (Cont.)
24	Cosmology **Term Essay due**
25	**Final Exam**