Indiana University Northwest
College of Arts and Sciences
Department of Chemistry, Physics, and Astronomy

COURSE SYLLABUS

Course: AST-A 100

COURSE TITLE: The Solar System

CREDIT HOURS: 3

CLASS SCHEDULE:

The class meets on Saturdays from 8:45 a.m. to 12:00 noon from September 12 to December 5. There is no class meeting on Saturday, October 17 (GLPA Conference) and November 28 (Thanksgiving Recess).

CLASS LOCATION:

The class is meeting at the Merrillville Community Planetarium, which is located inside of Clifford Pierce Middle School. Pierce is part of the Merrillville Community Schools and is located at 199 East 70th Avenue in Merrillville. Pierce is one block east of Broadway, two blocks south of 68th Place, and two blocks north of 73rd Avenue.

Please park on the west side of Pierce – the side closest to Broadway. There are no fees or parking passes required. Enter on the west side of Pierce at entrance marked "Main Office/ Planetarium".

COURSE DESCRIPTION:

Celestial sphere and constellations, measurement of time, astronomical instruments, Earth as a planet, moon, eclipses, planets and their satellites, comets, meteors, theories of origin of solar system.

PREREQUISITES: None

TEXTBOOK: None

RATIONALE:

The Solar System is our home in the universe. This course provides students with the opportunity to learn about our solar system: the sun, planets, moons, rings, asteroids, comets, and dwarf planets.

INTENDED AUDIENCE:

This course is intended for students who want to know more about the solar system and educators desiring to include more astronomy in their teaching.

EXPECTED STUDENT OUTCOMES:

Upon completion of this course, students will have an overview of our solar system and how it formed. Students will be able to describe the major characteristics of our sun. Students will understand the characteristics of the inner and outer planets and knowledge of their atmospheres, moons, and rings. Students will be able to describe the nature of asteroids, dwarf planets, comets, and Kuiper belt objects. Students will have a basic knowledge of the planets and some constellations in the night sky.

INSTRUCTIONAL ACTIVITIES:

The course will make use of the planetarium for demonstrations, planetarium programs, and student activities. Students are expected to take lecture notes. Some handouts will be provided.

COURSE CONTENT:

A. Our Solar System
B. General Observations About Our Solar System
C. The Formation of the Solar System – The Nebula Theory
D. Evaluating the Nebula Theory
E. The Sun
F. The Inner Planets – Mercury, Venus, Earth, and Mars
G. The Outer Planets – Jupiter, Saturn, Uranus, and Neptune
H. The Dwarf Planets
I. The Smaller Bodies – Asteroids, Comets, and Kuiper Belt Objects

STUDENT EVALUATION: Students will be evaluated using the following:

- Tests (approximately 55% of the grade) – There will be four tests, each covering approximately one-quarter of the course material.
- Research project (approximately 10% of the grade) – Each student will pick from a provided list of topics (or discuss other potential topics with the instructor), then research his or her topic. The student will then present a list of resources used and evidence of learning.
- Class activities (approximately 20% of the grade) – There will be planetarium programs, demonstrations, and/or lab activities that students are expected to participate and/or complete.
- Student participation (approximately 15% of the grade) – Each student is expected to participate in the class by asking questions and contributing to discussions.

In addition to the above, graduate students will be held to a higher standard in their tests and will be expected to complete some additional work.

Course Grade Assignment	
100 - 90%	A
89 - 80%	B
79 - 70%	C
69 - 60%	D
59% and below	F

CLASS ATTENDANCE:

This course has been approved to enforce the IU Northwest Attendance and Course Commitment Policy and the full text of this policy is available at:

http://www.iun.edu/registrar/policies/couse-commitment-attendance-policies.htm

As a student in this course, you are expected to attend scheduled class meetings and actively participate in all class activities. Students who miss the first week of the course or who do not attend 50% of the scheduled class meetings before the end of the fourth week of the course may be subject to administrative withdrawal. Regardless of attendance, students who do not actively participate in this class by receiving less than 50% of their Class activities and Student participation scores during the first four weeks are subject to administrative withdrawal. Students who are administratively withdrawn from this class after the fourth week will not be eligible for a tuition refund. Administrative withdrawals may have an impact on the student's financial aid awards and visa status.