SUNY Orange SYLLABUS

Instructor: John Wolbeck
Phone: 341-4577
Email: jwolbeck@sunyorange.edu
Office Hourse: T.B.A

37120 Astronomy

2 lect,. 3 lab., 3cr. (Fall, Spring)

CATALOG DESCRIPTION:

The relationship of physical laws to the structure and sized of the universe is the means by which the methods of observational astronomy are studied. The role of gravity in the formation of stars and galaxies is emphasized. Current study of cosmology is placed in the historical context. Besides observing sessions, the laboratory emphases the methods of observational astronomy.

TEXT AND MATERIALS:

Text: In Quest of the Universe, Author: Kuhn & Koupelis.
Materials Scientific calculator

RELATIONSHIP TO PROGRAMS:

Astronomy is a general elective course which one should take if only for the "good of one's soul." It has a laboratory component and so it fulfills the requirement for a laboratory science. It is also an excellent course for someone planning on a career in elementary of secondary science or mathematics education.

COURSE OBJECTIVES:

The student who successfully completes this course can understand and can

- Explain the basic concepts of astrophysics such as motion, gravitational forces, stellar energy and power.
- Explain central role of the force of gravity in the universe
- Apply physical principles to the understanding of the universe
- Place the search for understanding the universe in an historical context.
- Place the earth and humanity in a universal context and to see the understanding of the universe as a human quest.
- Explain how what we have learned has been learned.
- Appreciate the methods of physical science.

- Read with understanding contemporary new accounts of astrophysical discoveries.
- Declare (with clear conscience) that they have enjoyed learning the above

GRADING SYSTEM:

The grading for this course will be determined as follows:

There will be three major exams and one finals exam:	15% of final average each
The laboratory work	15% of final average
Homework/Quizzes and class participation:	10% of the final average

Homework assigned during a week will be submitted at the beginning of the following lecture.
Laboratory exercises and observational sessions will be explained as they occur.
Laboratory handouts will be provided.

ATTENDANCE AND WITHDRAWAL:

Astronomy is a rigorous subject and perfect attendance is required if a student expects to do well. The student's grade will be reduced by one letter grade if more than three classes are missed and two letter grades if six or more classes are missed.
MAKE-UP EXAMS DO NOT EXIST.
I do not give instructor withdrawals. If you wish to withdraw from the course, you must do so yourself. If you do not follow the proper withdrawal procedure, a grade of F will be give.

SUPPORT SERVICES:

Tutoring services are available in the Library. There are services available for students with disabilities. Any such conditions should be communicated privately to the instructor on the first day of class so that any necessary special arrangements or accommodations can be made.

Lecture Schedule

- Motions in the Sky
- History and Astronomy
- Newton, Physics and Astronomy
- Light and Telescopes
- The Classical Planets
- The Outer Solar System
- The Sun and Other Stars
- Basic Properties of Stars
- Stellar Structure and Evolution
- Life Story of Stars/Stellar Remnants
- Structure, Formation and Evolution of Galaxy
- Galaxies and Clusters
- Expansion, Cosmic Background and Quasars
- Cosmology/Life in the Universe
- Astronomy and Life
- Final