Required Text & Materials

- *Astronomy Through Practical Investigations* - ES 22 Laboratory Packet, by Lomaga, Smiley and Warasila, w/Starfinder & protractor
- a scientific calculator

Prerequisites

Much of what is known about stars & galaxies is inferred by incorporating information from the physical sciences. Physical quantities and their inter-relationships are often most easily described with mathematical formulae. A knowledge of elementary algebra (MA07) is therefore required.

Course Objectives

Upon completion of ES22, the student should

1. be comfortable with and be able to make measurements in the metric system
2. be familiar with the major constellations of the winter and spring night skies, and understand daily and annual motions
3. understand the nature of light & electromagnetic radiation, and how it is used to gather information
4. understand the nature and structure of the Sun and how it affects the environment on Earth
5. be familiar with the life cycle of stars from birth to death
6. know the types and nature of groupings (clusters, galaxies) that stars form
7. know the current scientific model of the creation of the universe, and various ending scenarios
8. be familiar with the scale of the universe and our size and position within it
9. know how our limited point of view and instrument precision limits collection of astronomical information
10. be familiar enough with astronomy to be able to appreciate recent developments in the field
# Course Outline

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The actual rate at which this material will be covered may vary, although the above sequence will be followed.

# Lab Coursework

Various forms of coursework will be assigned as part of the laboratory section of the class. A majority of the work will be based on the lab exercises found in the *Astronomy through Practical Investigations* packets. These labs are to be worked on in groups containing no greater than 2 students. However, each student in a group should write up their laboratory exercise individually. Copying another students work is strictly forbidden.

Lab coursework will be handed in exactly one week after it is set. Any works that are not turned in when requested will not be accepted, regardless of the reason.

If a student knows that they will be absent from a class when an assignment is due, arrangements can be made to turn in the assignment as long as the instructor prior to the date of the absence has granted the student permission.

# Office Hours

Dr. McCorkle will be available for consultation before and after class and can be reached by email at mccorkle@buoy.com.

# Grades

The semester grade will be computed in the following manner.

- 50% Exams
- 50% Lab coursework

A grading curve will not be applied, and there will be no opportunities for extra credit.
There will be four lecture exams, the lowest of which will be discarded, and a cumulative final at the end of the semester (which will not be discarded). There will also be two planetarium quizzes (also not discarded).

There will be no makeup exams. If a student misses an exam, the grade will be entered as zero.

**Attendance**

Because of the nature and amount of material in this course, it is crucial that each student attend every lecture. The College has instituted the following attendance policy, which can be found in the SCCC student handbook for 2004–2006 *(p66)*:

The college expects that each student will exercise personal responsibility with regard to class attendance. All students are responsible for all that transpires in class whether or not they are in attendance, even if absences are the result of late registration or add/drop activity at the beginning of a term as permitted by college policy. The college defines excessive absence or lateness as more than the equivalent of one week of class meetings during the semester. Excessive absence or lateness may lead to failure in a course or removal from the class roster.

A student may be removed from the class roster by an instructor at any time when, in the judgment of the instructor, absences have been excessive.

This policy clearly places the responsibility of attending class on the student, *that each student is allowed two absences for the semester, and permits the instructor to withdraw or fail any student that exceeds the number of absences*, and that each student is responsible for any material that was covered during the class of absence.

**Withdrawal Policy**

Students who wish to withdraw from the course, without academic penalty, must do so by mid-semester (March 21, 2005). Any student who has not withdrawn by this date will be required to finish out the semester, regardless of their grade. Therefore, *any student who wishes to withdraw, but has not formally done so will be considered to still be in the class, and a final grade will be administered.*

It is the students’ responsibility to complete the proper withdraw procedure, *not* the instructors.

**Cheating**

Suffolk County Community College has instituted the following policy regarding academic integrity, which can be found in the SCCC student handbook for 2004–2006 *(p67)*:

Any form of cheating, be it on a formal examination, informal quiz or other submitted material, is a violation of college conduct. Copying material from fellow students or from other sources during an examination may result in a failing grade for the course and /or serious disciplinary sanctions as outlines in the Code of Conduct. When students work together on a project, this becomes a joint responsibility of a group so designated and should be limited to the people and resources agreed upon with the instructor.

Any student who is caught cheating will be punished to the fullest extent of the college’s cheating policy.