**EAS 375**

**Spring 2011**

**Lecture questions**

**Lecture 2 - Science**

1. How would define the term “science”?

Pursuit of knowledge.

Organize observable information into testable and predictive explanations of the relationship between causes and effects of phenomena.

1. List five traits that characterize a scientist.

Curiosity, imagination and creativity, dedication, passion for knowledge, intellectual honesty, openness to new ideas.

1. What are the four basic questions scientists ask when they are attempting to explain a phenomenon?

What, Where, When and How.

1. What is the scientific method?

Collection of facts (data), classification of data, formulation of a hypothesis, testing of the hypothesis, recognition of a theory

1. Why is the classification of date so important in the scientific method?
2. What is meant by “multiple working hypotheses”?

Initially, may be more than one acceptable explanation, but additional data and experimentation will lead to elimination of incorrect explanations.

1. Discuss the reasons why becoming emotionally involved in a scientific discussion can lead to ethical dilemma.

Emotional involvement may affect objectivity. (intimidation, ignoring others or dismissing ideas..)

1. How had the role of the media altered how scientists operate? Include both the positive and negative aspects.

Positive: educate the public, positive publicity for institutions, show how tax dollars are used.

Negative: Manipulate media to support a point of view, disparage ideas that differ, influence journal reviewers.

1. Discuss the reasons why scientists use words like “suggests,” “may,” “could,” “might,” or other equally fuzzy adjectives to describe their work.

Cover their ass, promote an idea without solid evidence.

1. What are good and negative aspects of the media in science?

See 8).

1. What are proponents of a particular hypothesis they trying to accomplish by using word consensus?

To use “mainstream” to support their idea.