

## WTCS Repository

# 10-806-122 Natural Sciences in Society

## Course Outcome Summary

### Course Information

**Description** Focuses on the history, philosophy, common concepts and current issues of natural science which has impacted the United States and global society. Explores processes required to analyze natural science issues. Learners correlate science issues to personal and professional experiences.

**Total Credits** 3.00

### Pre/Corequisites

**Prerequisite** Each Wisconsin Technical College determines the General Education course prerequisites used by their academic institution. If prerequisites for a course are determined to be appropriate, the final Course Outcome Summary must identify the prerequisites approved for use by the individual Technical College.

### Course Competencies

#### 1. Summarize the process by which scientific information is assessed and utilized.

##### Assessment Strategies

- 1.1. by summarizing your initial insights about the impact of science on your life.
- 1.2. by presenting a model and a principle/law concept.

##### Criteria

*Your performance will be successful when:*

- 1.1. You choose a scientific concept and describe why it is a model.
- 1.2. You choose a scientific concept and describe why it is a principle or law.
- 1.3. You determine science concepts that have affected your political world view.
- 1.4. You determine science concepts that have affected your consumer behavior.
- 1.5. You determine science concepts that have affected your spiritual world view.
- 1.6. You determine science concepts that have affected your environmental awareness/behavior.
- 1.7. You determine science concepts that have intrigued you.
- 1.8. You determine science concepts that you have taken a moral or ethical stand on.

#### 2. Explain science concepts common to all branches of science.

##### Assessment Strategies

- 2.1. make an individual presentation.
- 2.2. by participating in "to tell the truth".

##### Criteria

*Your performance will be successful when:*

- 2.1. You give an example of cause and effect.
- 2.2. You explain the difference between continuous and discreet.
- 2.3. You put into perspective numerical data.

- 2.4. You interpret statistical data.
- 2.5. You identify a process.
- 2.6. You describe a system.
- 2.7. You give examples of positive feedback.
- 2.8. You give examples of negative feedback.
- 2.9. You differentiate between fact and opinion.

### **3. Summarize critical historical and philosophical concepts of natural science.**

#### **Assessment Strategies**

- 3.1. by making an oral presentation on a critical natural science concept.

#### **Criteria**

*Your performance will be successful when:*

- 3.1. You state the scientific concept.
- 3.2. You provide historical background.
- 3.3. You explain vocabulary related to the concept.
- 3.4. You identify the person or persons responsible for the discovery of the concept.
- 3.5. You explain the circumstances that drove the discovery of the concept.
- 3.6. You categorize the impact of the concept on society.

### **4. Determine the relationship between technological improvement and environmental stress.**

#### **Assessment Strategies**

- 4.1. by holding a press conference stating an environmental policy.
- 4.2. by assuming the role of the press in a press conference concerning an environmental policy.

#### **Criteria**

*Your performance will be successful when:*

- 4.1. You examined a waste disposal process.
- 4.2. You have identified a beneficial technological advances.
- 4.3. You have stated a new moral/ethical question that has arisen as the result of technology.
- 4.4. You have determined the results of an environmental regulation.
- 4.5. You have determined a political agenda of an environmental group.
- 4.6. You have stated your personal perspective on an environmental policy issue.

### **5. Analyze how society weighs economic progress, population growth and environmental stewardship.**

#### **Assessment Strategies**

- 5.1. perform a press release statement.

#### **Criteria**

*Your performance will be successful when:*

- 5.1. You state economic indicators.
- 5.2. You indicate economic ranking of world regions.
- 5.3. You state population growth of world regions.
- 5.4. You state how environmental indicators are measured.
- 5.5. You state technological advancement of world regions.
- 5.6. You compare environmental laws of world regions.

### **6. Articulate a responsible course of action to address societal and technological conflicts.**

#### **Assessment Strategies**

- 6.1. a group presentation will be made focusing on economic, environmental and societal policies as they relate to a specific world region.

#### **Criteria**

*Your performance will be successful when:*

- 6.1. You state life science conflicts between society and technology.
- 6.2. You state earth science conflicts between society and technology.
- 6.3. You state physical science conflicts between society and technology.

- 6.4. You state space/astronomical science conflicts between society and technology.
- 6.5. You state your opinion on a reasonable environmental policy.
- 6.6. You state your opinion on a reasonable economic policy.
- 6.7. You state your opinion on a reasonable societal policy.

## **7. Analyze current life science issues affecting society.**

### **Assessment Strategies**

- 7.1. by making a group presentation on a life science issue.

### **Criteria**

*Your performance will be successful when:*

- 7.1. You clarify a life science issue.
- 7.2. You state questions concerning a life science issue.
- 7.3. You state assumptions concerning a life science issue.
- 7.4. You apply concepts and vocabulary related to your life science issue.
- 7.5. You describe the positives of your life science issue.
- 7.6. You describe the negative of your life science issue.
- 7.7. You state your position on life science issue.
- 7.8. You provide evidence to support your position of life science issue.
- 7.9. You explain contradictions between your position and scientific evidence.

## **8. Analyze current earth science issues affecting the environment.**

### **Assessment Strategies**

- 8.1. by making a group presentation on a earth science issue.

### **Criteria**

*Your performance will be successful when:*

- 8.1. You clarify a earth science issue.
- 8.2. You state questions concerning a earth science issue.
- 8.3. You state assumptions concerning a earth science issue.
- 8.4. You apply concepts and vocabulary related to your earth science issue.
- 8.5. You describe the positives of your earth science issue.
- 8.6. You describe the negative of your earth science issue.
- 8.7. You state your position on earth science issue.
- 8.8. You provide evidence to support your position of earth science issue.
- 8.9. You explain contradictions between your position and scientific evidence.

## **9. Analyze current physical science issues affecting society.**

### **Assessment Strategies**

- 9.1. by making a group presentation on a physical science issue.

### **Criteria**

*Your performance will be successful when:*

- 9.1. Clarify a physical science issue.
- 9.2. You state questions concerning a physical science issue.
- 9.3. You state assumptions concerning a physical science issue.
- 9.4. You apply concepts and vocabulary related to your physical science issue.
- 9.5. You describe the positives of your physical science issue.
- 9.6. You describe the negative of your physical science issue.
- 9.7. You state your position on physical science issue.
- 9.8. You provide evidence to support your position of physical science issue.
- 9.9. You explain contradictions between your position and scientific evidence.

## **10. Analyze current space/astronomical issues.**

### **Assessment Strategies**

- 10.1. by making a group presentation on a space/astronomical science issue.

## Criteria

*Your performance will be successful when:*

- 10.1. You clarify a space/astronomical science issue.
- 10.2. You state questions concerning a space/astronomical science issue.
- 10.3. You state assumptions concerning a space/astronomical science issue.
- 10.4. You apply concepts and vocabulary related to your space/astronomical science issue.
- 10.5. You describe the positives of your space/astronomical science issue.
- 10.6. You describe the negative of your space/astronomical science issue.
- 10.7. You state your position on space/astronomical science issue.
- 10.8. You provide evidence to support your position of space/astronomical science issue.
- 10.9. You explain contradictions between your position and scientific evidence.