We will concentrate on a few important historical periods to identify and assess various scientific theories. The next fundamental to this approach is examining the cultural conditions that must exist before the next stage affects or creates the ability for knowledge to be transmitted from one generation to the next. This course will focus on the historical development of science in the context of embedded culture.

Course Structure and Information

Professors: Botvin and McIvor

Science and Culture

Physics/ Humanities/ History 361
ideas within those periods in the context of both social and technological settings. Throughout, we will attempt to trace the origin, transmission and refinement of scientific ideas from their early inception to their modern manifestation.

This is an interdisciplinary course designed to enhance both the science and cultural literacy of the students. We intend to present science as an empirical process driven by observations and curiosity that represents an ongoing humanistic endeavor to understand the world. Along the way we will continually confront the paradox that, at any given time, every culture believes that they know the "truth" and therefore are not particularly receptive to new ideas.

This course has three main goals:

1. To get students to understand that science is a process deeply embedded in culture and language

2. To get students to realize that "scientific knowledge" is largely acquired via a combination of accidental discovery and an open mind.

3. To get students to understand the collective set of human and cultural biases that impeded the acquisition and transmission of knowledge from one generation to another.
In addition to the laptops, students will also be making use of several other tools. There will be 5-6 times throughout the term where this facility is extensively used. These will be done in conjunction with the other tools used to assess students' understanding of key concepts. When you see the understanding of key concepts, you will see the assessment of attitudes, misconceptions, and understanding of the personal response system in this class to the Personal Response System in this course.

Course Mechanisms:

[Diagram of concepts related to the course mechanisms]
Grading Policy

Your grade will be based on this approximately criteria:

- Individual assignments: 45%
- The Final Exam: 40%
- In class participation: 15%

Useful Reference Material:

Recommended Text: *The Day the Universe Changed*

- Philosophy of Science
- Comprehensive overview of most of this entire course
- Nature and Philosophy of Science
- Measuring Time
- The Evolution of Measuring Time
- Key Players in the History of Science
- Nicholas of Cusa
- Bruno
- Galileo and the Inquisition

Important Laptop Tools For this course:

- Chat Question Tool - Mostly for Bend Students
  Type a question into the lower pane in the chat box and hit send; use either your real name or whatever in the popup dialogue box
- Generic Group/Text Reporting Tool