Appendix
Contextual Information on Carolina Core Learning Outcomes
Posted October 13, 2009; Revised Feb 8, 2011; Revised August 2011

VI. *Scientific Literacy*

Core Component	Learning Outcome
Scientific Literacy	Upon completion of the Carolina Core, students will be able to apply the principles and language of the natural sciences and associated technologies to historical and contemporary issues.

Context: Some of the critical issues facing society concern sustainability, the environment, energy, biotechnology, health and medicine, food and water, security, and defense. Informed citizens must understand both the principles and manner of thinking associated with technology and the natural sciences, whether chemical, physical, computational, environmental, or biological, enabling them to consider challenges and potential solutions and to engage in public conversations about these issues fully and thoughtfully.

University of South Carolina students must acquire knowledge of the principles of the natural universe and be able to apply scientific methods (broadly defined to include research and inquiry, computational methods and/or empirical reasoning) in the quest to understand and engage in discussions and decision-making. Both acquisition of content and demonstration of skills are necessary. Students must be able to evaluate scientific information on the basis of its source and the methods and technologies used to generate it, to pose and evaluate arguments based on evidence, and to apply conclusions from such arguments appropriately.

Foundational courses that support this learning outcome require students to understand and apply timeless principles and laws of science. Students must understand and describe natural phenomena, and formulate questions and determine answers using methods of empirical reasoning. Application of principles and methods must be illustrated using historical or contemporary issues.

A Carolina Core ***integrative course*** in the major might, for example, require students to consider scientific issues alongside other issues underlying international, national, or local decisions, and express positions that are scientifically and technologically informed. Students who achieve this learning outcome will be able to:

1.   Demonstrate understanding and use of the basic principles, concepts, and terms of the specific scientific discipline.

2.   Demonstrate and apply understanding of scientific method using observation, inquiry, formulation of hypotheses and experimentation to explain natural phenomena.

3.   Evaluate the relationships between science, technology, and society as these affect critical historical or contemporary issues.