

NATURAL SCIENCE (E)

GENERAL EDUCATION GOALS AND OBJECTIVES

PREFATORY STATEMENT

Natural science involves accumulation of knowledge and development of verifiable general laws which explain natural phenomena. The natural science general education component develops and understanding of scientific ways of thinking, including applications and limitations, and an ability to relate quantitative information to general laws. Ultimately, students should develop the confidence to use these principles in the analysis of contemporary problems.

Goal

Students will understand the empirical character of natural science and the role of theories and models in the interpretation and design of experiment. Students will also understand some of the historical and societal context of natural science.

Objectives: All students will

1. understand that scientific ways of thinking are based upon the assumption that nature is rational and intelligible
2. demonstrate and understanding that natural science is empirical by understanding the interplay of theory with experiment
3. use appropriate mathematical and statistical methods to analyze data that either (a) he/she has gathered, or (b) the instructor has provided and will use those data to test the validity of a hypothesis
4. demonstrate an understanding of the foundation of at least one of the natural sciences
5. demonstrate an understanding of the historical context and historical development of some aspect(s) of natural science
6. demonstrate and understanding of some public policy and technological implications of at least one of the natural sciences.