



gtPATHWAYS CONTENT: NATURAL & PHYSICAL SCIENCES

- GT-SC1: COURSE WITH REQUIRED LABORATORY
- GT-SC2: LECTURE COURSE WITHOUT REQUIRED LABORATORY

State-level Goal:

Collectively, the general education requirement in Natural and Physical Sciences is designed to help students master scientific knowledge at a level that facilitates communication in an increasingly technological society, including:

- To instill a clear understanding of the basic scientific viewpoint.
- To enable students to learn and use the scientific method.
- To evaluate the impacts of science and technology on society.
- To increase the level of science literacy.

Content Criteria for Designating a Natural and Physical Sciences Course as gtPathways:

1. The lecture content of a gtPathways science course (GT-SC1 or GT-SC2). Students should be able to:

- a. Develop foundational knowledge in specific field(s) of science.
- b. Develop an understanding of and ability to use the scientific method.
- c. Recognize that science as a process involves the interplay of observation, experimentation and theory.
- d. Develop quantitative approaches to study natural phenomena.
- e. Identify and highlight interconnections between specific science courses being taught and larger areas of scientific endeavor.
- f. Distinguish among scientific, nonscientific, and pseudoscientific presentations, arguments and conclusions.

2. The laboratory (either a combined lecture and laboratory, or a separate laboratory tied to a science lecture course) content of a gtPathways science course (GT-SC1) should be predominantly hands-on and inquiry-based with demonstration components playing a secondary role. Students should be able to:

- a. Develop concepts of accuracy, precision, and the role of repeatability in the acquisition of scientific data.
- b. Formulate and test hypotheses with scientific rigor.
- c. Generate and analyze actual data, use abstract reasoning to interpret these data, and communicate the results of experimentation.



COLORADO

Colorado Commission on
Higher Education

Department of Higher Education

- d. Develop modern laboratory skills.
- e. Emphasize procedures for laboratory safety.

Competency Criteria for Designating a Natural & Physical Sciences Course as gtPathways

All GT-~~CO1~~SC1&2 courses shall include:

- gtPathways competency in mathematics.
- gtPathways competency in critical thinking.

Maximum number of science credits that are guaranteed to transfer:

The total number of science credits guaranteed to transfer in the gtPathways curriculum is seven (7) -(two courses, one of which may be a non-laboratory science course).

11/30/2005