**Appendix B**

**GT PATHWAYS: NATURAL & PHYSICAL SCIENCES GT-SC1 & GT-SC2 COURSES**

**State-level Goal:** Collectively, the general education requirement in Natural & Physical Sciences is designed to develop students’ scientific literacy.

**REQUIRED Syllabus Statement Language for direct inclusion in each GT-SC type of course syllabus is found below. Include the appropriate language for the GT-SC1 (lab) or GT-SC2 (lecture) course. This includes Content Criteria and Competencies.**

**REQUIRED Syllabus Statement Language for direct inclusion in all GT-SC1 course syllabi is below this line. This includes Content Criteria and Competencies.**

**GT-SC1** This [*prefix & number*] course satisfies the Guaranteed Transfer (GT) Pathways Requirements for Natural & Physical Sciences Lab

The Colorado Commission on Higher Education has approved [*prefix & number*] for inclusion in the Guaranteed Transfer (GT) Pathways program in the GT-SC1 category. For transferring students, successful completion with a minimum C- grade guarantees transfer and application of credit in this GT Pathways category. For more information on the GT Pathways program, go to <http://highered.colorado.gov/Academics/Transfers/gtPathways/curriculum.html>.

This designation verifies the following Content Criteria and Competencies are met in this course.

**GT-SC1 Natural & Physical Sciences LAB CONTENT CRITERIA:**

Natural & Physical Sciences course are designed to develop students’ scientific literacy.

*Students should be able to:*

a. Perform hands-on activities with demonstration and simulation components playing a secondary role.

b. Engage in inquiry-based activities.

c. Demonstrate the ability to use the scientific method.

d. Obtain and interpret data, and communicate the results of inquiry.

e. Demonstrate proper technique and safe practices.

**GT-sc1 Natural & Physical Sciences Lab**

**Competencies and Student Learning Outcomes**

***Inquiry & Analysis Competency***

Inquiry is a systematic process of exploring issues/objects/works through the collection and analysis of evidence that results in informed conclusions/judgments. Analysis is the process of breaking complex topics or issues into parts to gain a better understanding of them.

***Student Learning Outcomes (SLOs 4, 5 & 6)***

*Students should be able to:*

1. **Select or Develop a Design Process**

Select or develop elements of the methodology or theoretical framework to solve problems in a given discipline.

1. **Analyze and Interpret Evidence**
   1. Examine evidence to identify patterns, differences, similarities, limitations, and/or implications related to the focus.
   2. Utilize multiple representations to interpret the data.
2. **Draw Conclusions**

State a conclusion based on findings.

***Quantitative Literacy Competency***

Competency in quantitative literacy represents a student’s ability to use quantifiable information and mathematical analysis to make connections and draw conclusions. Students with strong quantitative literacy skills understand and can create sophisticated arguments supported by quantitative evidence and can clearly communicate those arguments in a variety of formats (using words, tables, graphs, mathematical equations, etc.).

***Student Learning Outcomes (SLOs 1 & 2)***

*Students should be able to:*

1. **Interpret Information**: Explain information presented in mathematical forms (e.g., equations, graphs, diagrams, tables, words).
2. **Represent Information**: Convert information into and between various mathematical forms (e.g., equations, graphs, diagrams, tables, words).

**REQUIRED Syllabus Statement Language for direct inclusion in all GT-SC2 course syllabi is below this line. This includes Content Criteria and Competencies.**

**GT-SC2** This [*prefix & number*] course satisfies the Guaranteed Transfer (GT) Pathways Requirements for Natural & Physical Sciences

The Colorado Commission on Higher Education has approved [*prefix & number*] for inclusion in the Guaranteed Transfer (GT) Pathways program in the GT-SC2 category. For transferring students, successful completion with a minimum C- grade guarantees transfer and application of credit in this GT Pathways category. For more information on the GT Pathways program, go to <http://highered.colorado.gov/Academics/Transfers/gtPathways/curriculum.html>.

This designation verifies the following Content Criteria and Competencies are met in this course.

**GT-SC2 Natural & Physical Sciences CONTENT CRITERIA:**

Natural & Physical Sciences course are designed to develop students’ scientific literacy.

*Students should be able to:*

a. Develop foundational knowledge in specific field(s) of science.

b. Develop an understanding of the nature and process of science.

c. Demonstrate the ability to use scientific methodologies.

d. Examine quantitative approaches to study natural phenomena.

**GTsc2 Natural & Physical Sciences**

**Competencies and Student Learning Outcomes:**

***Inquiry & Analysis Competency***

Inquiry is a systematic process of exploring issues/objects/works through the collection and analysis of evidence that results in informed conclusions/judgments. Analysis is the process of breaking complex topics or issues into parts to gain a better understanding of them.

***Student Learning Outcomes (SLOs 4, 5 & 6)***

*Students should be able to:*

1. **Select or Develop a Design Process**

Select or develop elements of the methodology or theoretical framework to solve problems in a given discipline.

1. **Analyze and Interpret Evidence**
   1. Examine evidence to identify patterns, differences, similarities, limitations, and/or implications related to the focus.
   2. Utilize multiple representations to interpret the data.
2. **Draw Conclusions**

State a conclusion based on findings.

***Quantitative Literacy Competency***

Competency in quantitative literacy represents a student’s ability to use quantifiable information and mathematical analysis to make connections and draw conclusions. Students with strong quantitative literacy skills understand and can create sophisticated arguments supported by quantitative evidence and can clearly communicate those arguments in a variety of formats (using words, tables, graphs, mathematical equations, etc.).

***Student Learning Outcomes (SLOs 1 & 2)***

*Students should be able to:*

1. **Interpret Information**: Explain information presented in mathematical forms (e.g., equations, graphs, diagrams, tables, words).
2. **Represent Information**: Convert information into and between various mathematical forms (e.g., equations, graphs, diagrams, tables, words).