

### Physical Sciences (General Goal 11)

**General Goal (11):** Students will understand and actively explore fundamental principles in physical sciences and methods of developing and testing hypotheses used in the analysis of the physical universe.

Reviewers are encouraged to assign a zero to any work sample or collection of work that does not meet benchmark level of performance.

	<b>Capstone</b>	<b>Milestone</b>	<b>Benchmark</b>
<b>General Goal 11</b>	Apply fundamental principles and methods in physical sciences to develop and test hypotheses that analyze the physical universe.	Demonstrate knowledge of fundamental principles in physical sciences and methods of developing and testing hypotheses used in the analysis of the physical universe.*	Identify fundamental principles in physical sciences and methods of developing and testing hypotheses used in the analysis of the physical universe.
<b>SLO 11.1 Knowledge of Physical World</b>	Demonstrate knowledge of multiple aspects of the physical world and its processes.	Demonstrate knowledge of the physical world and its physical processes.*	Identify some basic facts related to the physical world
<b>SLO 11.2 Understanding of Scientific Method</b>	Demonstrate ability to apply the scientific method to generate knowledge of the physical world	Recognize how the scientific method is used to generate knowledge of the physical world.*	Identify the basic principles and terminology of the scientific method.
<b>SLO 11.3 Testing Hypotheses</b>	Use results of testing to evaluate the validity of hypotheses and propose alternate hypotheses as appropriate.	Test hypotheses and draw conclusions to develop knowledge and principles of the physical world.*	Test hypotheses related to the behavior of the physical world.

<p><b>SLO 11.4</b>  <b>Interaction with Humanity</b></p>	<p>Assess complex connections between physical world and human lives.</p>	<p>Demonstrates knowledge of causal relationships between the physical world and human lives.*</p>	<p>Identifies basic connections between the physical world and human lives.</p>
<p><b>SLO 11.5</b>  <b>Predictions Using Models</b></p>	<p>Independently identify and apply appropriate combinations of scientific principles, models, or computations to make predictions about the physical behavior of matter.</p>	<p>Apply a combination of scientific principles, models, or computations to make predictions about the physical behavior of matter.*</p>	<p>Apply a single scientific principle, model, or computation to make predictions about the physical behavior of matter.</p>

\*indicates the Faculty Senate approved SLO

**General Goal 11: Physical Sciences (GG11)**

Students will understand and actively explore fundamental principles in physical sciences and methods of developing and testing hypotheses used in the analysis of the physical universe.

SLO 11.1. Demonstrate knowledge of the physical universe and its physical processes.

SLO 11.2. Understand and use the processes by which knowledge of the physical world is generated.

SLO 11.3. Develop knowledge and principles of the physical world through hypothesis testing and gain the ability to draw defensible conclusions regarding the physical world.

SLO 11.4. Make logical connections between key concepts in the physical sciences and describe the interaction between human lives and the physical world.

SLO 11.5. Understand the ways the physical environment impacts humanity and how human actions affect the environment.

SLO11.6: Apply scientific models to make both qualitative or quantitative predictions about the behavior of matter.

Demonstrates ability use scientific models to make qualitative and quantitative predictions based about the physical behavior of matter.

Maybe:

SLO 11.4 1/2: Demonstrates understanding of connections between the physical world and human lives.