

Physical Sciences (P)

Physical science courses provide instruction in the basic concepts, theories and terms of the scientific method in the context of the physical sciences. Courses focus on major scientific developments and their impacts on society, science and the environment, and the relevant processes that govern physical systems. Students will formulate empirically-testable hypotheses derived from the study of physical processes, apply logical reasoning skills through scientific criticism and argument, and apply techniques of discovery and critical thinking to evaluate outcomes of experiments.

This checklist will be used by auditors in reviewing your course. We provide the checklist here to aid instructors in performing self-audits of General Education courses with the Physical Sciences designation. General Education courses have three targeted student learning outcomes: content, critical thinking, and communication.

General

Y/N Is the General Education designation “Physical Sciences (P)” stated in the syllabus?

Y/N Are reading lengths/word counts/page ranges provided for each assigned reading?

Y/N Are the time lengths provided for each assigned multimedia/audio-visual item?

Y/N Is there a weekly course schedule that includes sufficient detail to determine the topics or themes, brief summary of the content, assigned material, other assignments, due dates, and assessments?

Content

Identify, describe, and explain the basic concepts, theories and terminology of natural science and the scientific method; the major scientific discoveries and the impacts on society and the environment; and the relevant processes that govern physical systems.

Y/N Does the weekly schedule indicate that one or more of these content goals are being met throughout the course e.g: *basic concepts, theories, terminology of natural science, scientific method, major scientific discoveries, impacts on society, the environment, relevant processes that govern physical systems?*

Y/N Do the assessment methods test students’ ability to demonstrate these content goals?

What assessment methods are used to test students' ability to demonstrate these content goals?

- Quizzes
- Written Papers (posts, reports/research papers, or essays)
- Projects
- Exams
- Presentations
- Other _____

How often are students assessed on their ability to demonstrate these content goals for all assessment methods combined?

- Weekly
- Bi-weekly
- Monthly
- Other _____

Critical Thinking

Formulate empirically-testable hypotheses derived from the study of physical processes; apply logical reasoning skills effectively through scientific criticism and argument; and apply techniques of discovery and critical thinking effectively to solve scientific problems and to evaluate outcomes

Y/N Does the weekly schedule indicate that one or more of these critical thinking goals are being met throughout the course e.g: *empirically-testable hypotheses, logical reasoning skills, scientific criticism and argument, techniques of discovery and critical thinking, to solve scientific problems and to evaluate outcomes?*

Y/N Do the assessment methods test students' ability to demonstrate these critical thinking goals?

What assessment methods are used to test students' ability to demonstrate these critical thinking goals?

- Quizzes
- Written Papers (posts, reports/research papers, or essays)
- Projects

- Exams
- Presentations
- Other _____

How often are students assessed on their ability to demonstrate these critical thinking goals for all assessment methods combined?

- Weekly
- Bi-weekly
- Monthly
- Other _____

Communication

Communicate scientific knowledge, thoughts, and reasoning clearly and effectively

Y/N Does the weekly schedule indicate that one or more of these communication goals are being met throughout the course e.g: *communicate scientific knowledge, thoughts, and reasoning clearly and effectively*?

Y/N Do the assessment methods test students' ability to demonstrate these communication goals?

What assessment methods are used to test students' ability to demonstrate these communication goals?

- Quizzes
- Written Papers (posts, reports/research papers, or essays)
- Projects
- Exams
- Presentations
- Other _____

How often are students assessed on their ability to demonstrate these communication goals for all assessment methods combined?

- Weekly
- Bi-weekly
- Monthly
- Other _____

