

Physics Department

Degree Learning Goals and Student Learning Outcomes

B.S. Degree in Applied Arts and Sciences, Major Code: 19021

Degree Learning Goals (DLG)

DLG 1: Principles of Physics

Demonstrate knowledge of the principles of physics.

DLG 2: Inquiry

Participate in scientific inquiry.

DLG 3: Communication

Communicate scientific information and concepts clearly and effectively.

DLG 4: Lifetime Learning

Acquire further physics knowledge and skills during their entire careers.

Student Learning Outcomes (SLO)

DLG 1: Principles of Physics

SLO 1: Relevant Knowledge and Skills

Apply the principles of physics to problem solving in a wide variety of physical situations.

SLO 2: Problem Solving

When confronted with a need for new understanding, draw upon a depth of knowledge and skills to solve the problem, distinguishing what is relevant from what is irrelevant.

DLG 2: Inquiry

SLO 3: Experimenting

(Both majors) Use course resources and reference materials to complete the planning and setting-up of experiments (both in an actual laboratory setting and "in silica"); use problem solving skills while performing such experiments; analyze and interpret data; and draw appropriate, logical, quantitative and qualitative conclusions based on the data. Use computers in the laboratory, both as a part of an instrumentation system in the laboratory and as an analytical tool to generate and evaluate data.

SLO 4: Independent Research

Engage in an independent research project with a supervising faculty member and see it through to completion.

DLG 3: Communication

SLO 5: Oral Communication

Use oral, quantitative, and visual methods to communicate information and concepts clearly, logically, and critically, including organize and present their thesis work to their peers and faculty members using standard presentation software.

SLO 6: Written Communication; Use of Standard English

Use written, quantitative, and visual methods to communicate information and concepts clearly, logically, and critically. Use standard spelling, grammar, and punctuation.

DLG 4: Lifetime Learning

SLO 7: Traits

Exhibit confidence, curiosity, and discipline.

SLO 8: Motivation

Perseverance in the face of a challenge or obstacle. Choose to continue learning physics independently after graduation.