

Physics Learning Outcomes and Criteria for Success

Program Learning Outcomes	Measure: Signature Assignments/Embedded Assessments in the Following Classes:	Criteria for Success
Students will demonstrate an ability to identify, formulate, and solve complex problems by applying principles of science and mathematics (CC: CT)	EGR 2014 - Engineering Mechanics: Statics EGR 2014L - Engineering Mechanics: Statics Lab EGR 2024 - Circuit Analysis EGR 2024L - Circuit Analysis Lab EGR 3034 - Mechanics of Materials (2) EGR 3034L - Mechanics of Materials Lab (2) PHY 4072 - Senior Project I PHY 4082 - Senior Project II	PHY4082: 80% of the students should have an average score of at least 2.5 in each of the major areas on the problem solving rubric.
Students will demonstrate an ability to apply physical principles, mathematical reasoning, and computational techniques to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors	EGR 1023 - Introduction to Engineering II EGR 1023L - Introduction to Engineering II Lab EGR 3034 - Mechanics of Materials (2) EGR 3034L - Mechanics of Materials Lab (2) PHY 4072 - Senior Project I PHY 4082 - Senior Project II	PHY4082: 80% of the students should have an average score of at least 2.5 in each of the major areas on the design rubric.
Students will be able to speak about their work with precision, clarity and organization. (CC: OC)	EGR 2014 - Engineering Mechanics: Statics EGR 2014L - Engineering Mechanics: Statics Lab EGR 3034 - Mechanics of Materials (2) EGR 3034L - Mechanics of Materials Lab (2) PHY 3004 - Modern Physics PHY 3004L - Modern Physics Lab PHY 4072 - Senior Project I PHY 4082 - Senior Project II	PHY 4082: 80% of the students should have an average score of at least 2.5 in each of the major areas on the oral communication rubric.
Students will be able to write about their work with precision, clarity and organization. (CC: WC)	EGR 2014 - Engineering Mechanics: Statics EGR 2014L - Engineering Mechanics: Statics Lab EGR 3034 - Mechanics of Materials (2) EGR 3034L - Mechanics of Materials Lab (2) PHY 3004 - Modern Physics PHY 3004L - Modern Physics Lab PHY 4072 - Senior Project I PHY 4082 - Senior Project II	PHY4082: 80% of the students should have an average score of at least 2.5 in each of the major areas on the written communication rubric.
Students will be able to identify, locate, evaluate, and effectively and responsibly use and cite information for the task at hand. (CC: IL)	EGR 2014 - Engineering Mechanics: Statics EGR 2014L - Engineering Mechanics: Statics Lab EGR 3034 - Mechanics of Materials (2) EGR 3034L - Mechanics of Materials Lab (2) PHY 3004 - Modern Physics PHY 3004L - Modern Physics Lab PHY 4072 - Senior Project I PHY 4082 - Senior Project II	PHY4082: 80% of the students should have an average score of at least 2.5 in each of the major areas on the information literacy part of the written communication rubric.

Program Learning Outcomes	Measure: Signature Assignments/Embedded Assessments in the Following Classes:	Criteria for Success
Students will demonstrate an ability to recognize ethical and professional responsibilities and make informed judgments, which must consider the impact of scientific solutions in global, economic, environmental, and societal contexts	EGR 1023 - Introduction to Engineering II EGR 1023L - Introduction to Engineering II Lab EGR 2014 - Engineering Mechanics: Statics EGR 2014L - Engineering Mechanics: Statics Lab PHY 4072 - Senior Project I PHY 4082 - Senior Project II	PHY4082: 75% of the students will score at least 70% on the relevant ethics rubric.
Students will demonstrate an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives	EGR 1023 - Introduction to Engineering II EGR 1023L - Introduction to Engineering II Lab EGR 2024 - Circuit Analysis EGR 2024L - Circuit Analysis Lab PHY 3004 - Modern Physics PHY 3004L - Modern Physics Lab PHY 4072 - Senior Project I PHY 4082 - Senior Project II	PHY4082: 80% of the students should have an average score of at least 2.5 in each of the major areas on the teamwork rubric.
Students will demonstrate an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use scientific judgment to draw conclusions (CC: QR)	EGR 2024 - Circuit Analysis EGR 2024L - Circuit Analysis Lab EGR 3034 - Mechanics of Materials (2) EGR 3034L - Mechanics of Materials Lab (2) PHY 3004 - Modern Physics PHY 3004L - Modern Physics Lab PHY 4072 - Senior Project I PHY 4082 - Senior Project II	PHY4082: 80% of the students should have an average score of at least 2.5 in each of the major areas in the experimentation rubric.

2 – means that the measure done every two years