

Physics and Engineering Assessment Plan Schedule

Program Learning Outcome [†]	2015-16	2016-17	2017-18	Measurement Tool	Criteria for Success
Students will develop an understanding of the fundamental principles of physics.	Give in PHY475	Give in PHY475	Give in PHY475	Major Field Achievement Test in Physics taken by seniors in the capstone course PHY475.	At least 50% of students will score more than the 40th percentile on the MFAT in Physics.
Students will apply physical principles, mathematical reasoning, and computational techniques to solve real-world problems.	Collect data in PHY361	Collect data in PHY431	Collect data in PHY361	Embedded final exam question given in upper division mastery class on a rotating basis.	At least 75% of students will achieve an average score of 2.5 or higher on criteria described in application rubric.
Students will design and conduct experiments or complete engineering design projects as well as analyze and interpret data.	Collect data in PHY475	Collect data in PHY475	Collect data in PHY475	Two assignments from PHY475: lab rotation one highlighting analysis and Senior Lab final project highlighting design.	At least 75% of students will achieve an average score of 2.5 or higher on criteria described in experimental rubric.
Students will effectively communicate complicated technical information.	PHY475 data collection	PHY475 data collection	PHY475 data collection	PHY475: Senior Lab final written project and technical talk. Juried as a department; Secondary Measure Oral Examination in Electricity and Magnetism.	At least 75% of students will achieve an average score of 2.5 or higher on criteria on the Oral and Written Presentation rubrics; At least 75% of students will achieve an average score of no less than one grade lower on their PHY361 final oral exam than their written exam.
Students will effectively collaborate in teams.	Collection in PHY304L	Collection in PHY304L, possible revision	Collection in PHY304L	Teamwork survey taken, and faculty evaluation of the teams. This survey and evaluation is done in PHY304L.	At least 75% of students will achieve an average score of 2.5 or higher on criteria described in teamwork rubric.

[†] Currently the physics and engineering program learning outcomes are similar enough, that the same measures are being used. Thus this schedule can be used for both the Engineering Physics and for the Physics Programs.