Program-Level Assessment Plan

Program: Physics BS	Degree Level (e.g., UG or GR certificate, UG major, master's program, doctoral program):
Department: Physics	College/School:
Date (Month/Year): December, 2020	Primary Assessment Contact: Irma Kuljanishvili

Note: Each cell in the table below will expand as needed to accommodate your responses.

#	Student Learning Outcomes What do the program faculty expect all students to know or be able to do as a result of completing this program? Note: These should be measurable and manageable in number (typically 4-6 are sufficient).	Curriculum Mapping In which courses will faculty intentionally work to foster some level of student development toward achievement of the outcome? Please clarify the level at which student development is expected in each course (e.g., introduced, developed, reinforced, achieved, etc.).	Assessment Methods	
			Artifacts of Student Learning (What) 1. What artifacts of student learning will be used to determine if students have achieved this outcome? 2. In which courses will these artifacts be collected?	Evaluation Process (How) 1. What process will be used to evaluate the artifacts, and by whom? 2. What tools(s) (e.g., a rubric) will be used in the process? Note: Please include any rubrics as part of the submitted plan documents.
1	Students will apply the principles of physics to problems of fundamental and practical interest.	Classical Mechanics , Quantum Mechanics , Electricity and Magnetism , Optics; Research, Modern Physics, Thermal and Statistical Phys.	Student performance on specific assignments in listed courses assessed by course instructor according to outcome-specific rubric listed below.	In annual department meetings assessment results at individual level and in aggregate, corrective action for weaknesses in student attainment, and impact of previous corrective actions are discussed.
2	Students will apply the principles of physics to problems of fundamental and practical interest.	Modern Physics Lab, Optics Lab, Analog and Digital Electronics, Nanoscience Frontiers, Experimental Physics	Student performance on specific assignments in listed courses assessed by course instructor according to outcome-specific rubric listed below.	In annual department meetings assessment results at individual level and in aggregate, corrective action for weaknesses in student attainment, and impact of previous corrective actions are discussed.
3	Students will collaborate effectively on teams.	Group projects in Modern Physics Lab, Analog and Digital Electronics, Optics Lab.	Student performance on specific assignments in listed courses assessed by course instructor	In annual department meetings assessment results at individual level and in aggregate, corrective action for

			according outcome specific rubric listed below.	weaknesses in student attainment, and impact of previous corrective actions are discussed.
4	Students will communicate effectively and professionally in oral and written formats	Research presentation; written and oral presentations are assigned in Modern Physics I&II, Optics Lab, Nanoscience Frontiers, Applications of Quantum Mechanics	Student performance on specific assignments in listed courses assessed by course instructor according to outcome-specific rubric listed below	In annual department meetings assessment results at individual level and in aggregate, corrective action for weaknesses in student attainment, and impact of previous corrective actions are discussed.
5	Students will be able to discuss contemporary issues in science and technology	Student presentations in Modern Physics I, Modern Physics II, Optics, Nanoscience Frontiers, Research.	Student performance on specific assignments in listed courses assessed by course instructor according to outcome-specific rubric listed below	In annual department meetings assessment results at individual level and in aggregate, corrective action for weaknesses in student attainment, and impact of previous corrective actions are discussed.
6.	Students will be able to formulate numerically and solve scientific problems utilizing at least one programing language or environment	Assignments in Analog and Digital Electronics, Modern Physics Lab, and Optics Lab; Research, Experimental Physics	Student performance on specific assignments in listed courses assessed by course instructor according to outcome-specific rubric listed below	In annual department meetings assessment results at individual level and in aggregate, corrective action for weaknesses in student attainment, and impact of previous corrective actions are discussed.

Use of Assessment Data

1. How and when will analyzed data be used by program faculty to make changes in pedagogy, curriculum design, and/or assessment practices?

Every two years, with completing a full cycle of assessing all 6 outcomes.

2. How and when will the program faculty evaluate the impact of assessment-informed changes made in previous years?

Every fall semester faculty will evaluate the impact of changes made in previous years.

Additional Questions

1. On what schedule/cycle will program faculty assess each of the program's student learning outcomes? (Please note: It is <u>not recommended</u> to try to assess every outcome every year.)

Two year rotation,

Academic Year	Student Outcomes Assessed
2020/2021	**1,2,3**
2021/2022	**4,5,6**

2. Describe how, and the extent to which, program faculty contributed to the development of this plan.

The program faculty collectively developed the outcome-specific rubrics.

IMPORTANT: Please remember to submit any rubrics or other assessment tools along with this plan.