



Student Learning Outcomes Assessment

Academic Year: 2016-2017

Department: Physics and Technology* (Physics and Engineering Programs)

***Note: This assessment program has been revised since the 2015-2016 academic year.**

Program	Objective Assessed	Direct Measure	Direct Measure Results	Indirect Measure	Indirect Measure Results	Proposed Action Items for Assessment Tool	Proposed Action Items for Program	Action Items Implemented This Year	Objective to be Assessed Next Year
BS Physics	1. Physics students will retain relevant knowledge of physical facts and principles over the course of the core physics program	MFT Physics Test score above 50 th percentile	3 of 3 students above 50 th percentile.	Senior level major course grades at or above C.	All tested students have course grades at C or above	NA	NA		yes
BS Physics	2. The majority of physics students should complete a research or special project prior to graduation	50% of graduating seniors complete special project with acceptable level of performance.	1 student completed Independent Study in gravitational waves Two students applied to research for undergraduates to take place after graduation: 1 student accepted into SULI	Present results of REU, CUREA, etc., internship, or independent study	1 student presented results from SULI program (Ferbmilab) at Celebration of Science @ EUP. 2 students presented research in mathematics at YSU PME Regional Conference, MAA Allegheny Mountain Section Meeting and PASSHE Undergraduate	NA	NA		Yes

			program (summer 2017) 1 student applied to SULI program (approval pending for fall 2017)		Research Conference in STEM				
BS Physics	3. Students develop and execute successful plans for post-graduation to establish their careers	Acceptance rate to graduate school or post-grad placement 80% or greater	2 students placed in graduate school --OSU Mech. Eng. --Montana State U. in Gravity Physics. This is a 50% placement rate	80% of graduating seniors/3+2 juniors develop plans	Plans were developed in consultation with advisor and/or chair for all graduating students.	NA	NA		yes

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Associates of Applied Science (AAS)	Students will demonstrate proficiency in algebraic manipulations for science computations	Math placement MATH 104, Students' scores will be compared to measure improvement rate. Target goal: 70%	Satisfactory improvement all student achieving the target goal	None	None	Not applicable	Not applicable	Not applicable	Yes
	Students will demonstrate understanding of quality control principles in the applied sciences.	MFGT 201 Pre/Post worksheets to assess aptitude at 70%	Students displayed a competency with a 84% competency rate	None	None	Not applicable	Not applicable	Not applicable	Yes
Associates of Engineering Technology (Manufacturing Engineering Technology)	Assessed student assignments metal working skills against the national standards NIMS certificate	NIMS level 1 Standard Target goal: 75%	93% competency rate	None	None	Not applicable	Not applicable	None, class will not be offered in 2017-2018	No
	Solidworks CAD software certification exam	CSWP Exam Target goal: 75%	84% satisfactory completion rate	None	None	Not applicable	Not applicable	No additional	Yes
	Part of Engineering Materials Final Exam	Assessment embedded in	None, class was not	None	None	Not applicable	Not applicable	Not applicable	Yes

		final exam. Students needs to display competency Target goal: 70%	offered in 2016-2017 No competency rate reported						
Bachelor of Science in Industrial Engineering Administration (IdEA)	Solidworks CAD software certification exam	CSWP Exam Target goal: 75%	84% satisfactory completion rate	None	None	Not applicable	Not applicable	No additional	Yes
	Part of Engineering Materials Final Exam	Assessment embedded in final exam. Students needs to display competency Target goal: 70%	None, class was not offered in 2016-2017 No competency rate reported	None	None	Not applicable	Not applicable	No additional	Yes
	Business and management assessments evaluate the potential effects of management decisions on future financial performance; 70% of students will meet or exceed the standard	Managerial Accounting case study requiring students to evaluate various alternatives related to product mix and development	82.5% of students met or exceeded the standard	None	None	This is the first use of the assessment tool. The tool will be used for at least two more assessment cycles to determine any trends in student performance.		This is the first implementation of the assessment tool.	Yes