

Program Assessment

2019-2020

Engineering, Physical Science & Process Technology

Math & Physical Science – Pre-Engineering Option	
Date	Click or tap to enter a date.
Competency # and Description	1. Use and apply physical data to solve problems
Course	PHYS 2014 – Engineering Physics I PHYS 2114 – Engineering Physics II MATH 2145 – Calculus I MATH 2155 – Calculus II
Activity	PHYS 2014 - Quizzes, exams PHYS 2114 – Quizzes, exams MATH 2145 – Word problems involving derivations MATH 2155 – Word problems involving vectors.
Measurement (attached copy of instrument with point distribution)	PHYS 2014 - Quizzes, exams PHYS 2114 – Quizzes, exams MATH 2145 - Common questions assessed on a quiz MATH 2155 - Common questions assessed on a quiz
Evaluation Criteria	70% pass rate on exam
2015-2016 Results	PHYS 2014 14 out of 20 – 70.0% PHYS 2114 4 out of 5 – 80.0% MATH 2145 not collected MATH 2155 not collected
2016-2017 Results	PHYS 2014 25 out of 25 – 100% PHYS 2114 18 out of 20 – 90% MATH 2145 – 7/7 (100%) of students met competency MATH 2155 – 31/35 (88.57%) of students met competency MATH 2145 – 26/35 (74.28%) of students met competency MATH 2155 – 4/7 (57.14%) of students met competency
2017-2018 Results	PHYS 2014 19 out of 21 – 90.5% PHYS 2114 15 out of 16 – 93.8% MATH 2145 – 9/12 (75%) of students met competency MATH 2155 – 6/13 (46.15%) of students met competency
2018-2019 Results	PHYS 2014 - 15 out 16 – 93 % PHYS 2114 - 13 out 14 – 93 % MATH 2145 – 8/16 (50%) of students met competency MATH 2155– 14/16 (87.5%) of students met competency MATH 2145 – 18/27 (66.67%) of students met competency MATH 2155 – 4/6 (66.67%) of students met competency

2019-2020 Results	
Summary of changes for 2018-2019	No changes.
Recommendation for changes for 2019-2020	No Changes MATH - Data to be assessed in Fall with faculty
Recommendation for changes for 2020-2021	
Timeline for Review	Fall/spring data will be collected and reviewed in the spring and instructors from all campuses will determine needed adjustments.
Date	Click or tap to enter a date.
Competency # and Description	2. Use logical reasoning to solve problems
Course	PHYS 2014 – Engineering Physics I PHYS 2114 – Engineering Physics II MATH 2145 – Calculus I MATH 2155 – Calculus II
Activity	PHYS 2014 - Quizzes, exams PHYS 2114 – Quizzes, exams MATH 2145 – Word problems involving derivations MATH 2155 – Word problems involving vectors.
Measurement (attached copy of instrument with point distribution)	PHYS 2014 - Quizzes, exams PHYS 2114 – Quizzes, exams MATH 2145 - Common questions assessed on a quiz MATH 2155 - Common questions assessed on a quiz
Evaluation Criteria	70% pass rate on exam
2015-2016 Results	PHYS 2014 14 out of 20 – 70.0% PHYS 2114 4 out of 5 – 80.0% MATH 2145 103 out of 134 – 77% MATH 2155 36 out of 39 – 92%
2016-2017 Results	PHYS 2014 25 out of 25 – 100% PHYS 2114 18 out of 20 – 90% MATH 2145 – 7/7 (100%) of students met competency MATH 2155 – 31/35 (88.57%) of students met competency MATH 2145 – 26/35 (74.28%) of students met competency MATH 2155 – 4/7 (57.14%) of students met competency
2017-2018 Results	PHYS 2014 19 out of 21 – 90.5% PHYS 2114 15 out of 16 – 93.8% MATH 2145 – 9/12 (75%) of students met competency MATH 2155 – 6/13 (46.15%) of students met competency
2018-2019 Results	PHYS 2014 - 15 out 16 – 93 % PHYS 2114 - 13 out 14 – 93 % MATH 2145 – 8/16 (50%) of students met competency MATH 2155 – 14/16 (87.5%) of students met competency MATH 2145 – 18/27 (66.67%) of students met competency

	MATH 2155 – 4/6 (66.67%) of students met competency
2019-2020 Results	
Summary of changes for 2018-2019	No changes.
Recommendation for changes for 2019-2020	No Changes MATH - Data to be assessed in Fall with faculty
Recommendation for changes for 2020-2021	
Timeline for Review	Fall/spring data will be collected and reviewed in the spring and instructors from all campuses will determine needed adjustments.
Date	Click or tap to enter a date.
Competency # and Description	3. Communicate scientific ideas through technical writing
Course	PHYS 2014 – Engineering Physics I PHYS 2114 – Engineering Physics II
Activity	PHYS 2014 – Lab PHYS 2114 - Lab
Measurement (attached copy of instrument with point distribution)	PHYS 2014 – Lab PHYS 2114 - Lab
Evaluation Criteria	Pass rate of 70% on each activity
2015-2016 Results	PHYS 2014 17 out of 20 – 85.0% PHYS 2114 4 out of 5 – 80.0%
2016-2017 Results	PHYS 2014 26 out of 28 – 92.8% PHYS 2114 18 out of 20 – 90%
2017-2018 Results	PHYS 2014 18 out of 21 – 85.7% PHYS 2114 14 out of 16 – 87.5%
2018-2019 Results	PHYS 2014 - 12 out 17 – 70.5 % PHYS 2114 - 12 out 14 – 85.7 %
2019-2020 Results	
Summary of changes for 2018-2019	No changes.
Recommendation for changes for 2019-2020	No Changes
Recommendation for changes for 2020-2021	
Timeline for Review	Fall/spring data will be collected and reviewed in the spring and instructors from all campuses will determine needed adjustments.

Date	Click or tap to enter a date.
Competency # and Description	4. Recognize connections between physical concepts and engineering applications
Course	PHYS 2014 – Engineering Physics I PHYS 2114 – Engineering Physics II
Activity	PHYS 2014 – Assignments, exam PHYS 2114 – Assignments, exam
Measurement (attached copy of instrument with point distribution)	PHYS 2014 – Assignments, exam PHYS 2114 – Assignments, exam
Evaluation Criteria	Pass rate of 70% on each activity
2015-2016 Results	PHYS 2014 not collected PHYS 2114 4 out of 5 – 80.0%
2016-2017 Results	PHYS 2014 not collected PHYS 2114 18 out of 20 – 90%
2017-2018 Results	PHYS 2014 19 out of 21 – 90.5% PHYS 2114 15 out of 16 – 93.8%
2018-2019 Results	PHYS 2014 - 15 out 16 – 93 % PHYS 2114 - 13 out 14 – 93 %
2019-2020 Results	
Summary of changes for 2018-2019	No changes.
Recommendation for changes for 2019-2020	No Changes.
Recommendation for changes for 2020-2021	
Timeline for Review	Fall/spring data will be collected and reviewed in the spring and instructors from all campuses will determine needed adjustments.

Summary of Program and Divisional Changes	
2016-2017	<ul style="list-style-type: none"> Switched semester offerings for ENGR 2433 Thermodynamics and ENGR 2113 Statics to better align with mathematics course offerings. Incorporated a multidiscipline aspect to ENGR 2111 Engineering Mechanics I. Began offering PHYS 2014 Engineering Physics I to Enid campus via ITV. Offered a summer section of Phys 2014 (Tonkawa) to support student to degree completion in a timely manner. Placed 3 engineering interns during the year. Began offering Physics research opportunities to students.

2017-2018	<ul style="list-style-type: none"> Identified recommended electives for specific degree programs. Incorporating an "Introduction to Engineering Course" into the program.
2018-2019	<ul style="list-style-type: none"> Added an Introduction to Engineering Class to help students develop strong skills. First class was held in the Spring Semester
2019-2020	<ul style="list-style-type: none">

Recommendations for Program Changes	
2017-2018	<ul style="list-style-type: none"> Assess the needs of offering a Basic Circuits course for Engineering students. Assess the feasibility of offering a CAD course for Engineering students.
2018-2019	<ul style="list-style-type: none"> Identified recommended electives for specific degree programs. Incorporating an "Introduction to Engineering Course" into the program. No specific changes on the assessment questions or activities.
2019-2020	<ul style="list-style-type: none"> Including the Introduction to Engineering Course to Fall Semester. Added an evening chemistry to help non-traditional students Added a summer ENGR Dynamics course offering.
2020-2021	<ul style="list-style-type: none">

Ag, Science, & Engineering

Program Level Outcomes Timeline						
Program Objectives – Pre-Engineering	Course Map	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020
1. Use and apply physical data to solve problems	PHYS 2014, PHYS 2114, MATH 2145, MATH 2155	X	X	X	X	X
2. Use logical reasoning to solve problems	PHYS 2014, PHYS 2114, MATH 2145, MATH 2155	X	X	X	X	X
3. Communicate scientific ideas through technical writing	PHYS 2014, PHYS 2114	X	X	X	X	X
4. Recognize connections between physical	CHEM 1414 PHYS 2014, PHYS 2114	X	X	X	X	X

concepts and engineering applications						
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