

# Program Assessment

2017-2018

## Ag, Science, & Engineering

<b>Math &amp; Physical Science - Chemistry/Physics Option</b>	
Date	Click or tap to enter a date.
Competency # and Description	1. Use and apply physical data to solve problems
Course	CHEM 1414 – General Chemistry II PHYS 2014 – Engineering Physics I MATH 2145 – Calculus I MATH 2155 – Calculus II
Activity	CHEM 1414 – Quizzes, exams PHYS 2014 - Quizzes, exams MATH 2145 – Word problems involving derivations MATH 2155 – Word problems involving vectors.
Measurement (attached copy of instrument with point distribution)	CHEM 1414 – Quizzes, exams PHYS 2014 – 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	CHEM 1414 31 out of 44 – 70.5% PHYS 2014 14 out of 20 – 70.0% MATH 2145 not collected MATH 2155 not collected
2016-2017 Results	CHEM 1414 39 out of 51 – 76.5% PHYS 2014 25 out of 25 – 100%  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	Click or tap here to enter text.
Summary of changes for 2017-2018	Science - Use the same set of questions along with a rubric for scoring. Math - Conversation still in progress to be completed before fall course start.
Recommendation for changes for 2018-2019	Click or tap here to enter text.
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	CHEM 1414 – General Chemistry II PHYS 2014 – Engineering Physics I MATH 2145 – Calculus I MATH 2155 – Calculus II
Activity	CHEM 1414 – Quizzes, exams PHYS 2014 - Quizzes, exams MATH 2145 – Word problems involving derivations MATH 2155 – Word problems involving vectors.
Measurement (attached copy of instrument with point distribution)	CHEM 1414 – Quizzes, exams PHYS 2014 - 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	CHEM 1414 28 out of 45 – 62.2% PHYS 2014 14 out of 20 – 70.0% MATH 2145 103 out of 134 – 77% MATH 2155 36 out of 39 – 92%
2016-2017 Results	CHEM 1414 38 out of 55 – 69.1% PHYS 2014 25 out of 25 – 100%  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	Click or tap here to enter text.
Summary of changes for 2017-2018	Science - Use same set of questions and use a rubric to score. Math - Conversation still in progress to be completed before fall course start.
Recommendation for changes for 2018-2019	Click or tap here to enter text.
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	CHEM 1414 – General Chemistry II PHYS 2014 – Engineering Physics I
Activity	CHEM 1414 - Labs PHYS 2014 - Labs
Measurement (attached copy of instrument with point distribution)	CHEM 1414 - Labs PHYS 2014 - Labs

Evaluation Criteria	Pass rate of 70% on each activity
2015-2016 Results	CHEM 1414 39 out of 40 – 97.5% PHYS 2014 17 out of 20 – 85.0%
2016-2017 Results	CHEM 1414 44 out of 53 – 83.0% PHYS 2014 26 out of 28 – 92.8%
2017-2018 Results	Click or tap here to enter text.
Summary of changes for 2017-2018	Have students take lab notes and turn these in with the lab report.
Recommendation for changes for 2018-2019	Click or tap here to enter text.
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. Solve problems related to thermodynamics
Course	CHEM 1414 – General Chemistry II
Activity	CHEM 1414 – Quiz, exam
Measurement (attached copy of instrument with point distribution)	CHEM 1414 – Quiz, exam
Evaluation Criteria	Pass rate of 70% on each activity
2015-2016 Results	CHEM 1414 34 out of 45 – 76%
2016-2017 Results	CHEM 1414 46 out of 53 - 86.8%
2017-2018 Results	Click or tap here to enter text.
Summary of changes for 2017-2018	Use a specific quiz for thermo assessment using a rubric for scoring.
Recommendation for changes for 2018-2019	Click or tap here to enter text.
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"> <li>Modified semester offerings of CHEM 1014 Concepts of Chemistry to address the needs of multiple degree program.</li> <li>Added summer offerings of CHEM 1314 (Tonkawa).</li> <li>Added online offerings of PHSC 1114 General Physical Science to both Spring and Summer schedules.</li> <li>Added online sections of ESCI 1114 Earth Science to Summer schedule.</li> </ul>
2017-2018	<ul style="list-style-type: none"> <li>Click or tap here to enter text.</li> </ul>

Recommendations for Program Changes	
2016-2017	<ul style="list-style-type: none"> <li>Pursue more online and evening offerings of course for non-traditional students.</li> <li>Design program options for different workforce areas.</li> <li>Assess the needs of adding course offerings in the subjects areas of circuits, concepts of physics (online) and a General, Organic, Biochemistry (GOB) course.</li> </ul>
2017-2018	<ul style="list-style-type: none"> <li>Click or tap here to enter text.</li> </ul>

## Ag, Science, & Engineering

Program Level Outcomes Timeline						
Program Objectives – Chemistry/Physics	Course Map	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020
1. Use and apply physical data to solve problems	CHEM 1414 PHYS 2014 MATH 2145 MATH 2155	X	X	X	X	X
2. Use logical reasoning to solve problems	CHEM 1414 PHYS 2014 MATH 2145 MATH 2155	X	X	X	X	X
3. Communicate scientific ideas through technical writing	CHEM 1414 PHYS 2014	X	X	X	X	X
4. Solve problems related to thermodynamics	CHEM 1414	X	X	X	X	X

