Program Assessment

2021-2022

Agriculture and Biological Sciences

Outcome 1	Biological Science Pre-Medicine Option
Date	
Outcome and Description	1. Demonstrate knowledge of the levels of structural and functional relationships from atoms to organ systems.
Course	BIOL 2104 – Human Anatomy BIOL 2124 - Microbiology
Activity	BIOL 2104 - Exams BIOL 2124 - Exams
Measurement (attached copy of instrument with point distribution)	BIOL 2104 - Exams BIOL 2124 - Exams
Evaluation Criteria	Pass rate of 70% on each activity
2022-2023 Results	BIOL 2104 47 out of 72 – 65.3% BIOL 2124 22 out of 27 – 81.5% BIOL 2124 (net) 5 out of 6 – 83.3%
Interpretation of Results for 2022-2023	Percentages for BIOL 2124 have rebounded. BIOL 2104 remained below acceptable parameters.
Reflection of Results for 2022-2023	We will continue to collect data using the current assessment tools for these courses.
Actions for 2023-2024 Based on Results	For BISI 2104 we will collect data from both quizzes and exams that cover the cell. We will also collect data from both fall and spring semesters to acquire more data, and continue to compare different formats
Timeline for Review	Fall data will be collected and reviewed in the spring and instructors from all campuses will determine needed adjustments.
Past Data and Actions	
Past Results	2015-2016 BISI 2104 25 out of 35 – 71.4% BISI 2124 46 out of 64 – 71.9% 2016-2017 BISI 2104 28 out of 35 – 80.0% BISI 2124 38 out of 58 – 65.5% 2017-2018 BISI 2104 51 out of 82 – 62.2% BISI 2124 28 out of 47 – 59.6% 2018-2019 BISI 2104 36/63 – 57.1% BISI 2124 33/58 – 56.9% 2019-2020 Data not collected

	2020-2021 Data not collected
Summary of changes for 2018-2019	No changes for the next year. Since averages of both courses dropped this year compared to the last two, assessment needs to continue this year to assess trends.
Recommendation for changes for 2019-2020	Since percentages for both courses dropped for the second consecutive year, we will change the assessment tool to collect data from the comprehensive Final Exam instead of Exam 1 for BISI 2124. For BISI 2104 we will collect data from both quizzes and exams that cover the cell. We will also collect data from both fall and spring semesters to acquire more data.
Recommendation for changes for 2020-2021	NA
Recommendation for changes for 2021-2022	NA

Outcome 2	**Biological Science Pre-Medicine Option**
Date	
Outcome and Description	2. Demonstrate effective implementation of the scientific method and written and oral expression of scientific concepts and analysis of data.
Course	BIOL 2124 - Microbiology CHEM 1414 – General Chemistry II PHYS 1114 – General Physics I PHYS 1214 – General Physics II
Activity	BIOL 2124 – Quizzes, exams, labs, paper CHEM 1414 - Lab PHYS 1114 – Quiz and lab PHYS 1214 – Quiz and lab
Measurement (attached copy of instrument with point distribution)	BIOL 2124 – Quizzes, exams, labs, paper CHEM 1414 - Lab PHYS 1114 – Quiz and lab PHYS 1214 – Quiz and lab
Evaluation Criteria	70% pass rate on exam
2022-2023 Results	BIOL 2124 27 out of 27 – 100.0% BIOL 2124 (net) 5 out of 6 – 83.3% CHEM 1414 31 out of 31 – 100.0% PHYS 1114 22 out of 31 – 71% PHYS 1214 12 out of 14 – 85.7%
Interpretation of Results for 2022-2023	Criteria met for all courses assessed.
Reflection of Results for 2022-2023	We will continue to collect data using the current assessment tools.
Actions for 2023-2024 Based on Results	We will collect data from both fall and spring semesters for the Biological Science courses to acquire more data. Additionally, we will add different formats to data sets to compare, i.e., online and virtual sub groups.
Timeline for Review	Fall data will be collected and reviewed in the spring and instructors from all campuses will determine needed adjustments.
Past Data and Actions	

Past Results	2015-2016 BISI 2124 47 out of 57 – 82.5% CHEM 1414 46 out of 46 – 100% PHYS 1114 63 out of 72 – 87.5% PHYS 1214 21 out of 23 – 91.3% 2016-2017 BISI 2124 54 out of 59 – 91.5% CHEM 1414 43 out of 51 – 84.3% PHYS 1114 57 out of 63 – 90.5% PHYS 1214 27 out of 31 – 97.1% 2017-2018 BISI 2124 41 out of 43 – 95.3% CHEM 1414 50 out of 53 – 94.3% PHYS 1114 25 out of 28 – 89.3% PHYS 1214 15 out of 15 – 100.0% 2018-2019 BISI 2124 53/58 – 91.4% CHEM 1414 47/47 – 100% PHYS 1114 38/51 – 74.5% PHYS 1214 18/23 – 78.3% 2019-2020 Data not collected 2020-2021 Data not collected
Summary of changes for 2018-2019	Develop a common rubric for use by all courses for use when grading lab reports for this assessment.
Recommendation for changes for 2019-2020	Criteria met for all courses assessed. We will continue to collect data using the current assessment tools.
Recommendation for changes for 2020-2021	NA
Recommendation for changes for 2021-2022	NA

Outcome 3	**Biological Science Pre-Medicine Option**
Date	
Outcome and Description	3. Explain concepts of equilibrium, homeostasis, and energy transfer as it relates to human body systems.
Course	BIOL 2104 – Human Anatomy BIOL 2124 - Microbiology CHEM 1414 – General Chemistry II PHYS 1114 – General Physics I PHYS 1214 – General Physics II
Activity	BIOL 2104 – Quizzes, exams BIOL 2124 – Exam, worksheet CHEM 1414 – Quiz, lab PHYS 1114 – Quiz, homework PHYS 1214 – Quiz, lab
Measurement (attached copy of instrument with point distribution)	BIOL 2104 – Quizzes, exams BIOL 2124 – Exam, worksheet CHEM 1414 – Quiz, lab PHYS 1114 – Quiz, homework PHYS 1214 – Quiz, lab

Evaluation Criteria	70% pass rate on activity
2022-2023 Results	BIOL 2104 54 out of 67 – 80.6% BIOL 2124 22 out of 27 – 81.5% BIOL 2124 (net) 5 out of 6 – 83.3% CHEM 1414 17 out of 31 – 54.9% PHYS 1114 22 out of 31 – 71.0% PHYS 1214 12 out of 14 – 85.7%
Interpretation of Results for 2022-2023	Criteria met for all courses assessed with in the Biological Science group. Chemistry was below acceptable parameters.
Reflection of Results for 2022-2023	We will continue to collect data using the current assessment tools.
Actions for 2023-2024 Based on Results	We will collect data from both fall and spring semesters for the Biological Science courses to acquire more data. Additionally, we will add different formats to data sets to compare, i.e., online and virtual sub groups. Changes made by EPP will acceptable for the shared data.
Timeline for Review	Fall data will be collected and reviewed in the spring and instructors from all campuses will determine needed adjustments.
Past Data and Actions	
Past Results	2015-2016 BISI 2104 22 out of 35 - 62.9% BISI 2124 48 out of 64 – 75.0% CHEM 1414 16 out of 21 – 76.2% PHYS 1114 54 out of 66 – 81.8% PHYS 1214 15 out of 17 – 88.2% 2016-2017 BISI 2104 27 out of 35 – 77.1% BISI 2124 36 out of 56 – 64.3% CHEM 1414 48 out of 51 – 94.1% PHYS 1114 57 out of 62 – 91.9% PHYS 1214 32 out of 38 – 84.2% 2017-2018 BISI 2104 49 out of 81 – 60.5% BISI 2124 27 out of 43 – 62.8% CHEM 1414 45 out of 53 – 84.9% PHYS 1114 16 out of 19 – 84.2% PHYS 1214 12 out of 15 – 80.0% 2018-2019 BISI 2104 47/61 – 77.0% BISI 2124 35/58 – 60.3% CHEM 1414 43/47 – 91.5% PHYS 1114 38/51 – 74.5% PHYS 1214 18/23 – 78.3% 2019-2020 Data not collected 2020-2021 Data not collected
Summary of changes for 2018-2019	No changes for the next year.
Recommendation for changes for 2019-2020	Criteria met for BISI 2104, CHEM 1414, PHYS 1114 and PHYS 1214. We will continue to collect data using the current assessment tools for these courses. For BISI 2124, we will change the assessment tool to collect data from the comprehensive Final Exam. We will also collect data from both fall and spring semesters to acquire more data.

Recommendation for changes for 2020-2021	NA
Recommendation for changes for 2021-2022	NA

Summary of Program and Divisional Changes	
2016-2017	• Changed program requirement of MATH 2145 Calc I to MATH 2103 Elem Calc to meet requirement at transfer institutions. • Increased CHEM 1414 offerings in Enid. • Added onsite offering of HLST 1113 (Tonkawa) • Added additional summer course offerings of CHEM 1314 and BISI 2214 (Tonkawa). • Increase internship opportunities within the discipline area.
2017-2018	• Added sections of BISI 2104 and BISI 2204 in Stillwater to accommodate nursing and radiology students. • Purchased A&P lab models and Physiology computer interfaces for Stillwater lab sections. • Added additional online summer course offerings of BISI 1114 and HLST 1113 1314
2018-2019	• Added fall offering of BISI 2104 and spring offering of BISI 2204 in Stillwater • Increased online course offerings for BISI 1114, BISI 2204 and BISI 1214 for fall and spring semesters • Increased summer online course offerings for NUTR 2123 • Increased online offerings of HLST 1113 for summer and fall • Added evening course offerings for BISI 2124 and BISI 2214 in Tonkawa • Added a 16-week and an 8-week hybrid section of BISI 1114 and corresponding lab sections in Stillwater • Added the "Introduction to Scientific Research" course offering for spring semester in Tonkawa
2019-2020	•
2020-2021	•
2021-2022	•
2022-2023	•

Recommendations for Program Changes

2017-2018	• Evaluate enrollment number for BISI 1124, BISI 2104 and BISI 2204 for needs of additional sections.
2018-2019	• Collect data of program classes in the fall if that is the only time they are taught on the campus. • Incorporate an "overall" average for each competency for comparison back to yearly averages. • Report data for BISI students only for CHEM 1414, PHYS 1114 and PHYS 1214.
2019-2020	• Addition of online course offerings for Microbiology. • Addition of evening ITV offering of General Biology through partnering with Pioneer Technology Center.
2020-2021	
2021-2022	
2022-2023	
2023-2024	

Agriculture and Biological Sciences

		Program Level Outcomes Timeline				
Program Outcome – Pre-Medicine Option	Course Map	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025
1. Demonstrate knowledge of the levels of structural and functional relationships from atoms to organ systems	BIOL 2104 BIOL 2124	X	X	X	X	X
2. Demonstrate effective implementation of the scientific method and written and oral expression of scientific concepts and analysis of data.	BIOL 2124 CHEM 1414 PHYS 1114 PHYS 1214	X	X	X	X	X
3. Explain concepts of equilibrium, homeostasis, and energy transfer as it relates to human body systems.	BIOL 2104 BIOL 2124 CHEM 1414 PHYS 1114 PHYS 1214	X	X	X	X	X