Program Assessment

2021-2022

Agriculture and Biological Sciences

Biological Science	
Date	September 21.2022
Competency # and Description	1. Demonstrate the levels of organization from atoms to ecosystems
Course	BIOL 1314 – General Botany BIOL 1414 – General Zoology BIOL 2124 - Microbiology
Activity	BIOL 1314 - exam BIOL 1414 - exam BIOL 2124 - exam
Measurement (attached copy of instrument with point distribution)	BIOL 1314 - exam BIOL 1414 - exam BIOL 2124 - exam
Evaluation Criteria	70% pass rate on exam
2021-2022 Results	BIOL 1314 7 out of 11 – 63.6% BIOL 1414 24 out of 29 – 82.8% BIOL 2124 22 out of 27 – 81.4% BIOL 2124 (net) 5 out of 6 – 83.3%
Interpretation of Results for 2021-2022	Majority of courses either met or exceeded pass rates.
Reflection of Results for 2021-2022	We will continue to collect data using the current assessment tools for these courses.
Actions for 2022 Based on Results	We will collect data from both fall and spring semesters 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 1314 9 out of 11 – 81.8% BISI 1414 27 out of 34 – 79.4% BISI 2124 46 out of 64 – 71.9% 2016-2017 BISI 1314 6 out of 11 – 54.5% BISI 1414 20 out of 29 – 69.0 % BISI 2124 28 out of 47 – 59.6% 2017-2018 BISI 1314 7 out of 9 – 77.8% BISI 1414 23 out of 34 – 67.6% BISI 2124 35 out of 62 – 56.5% 2018-2019 BISI 1314 8/8 – 100%

	BISI 1414 25/33 – 75.8% BISI 2124 33/58 – 56.9% 2019-2020 Data not collected 2020-2021 Data not collected
Summary of previous changes 2018-2019	No changes. Majority of courses either met or exceeded pass rates.
Recommendation for changes for 2019-2020	Criteria met for BISI 1314 and BISI 1414. 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 instead of Exam 1. 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
Date	September 21, 2022
Competency # and Description	2. Demonstrate effective implementation of the scientific method and written and oral expression of scientific concepts and analysis of data.
Course	BIOL 1314 – General Botany BIOL 1414 – General Zoology BIOL 2124 - Microbiology CHEM 1414 – General Chemistry II PHYS 1114 – General Physics I
Activity	BIOL 1314 – Quizzes, BIOL 1414 – Paper, exam BIOL 2124 – Exam, quiz, paper CHEM 1414 - lab PHYS 1114 – Quiz, lab
Measurement (attached copy of instrument with point distribution)	BIOL 1314 – Quizzes, BIOL 1414 – Paper, exam BIOL 2124 – Exam, quiz, paper CHEM 1414 - lab PHYS 1114 – Quiz, lab
Evaluation Criteria	70% pass rate on activity
2021-2022 Results	BIOL 1314 8 out of 11 – 72.7% BIOL 1414 22 out of 29 – 75.9% BIOL 2124 27 out of 27 – 100.0% BIOL 2124 (net) 5 out of 6 – 83.3% CHEM 1414 31 out of 31 – 100% PHYS 1114 22 out of 31 – 71.0%
Interpretation of Results for 2021-2022	Criteria met for all courses assessed.
Reflection of Results for 2021-2022	We will continue to collect data using the current assessment tools.

Actions for 2022 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 1314 6 out of 11 – 54.5% BISI 1414 22 out of 25 – 88% BISI 2124 50 out of 60 – 83.3% CHEM 1414 46 out of 46 – 100% PHYS 1114 63 out of 72 – 87.5% 2016-2017 BISI 1314 7 out of 9 – 77.8% BISI 1414 29 out of 34 – 85.3% BISI 2124 49 out of 57 – 86.0% CHEM 1414 46 out of 55 – 83.6% PHYS 1114 57 out of 63 – 90.5% 2017-2018 BISI 1314 6 out of 11 – 54.5% BISI 1414 23 out of 26 – 88.5% BISI 2124 41 out of 43 – 95.3% CHEM 1414 50 out of 53 – 94.3% PHYS 1114 25 out of 28 – 89.3% 2018-2019 BISI 1314 6/8 – 75% BISI 1414 47/49 – 95.9% BISI 2124 53/58 – 91.4% CHEM 1414 47/47 – 100% PHYS 1114 38/51 – 74.5% 2019-2020 Data not collected 2020-2021 Data not collected
Summary of previous changes 2018-2019	No changes. Majority of courses either met or exceeded pass rates.
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
Date	Sept 21, 2022
Competency # and Description	3. Explain evolutionary theory and its supporting principles.
Course	BIOL 1314 – General Botany BIOL 1414 – General Zoology BIOL 2124 - Microbiology
Activity	BIOL 1314 – Quizzes/Exams BIOL 1414 – Quizzes/Exams BIOL 2124 – Quizzes/Exams

Measurement (attached copy of instrument with point distribution)	BIOL 1314 – Quizzes/Exams BIOL 1414 – Quizzes/Exams BIOL 2124 – Quizzes/Exams
Evaluation Criteria	70% pass rate on activity
2021-2022 Results	BIOL 1314 8 out of 11 – 72.7% BIOL 1414 22 out of 29 – 75.9% BIOL 2124 21 out of 28 – 75% BIOL 2124 (net) 6 out of 6 – 100.0%
Interpretation of Results for 2021-2022	Criteria met for all courses assessed.
Reflection of Results for 2021-2022	We will continue to collect data using the current assessment tools.
Actions for 2022 Based on Results	We will collect data from both fall and spring semesters 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 1314 7 out of 11 – 63.6% BISI 1414 22 out of 27 – 81.4% BISI 2124 45 out of 64 – 70% 2016-2017 BISI 1314 7 out of 9 – 77.8% BISI 1414 46 out of 63 – 73.0% BISI 2124 41 out of 55 – 74.5% 2017-2018 BISI 1314 5 out of 11 – 45.5% BISI 1414 21 out of 24 – 87.5% BISI 2124 33 out of 48 – 68.9% 2018-2019 BISI 1314 5/9 – 55.6% BISI 1414 14/21 – 66.7% BISI 2124 30/55 – 54.5% 2019-2020 Data not collected 2020-2021 Data not collected
Summary of previous changes 2018-2019	No changes. Majority of courses either met or exceeded pass rates.
Recommendation for changes for 2019-2020	Current pass rates are well below data from 2015-2018. Concerns are if the current year is an anomaly or a trend. Recommendation is to collect 2019-2020 data using same assessment tool. If results are below the benchmark, incorporation of a pre- and post-test assessment will be used for this criterion.
Recommendation for changes for 2020-2021	NA
Recommendation for changes for 2021-2022	NA
Assessment for HPER	
Date	Sept 21, 2022

Competency # and Description	4. Demonstrate knowledge and application of the mechanics of the human body.
Course	BIOL 2104 – Human Anatomy BIOL 2204 – Human Physiology
Activity	BIOL 2104 – Exam 3 BIOL 2204 – Average of 5 exams
Measurement (attached copy of instrument with point distribution)	BIOL 2104 – Exam covering muscles and contraction mechanism. BIOL 2204 – Exams covering the application of mechanics.
Evaluation Criteria	BIOL 2104 – 70% of students will successfully pass this test BIOL 2204 - 70% of students will successfully pass this test
2021-2022 Results	Results????? (I think I had sent these to you after I submitted the others)
Interpretation of Results for 2021-2022	
Reflection of Results for 2021-2022	
Actions for 2022 Based on Results	
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	2016-2017 N/A 2017-2018 BISI 2104 – no data collected BISI 2204 – no data collected 2018-2019 BISI 2104 – 40/63 – 63.5% BISI 2204 38/79 – 48.1% 2019-2020 Data not collected 2020-2021 Data not collected
Summary of previous changes 2018-2019	No data collected
Recommendation for changes for 2019-2020	Incorporate more review exercises over the cell and membrane transport mechanisms. Review if students have taken BISI 1214 Biology for Majors or BISI 1114 General Biology and if they have also met pre-requisite of CHEM 1314 Chem I prior to enrollment in BISI 2204.
Recommendation for changes for 2020-2021	NA
Recommendation for changes for 2021-2022	NA

Summary of Program and Divisional Changes	
2016-2017	• Added additional summer course offerings of BISI 1114 (online) and CHEM 1314 (Tonkawa). • Purchased student lab materials for Stillwater (A&P models, Physiology computer interfaces, Botany microscope slides).

2017-2018	• Added sections of BISI 1314, BISI 2104, BISI 2204 in Stillwater. • Began offering CHEM 1414 during the fall semester in Enid.
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, BISI 1114, and HLST 1113 • 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 • Purchased A&P lab models and Physiology computer interfaces for Stillwater lab sections. • 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 • 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
2019-2020	•
2020-2021	•
2021-2022	•

Recommendations for Program Changes	
2017-2018	• Monitor enrollment for BISI 1124, BISI 2104 and BISI 2204 to assess the need to add more sections across campuses. • Purchase new microscopes for Enid and Stillwater campuses.
2018-2019	• Incorporate an "overall" average for each competency for comparison back to yearly averages. • Report data for BISI students only for CHEM 1414 and PHYS 1114.
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	

Ag, Science, & Engineering

		Program Level Outcomes Timeline				
Program Objectives – Biological Sciences	Course Map	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025
1. Demonstrate the levels of organization from atoms to ecosystems.	BIOL 1314 BIOL 1414 BIOL 2124	X	X	X	X	X
2. Demonstrate effective implementation of the scientific method and written and oral expression of scientific concepts and data.	BIOL 1314 BIOL 1414 BIOL 2124 CHEM 1414 PHYS 1114	X	X	X	X	X
3. Explain evolutionary theory and its supporting principles	BIOL 1314 BIOL 1414 BIOL 2124	X	X	X	X	X