

EXAMPLE

Winthrop University Academic Program Continuous Improvement Plan 2019-20

College or Unit: College of Arts and Sciences

Department: Biology, BS

Academic Year: 2019-20

Dean or Unit Head: XX

Program Coordinator: XX

Unit Assessment Coordinator: XX



Program Mission Statement: The mission of the Bachelor of Science program in the Department of Biology is to prepare undergraduate students for entry-level careers in a biology-related field or to pursue studies in an advanced degree program. By providing instruction that explores the science of life, in all its complexity and diversity, and the opportunity to work on research or participate in practical biological experiences, the program strives to create students who are knowledgeable across various biological fields and are able to think critically. This mission aligns with the institutional and college missions of educating students to meet the needs and challenges of the contemporary world.

Department Mission Statement: XX

Unit Mission Statement: XX

University Mission Statement: Winthrop University provides personalized and challenging undergraduate, graduate, and continuing professional education programs of national caliber within a context dedicated to public service to the State of South Carolina...The values of service, excellence, diversity, community, and leadership provide the foundation of Winthrop’s continuing development and shape Winthrop’s continuing success...Winthrop students acquire and develop knowledge, skills, capabilities, and values that enrich their lives and prepare them to meet the needs and challenges of the contemporary world, including the ability to communicate effectively, appreciate diversity, work collaboratively, synthesize knowledge, solve complex problem, and adapt to change. [Full mission statement: <https://www.winthrop.edu/president/default.aspx?id=1620>]

Student Learning Outcome #1: Students will demonstrate knowledge of the broad fundamental concepts of biology.	This outcome is carried over from 2018-19 because it is central to the program.
Alignment of outcome with the Winthrop Plan, if applicable: Goal 2 – Enhance quality of the student experience	
Alignment of outcome with the College’s Strategic Plan, if applicable:	
Alignment of outcome with the University Learning Competencies (ULCs), if applicable:	These alignments indicate the relationship between the program, the college, and university.
Drop down box:	

ULC 1 – Graduates think critically and solve problems.

Summary Statement of Assessment-based Accomplishments and Improvements: (summary statement based on prior year’s Continuous Improvement Action Plan)

This section will not be completed in the 2019-20 Plan. It is the summary of changes made in 2019-20 and the impact they had on student learning. This section will be completed at the end of the 2019-20 assessment cycle.

Activities:

The activities being conducted in 2019-20 are clearly described. They align with the Continuous Improvement Action Plan described in the 2018-19 Continuous Improvement Report (based on data gathered in 2018-19).

As identified in the Action Plan for 2019-20 (from our 2018-19 Report), the program will engage in the following activities in 2019-20 to increase the emphasis on diversity of organisms within the curriculum. The diversity of organisms is an area of the Major Field Test (MFT) on which our students have repeatedly scored below the target.

1. Dr. James, the instructor of record for BIO 115, will continue to use the three readings added to the curriculum last year. These include “Diversity of Organisms” (supports lecture in evolution unit), “Concerns with Near Extinct Amazon Rainforest Flora” (supports small group discussion in the plant unit), and “Impact of Pollution on Organisms” (supports laboratory activity in environmental impact unit). (1 – “Diversity of Organisms” reading; 2 – “Concerns with Near Extinct Amazon Rainforest Flora” reading; 3 – “Impact of Pollution on Organisms” reading)

Includes reference to documentation.

2. Dr. Kim, the instructor of record for BIO 332, will modify the course’s laboratory curriculum in the program’s efforts to place more emphasis on diversity of organisms, specifically fungi and non-seed-bearing plants. The general ecology lab will be modified to include an activity on seed-bearing plants, with the seed-bearing plant lab being replaced with the lab, “Fungi and Ferns.” The laboratory exercise contains a portion that is descriptive in nature and a section that is “hands-on.” The program is using some of laboratory supplies budget to enhance the program’s collection of ferns and fungi samples. (4 – Fungi and Ferns Lab)

Includes reference to documentation.

3. MFT review sessions will be conducted early in the spring semester for students taking the MFT in spring 2020. Review sessions will be organized by topic and students can select which ones they desire to attend, with attendance at all being recommended. Each one-hour sessions will be facilitated by a faculty member with the appropriate expertise. We will have discussions with students early in the fall semester to determine the best time to conduct the sessions, optimizing the availability of students. Current possibilities include Saturday mornings, Sunday evenings, common hours, and a week night evening. The timing decision will be made within two weeks of the beginning of the fall semester and communicated to students via email, program/department website, bulletin boards, social media outlets, and classroom announcements.

This section will be updated to reflect the details of the training sessions at the end of the 2019-20 assessment cycle.

Direct measure of assessment.

Clear identification of tool and discussion of how the tool supports the outcome.

Assessment Method #1:

All students are required to take the Major Field Test (MFT) in Biology prior to graduation. The MFT is a good assessment method for this outcome since it assesses student knowledge across a wide spectrum of biological concepts. (5 – ETS Major Field Test for Biology Test Description and Sample Test Questions)

Includes reference to documentation. This document will be added at the end of the 2019-20 assessment cycle.

Most students complete the MFT in the spring semester of their senior year, however, a few will take it in the spring semester of their junior year if they plan to graduate the following December. Students take the MFT in a nearby institution of higher education that is a certified ETS Testing Center. (Note: The department has a process and funding to support students who are not able to afford the testing fee.) (6 – Roster of spring 2020 student test participants by academic year)

Data collection process is clearly described – who, what, where, when.

Test results are provided directly to students by ETS. Institutional MFT data are available for download via a web interface. Staff within the Office of the Provost download and share the data with the Biology department chair. He then shares it with program faculty and a meeting to discuss the data is held.

Clearly states the desired results.

Target:

55% of test questions within each of the nine indicators are to be answered correctly by the students as a collective group. This has been and remains the program's target based on historical data (see 5-year data results), the benchmark set by several of the institution's peer institutions, and the addition of MFT review sessions in 2019-20. (7 – Summary of discussions with peer institutions regarding student expectations for MFT Biology performance)

Provides sound reasoning for the established target and documents its discussion with peer institutions.

Assessment Results:

This section will not be completed in the 2019-20 Plan. Assessment results will be added at the end of the 2019-20 assessment cycle.

Discussion of Assessment Results:

This section will not be completed in the 2019-20 Plan. Discussion of assessment results will be added at the end of the 2019-20 assessment cycle.

Indirect measure of assessment.

Multiple methods of assessment are used (MFT, Senior Survey, and Lab Reports).

Assessment Method #2:

Clear identification of tool and alignment of tool with the outcome.

All senior students enroll in BIO 499 during the spring semester, so it is an ideal environment for students to reflect over their four-years in the biology program. Students within the course are asked to complete a Senior Survey that focuses on the biology curriculum, their research experience, and their level of confidence in their knowledge of basic fundamental biological concepts. The survey, although written by program faculty, does incorporate selected questions from David Lopatto's Survey of Undergraduate Research Experiences (S.U.R.E.). (8 – David Lopatto's Survey of Undergraduate Research Experiences; 9 – Biology Program Senior Survey)

Includes reference to documentation.

The Senior Survey was modified this year to include a few questions regarding the MFT prep sessions. These questions will address the timing and quality of the sessions, and the students' perception of the sessions' contribution to their test readiness.

Note that the survey has been expanded to assess the MFT review sessions that have been added this year. The specific questions will be added here at the end of the 2019-20 assessment cycle.

The online survey is completed by students during the first part of class using their own laptops, tablets, or phones. The instructor leaves the room and a GA not associated with BIO 499 monitors the survey administration. Data are extracted from the system by the biology program's administrative

The data collection process is clearly described.

assistant and shared with faculty after final grades are due. Program faculty review and discuss the data during an assessment meeting held the week after spring graduation.

Clear expectation.

Target:

The program expects 85% of seniors to be “confident” or “very confident” in their knowledge of the broad fundamental concepts of biology. Since the majority of our graduates go to professional school (pre-med, pre-dent) or graduate school, the faculty feel strongly that they need to feel confident in their knowledge of fundamental concepts to assure success in the next chapter of their professional lives. Additionally, historical data trends (see 5-year data results) support the feasibility of this target.

Justification for target.

Assessment Results:

This section will not be completed in the 2019-20 Plan. Assessment results will be added at the end of the 2019-20 assessment cycle.

Discussion of Assessment Results:

This section will not be completed in the 2019-20 Plan. Discussion of assessment results will be added at the end of the 2019-20 assessment cycle.

Direct measure of assessment.

Note the addition of a third assessment method based on the new activity – a new lab on diversity of organisms.

Assessment Method #3:

All laboratory reports in BIO 332 are assessed with a common lab report rubric. The new lab, Fungi and Fern Lab, which will be assessed with this rubric as well. The rubric assesses the dimensions of development of hypothesis, conduction of experiment, data collection, data analysis and interpretation, and conclusion for all lab reports. The department would like to see how rubric results for this lab compare to rubric ratings for the other BIO 332 labs. (10 – Biology Laboratory Report Rubric)

Clear expectation.

Target:

Since BIO 332 is an upper-level laboratory course, the expectation is that 80% of students score a rating of “3 – above average” or “4 – exceptional” on each dimension of the rubric. This level of performance will also be expected of students on their Fungi and Fern Lab Report. The department would like to see how rubric results for this lab compare to rubric ratings for the other BIO 332 labs.

Justification for target.

Assessment Results:

This section will not be completed in the 2019-20 Plan. Assessment results will be added at the end of the 2019-20 assessment cycle.

Discussion of Assessment Results:

This section will not be completed in the 2019-20 Plan. Discussion of assessment results will be added at the end of the 2019-20 assessment cycle.

Continuous Improvement Action Plan for next year:

This section will not be completed in the 2019-20 Plan. The Continuous Improvement Action Plan will be added at the end of the 2019-20 assessment cycle.

Supporting Documentation

This section will not be completed in the 2019-20 Plan. Documentation will be added at the end of the 2019-20 assessment cycle.