

PROGRAM ASSESSMENT PLAN ~ 2014-15 through 2019-20

This document only needs to be updated when changes are made.

UNIT	COLLEGE OF ARTS AND SCIENCES
Department (if applicable)	BIOLOGY
Degree/Program	Bachelor of Science/Secondary Education Specialization
Date Prepared	June 28, 2015
Date Revised	Updated to New for (6/30/15),

PROGRAM MISSION

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Biology is an integrative discipline that emerges from all areas of the natural sciences and builds upon those foundations. In the spirit of our discipline the Biology Department is committed to providing students with a strong foundation in the life sciences that culminates in specialized experiences designed to prepare students not only for diverse career opportunities available in the biological sciences, but also to be life-long learners. Fundamental to our students' development is the acquisition of a broad knowledge base, the ability to integrate and apply this knowledge, and the ability to communicate observations and analyses. Through close interaction with our faculty in the classroom and in research environments the Biology Department fosters students' innate desire for discovery and helps them develop the skills and modes of thinking that will empower their contributions to an ever-expanding understanding of the natural world.

Within the broader umbrella of Biology, the B.S. degrees in Biology Education place a stronger emphasis on the principles of ecology and evolution as well as the aspects of human biology that are the principle focus in secondary classrooms. However, the Biology Education degree is built around a biology core that provides students with a broad background in the natural sciences and fundamental biological principles. The B.S. in Biology Education is intended to prepare students to bring multiple scientific approaches and analytical skills to the classrooms that they will be leading.

PROGRAM STUDENT LEARNING OUTCOMES (PSLO)

If the program has more than 6 PSLO, hit "Tab" in the last cell to add another row. Cells will expand to accommodate text.

Upon completion of the program students will be able to:

PSLO 1	Describe or distinguish major biological principles in cell biology, genetics, organismal biology, ecology, and evolution.
PSLO 2	Demonstrate the complex interrelationships amongst ecological and evolutionary forces and how they influence organisms, populations, and community function.
PSLO 3	Explain the scientific process and be able to discriminate between different approaches to science.
PSLO 4	Identify, recognize, and recall human anatomy, physiology, reproduction and development.
PSLO 5	Design experiments and analyze and interpret basic scientific data.
PSLO 6	Explain scientific information in oral and written presentation in a clear and professional manner.

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CURRICULUM MAP (Alignment)

List all courses required for program majors and indicate, where applicable, (using the following key) the PSLO with which they are associated.

T = Taught

X = Taught and Assessed

A = Assessed

If the program has more than 6 PSLO, "Copy and Paste" rows from this table below the existing table, beginning with the row numbering the PSLO.

REQUIRED COURSES	PSLO 1	PSLO 2	PSLO 3	PSLO 4	PSLO 5	PSLO 6
BI 102	X					
BI 103	X	X	X		X	X
BI 155			T	T		
BI 202		T	T			
BI 255			X	X	T	
BI 275				X		
BI 301	X	X	X			
BI 310	X	X	X			X
BI 333	X				T	T
BI 340	X	X				
BI 390			X		X	X
BI 395			X		X	X

ASSESSMENT MEASURES (Method)

Indicate (mark with an X) the type of assessment used to evaluate each PSLO.

Check as many boxes as apply.

Programs should use at least 2 direct measures for each PSLO.

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	PSLO 1	PSLO 2	PSLO 3	PSLO 4	PSLO 5	PSLO 6
DIRECT						
Portfolio						
Performance Assessment (Poster presentations at scientific conferences)						X
Performance Assessment (Off campus experience – Clinical, Internship, Practicum, etc.)						
Professional Credentialing Exam						
Major Field Test or National Exam	X	X				
Course Embedded Assignment (Oral Presentations in Core Courses)	X	X	X	X	X	X
Project Evaluation (e.g. research)						
Course Grades	X	X	X	X	X	X

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Other (Describe)						
INDIRECT						
Surveys	X	X	X		X	X
Exit Interviews/Focus Groups						
Other (Describe)						

THRESHOLD OF STUDENT SUCCESS

For each PSLO, list each measure separately and indicate the threshold of student achievement considered acceptable.

(example: 75% of students will receive B or better) - see Assessment Plan Guide for additional instructions.

Hit :Tab" in the last cell to add another row. Cells will expand to accommodate text.

PSLO	MEASURE	THRESHOLD
1	Major Field Test	Above the national standard in all sub-areas of the exam
	Course Embedded Assignment	90% earn a B or better in 1 lab in the BI 103 course and 3 labs in BI 310; 90% correctly answer ¾ of embedded questions in BI 103 and BI 310 final exams.
	Course Grades	75% earn a C or better for BI 102; 90% earn a C or better for all other core courses
	Senior Exit Survey	100% of students agree with senior exit survey questions pertaining to PSLO 1
2	Major Field Test	Above the national standard in the "Population Biology, Ecology & Evolution " subsection of the exam
	Course Embedded Assignment	90% Earn a B or better in 3 labs in the BI 103 course and 10 labs in BI 310
	Course Grades	75% earn a C or better for BI 103; 90% earn a C or better in BI 310 and BI 340
	Senior Exit Survey	100% of students agree with senior exit survey questions pertaining to PSLO 2
3	Course Embedded Assignment	90% Earn a B or better in 1 lab in the BI 103 course and 3 labs in BI 310; 90% correctly answer ¾ of embedded questions in BI 103 and BI 310 final exams.
	Course Grades	100% earn a C or better in BI 395; 90% earn a C or better in all other courses
	Senior Exit Survey	100% of students agree with senior exit survey questions pertaining to PSLO 3
4	Course Embedded Assignment	90% Earn a B or better in 3 labs in the BI 255 course; 90% correctly answer ¾ of embedded questions in BI 155, BI 255, and BI 275 final exams.
	Course Grades	90% earn a C or better in BI 155, BI 255 and BI 275
5	Oral Presentation	Critical Thinking Rubric - 90% of biology education majors are at target (3) level for all rubric components in seminar courses
	Course Embedded Assignment	90% Earn a B or better in 4 labs BI 310

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	Course Grades	100% earn a C or better in BI 390
	Senior Exit Survey	100% of students agree with senior exit survey questions pertaining to PSLO 5
6	Poster Presentation	60% of all biology majors present at least once at a conference
	Course Grades	100% earn a C or better in BI 390 and BI 395
	Course Embedded Assignment	90% Earn a C or better in presentations in BI 103 and BI 310 Oral Communication Rubric - 90% of biology majors are at target (3) level for all rubric components in seminar courses
	Senior Exit Survey	100% of students agree with senior exit survey questions pertaining to PSLO 6

DATA COLLECTION CALENDAR

Indicate how often assessment data are collected for each PSLO.

S=every semester

Y=every year

2=every other year

3=every 3 years, (etc.)

O-Other (please explain)

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	Frequency of Data Collection
PSLO 1	S
PSLO 2	S
PSLO 3	S
PSLO 4	S
PSLO 5	S
PSLO 6	S

ANALYSIS AND REPORTING CALENDAR

Indicate (mark with an X) the years in which each PSLO was/will be analyzed and reported.

Cycle will repeat after Year 6.

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	PSLO 1	PSLO 2	PSLO 3	PSLO 4	PSLO 5	PSLO 6
Year 1/2014-15						X (Data Not Available)
Year 2/2015-16					X (Data Not Available)	
Year 3/2016-17	X					
Year 4/2017-18		X				
Year 5/2018-19			X			
Year 6/2019-20				X		

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If field experiences are a significant part of the program, explicitly address how validity and reliability of the evaluation instrument is ensured.

Cell will expand to accommodate text.

N/A

STAKEHOLDER INVOLVEMENT

Describe how stakeholders (faculty, students, alumni, advisory boards, community, etc.) are involved in the development, implementation, periodic review and continuous improvement of the Assessment Plan.

Cell will expand to accommodate text.

Every year, all biology faculty have access to assessment data and reports. These are briefly discussed at a faculty meeting. If needed, faculty meet again to discuss and implement changes regarding the assessment plan.

PROGRAM ASSESSMENT PLAN REVIEW CYCLE

Indicate (mark with an X in column 2) the year(s) in which this Program Assessment Plan will be reviewed and indicate in column 3 (when applicable) when changes are made and addressed in the appropriate year's annual report.

Cycle repeats after Year 6.

	Program Assessment Plan Review	Were changes made and addressed in the Annual Report? <u>Yes</u> or <u>No</u> (update when applicable)
Year 1/2014-15		
Year 2/2015-16	X	
Year 3/2016-17		
Year 4/2017-18		
Year 5/2018-19	X	
Year 6/2019-20		