PROGRAM ASSESSMENT PLAN ~ 2013-14 through 2018-19

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

6UNIT	**COLLEGE OF ARTS AND SCIENCES**
Department (if applicable)	**BIOLOGY**
Degree/Program	**B.S. Molecular Biology and Biotechnology**
Date Prepared	**6/12/15**
Date Revised	**8/4/16**

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 Biology, the disciplines of Molecular Biology and Biotechnology are the pillars of modern biomedical research. The Biology Department is excited to offer these new avenues which build upon the foundations of basic Biology and are key to gaining new knowledge for the prevention and combating of a number of diseases and expanding the boundaries in medicine and science. We aim to prepare well-educated scientists able to approach problems with creativity and flexibility. A key element in this preparation is active participation in the process of scientific inquiry. 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.

Our Department has a long and distinguished history, with faculty members professionally engaging in their sub-disciplines through scholarly work and service. This enables us to contribute to the evolution of our respective disciplines and function as active members of the greater scientific community abreast of the dynamic nature of our fields. We strive to establish and maintain the highest standards of curricular innovation, academic rigor, technical skill, modern physical facilities, and personalized mentorship, in support of our primary goal: providing a high quality learning experiences for all students that we engage. We are, above all, a student-centered team of teachers.

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	Acquire a comprehensive understanding of biological principles including cell biology, genetics, organismal biology, structure and function, ecology and evolution.

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PSLO 2	Acquire the ability to understand and utilize the scientific method.
PSLO 3	Master a variety of scientific techniques in the core biology disciplines of organismal biology, microbiology, genetics, molecular biology and undergraduate research.
PSLO 4	Develop the ability to analyze and interpret scientific data.
PSLO 5	Develop the oral and written presentation skills to successfully communicate scientific information in a professional manner.

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	X				
BI 103	X	X	X			
BI 280	X					
BI 301		X	X	T		
BI 333	X	X	X	X		
BI 353		X		T		
BI 354			X	T		
BI 380				T	X	
BI 390				X	X	
BI 395		X	X	T	X	

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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.

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.

	PSLO 1	PSLO 2	PSLO 3	PSLO 4	PSLO 5	PSLO 6
DIRECT						
Portfolio						
Performance Assessment (Art, Music, Theatre, etc.)					X	
Performance Assessment (Off campus experience – Clinical, Internship, Practicum, etc.)						
Professional Credentialing Exam						
Major Field Test or National Exam	X					
Course Embedded Assignment				X	X	
Project Evaluation (e.g. research)						
Course Grades	X	X	X	X	X	
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
PSLO 1	Course grades	60% earn a B or better for BI 102; 75% earn a B or better for all other courses
	Biology Major Field Test	above the national standard in all sub-areas of the exam
	Senior Exit Survey	100% of students agree with survey questions pertaining to PSLO 1
PSLO 2	Course grades	60% earn a B or better for BI 102; 75% earn a B or better for all other courses
	Senior Exit Survey	100% of students agree with survey questions pertaining to PSLO 2
PSLO 3	Course grades	100% earn a B or better in BI 395; 75% earn a B or better in all other courses

	Senior Exit Survey	100% of students agree with survey questions pertaining to PSLO 3
PSLO 4	Course grades	60% earn a B or better for BI 102; 75% earn a B or better for all other courses
	Senior Exit Survey	100% of students agree with survey questions pertaining to PSLO 4
	Course embedded assignment	Oral Communication Rubric - 90% of majors are at target (3) level for all rubric components involving oral presentation Written Communication Rubric – 80% of majors earn a B or better in research paper writing for BI 333
PSLO 5	Course grades	60% earn a B or better for BI 102; 75% earn a B or better for all other courses
	Senior Exit Survey	100% of students agree with survey questions pertaining to PSLO 5
	Student presentations at conferences	60% of majors present at least once at a conference
	Course embedded assignment	Oral Communication Rubric - 90% of majors are at target (3) level for all rubric components involving oral presentation

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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)
If the program has more than 6 PSLO, hit "Tab" in the last cell to add another row.

	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.
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.

	PSLO 1	PSLO 2	PSLO 3	PSLO 4	PSLO 5	PSLO 6
Year 1/2013-14						
Year 2/2014-15						
Year 3/2015-16	**X**					
Year 4/2016-17		**X**				
Year 5/2017-18			**X**			
Year 6/2018-19				**X**	**X**	

Years 1 and 2 are not applicable. Program start date is Fall 2015

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.

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. We will also receive feedback from organizations that

host BI 380 biotechnology internship and from graduate or professional schools that our students attend after receiving their degree.

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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? Yes or No (update when applicable)
Year 1/2013-14		
Year 2/2014-15		
Year 3/2015-16	X	
Year 4/2016-17		
Year 5/2017-18		
Year 6/2018-19	X	