Assurance of Student Learning 2018-2019	
Ogden College of Science and Engineering	Biology Department
Medical Laboratory Science- 582 (5004)	

Use this page to list learning outcomes, measurements, and summarize results for your program. Detailed information must be completed in the subsequent pages.			
Student Learning Outcome 1: Graduates will apply biological content knowledge to analyzing biological specimen in the clinical laboratory.			
Instrument 1	American Society of Clinical Pathology Board of Certification Exam score/pass rate		
Instrument 2			
Instrument 3			
Based on your results, circle or highlight whether the program met the goal Student Learning Outcome 1.		**Met**	**Not Met**
Student Learning Outcome 2: Students will demonstrate proficiency in using instrumentation to analyze medical specimen.			
Instrument 1	Observation of students during Senior year, during clinical internship, operating equipment and instrumentation- reported by preceptor as a proficiency lab score		
Instrument 2			
Instrument 3			
Based on your results, circle or highlight whether the program met the goal Student Learning Outcome 2.		**Met**	**Not Met**
Student Learning Outcome 3: Seniors will be prepared for entry level career in the clinical laboratory.			
Instrument 1	NAACLS self-study question-"Where did you obtain employment?" at the end of the clinical year.		
Instrument 2			
Instrument 3			
Based on your results, circle or highlight whether the program met the goal Student Learning Outcome 3.		**Met**	**Not Met**

Program Summary (Briefly summarize the action and follow up items from your detailed responses on subsequent pages.)

Overall, the results from this assessment indicates that the program has reached and/or exceeded the self-reported assessment goals. Students graduating from the program had a 100% pass rate on the American Society of Clinical Pathology Board of Certification Exam and 100% placement rate in Medical Laboratories.

Student Learning Outcome 1				
Student Learning Outcome	Graduates will demonstrate a level of biological content knowledge appropriate to their degree level.			
Measurement Instrument 1	**DIRECT MEASURE: Biology Senior Assessment Exam** All Biology majors are now required to take BIOL 489 (Professional Aspects of Biology) as the Capstone course in biology. As part of this course, each student is required to take the Biology Senior Assessment Exam in Blackboard, which has questions randomly chosen for each student from a pool of 500 questions from the Biology Subject Graduate Record Exam. Results will be given to the Biology Assessment Committee.			
Criteria for Student Success	60% of the undergraduates will score a 70% or higher			
Program Success Target for this Measurement	60%	**Percent of Program Achieving Target**	64.2%	
Methods	As the requirement to take BIOL 489 for the Biology Major (617) was just implemented in the Spring of 2019, we only have data for the cohort in the Fall of 2019. 14 students were in this first cohort and the range of their scores were 91-59 with a mean score of 75.8, with 64.2% of students scoring 70% or higher.			
Measurement Instrument 2				
Criteria for Student Success				
Program Success Target for this Measurement		**Percent of Program Achieving Target**		
Methods				
Measurement Instrument 3				
Criteria for Student Success				
Program Success Target for this Measurement		**Percent of Program Achieving Target**		
Methods				

Based on your results, circle or highlight whether the program met the goal Student Learning Outcome 1.	**Met**	**Not Met**
Actions (Describe the decision-making process and actions planned for program improvement. The actions should include a timeline.)		
1) The proportion of the BIOL 489 grade that comes from taking the Biology Senior Assessment Exam and the subsequent score, will be increased so that students will put more effort into performing their best on the exam to more accurately reflect their knowledge. 2) The Biology Senior Exit Exam questions will be coded by biological category (e.g., cell biology, genetics, evolution, ecology, etc.) in the future so that student success can be quantified in terms of areas of strengths and weaknesses.		
Follow-Up (Provide your timeline for follow-up. If follow-up has occurred, describe how the actions above have resulted in program improvement.)		
Changes to the Biology Senior Exit Exam (see above) will be incorporated in the Spring 2020 semester.		

Student Learning Outcome 2				
Student Learning Outcome	**Students will apply scientific methodology and field/laboratory/analytical skills to a biological question.**			
Measurement Instrument 1	**INDIRECT MEASURE 1: Exit survey question**: Students response to the exit survey question: "Did you conduct research in BIOLOGY at WKU (e.g., BIOL 399)? - Rate your ability."			
Criteria for Student Success	Biology students will have participated in some form of research while at WKU and feel confident in their ability to perform research.			
Program Success Target for this Measurement	75%	**Percent of Program Achieving Target**	82.8%	
Methods	Note: This is a bundled survey question, asking students to respond to 2 different prompts. It's unlikely that all students participated in research while at WKU; but all students responded by rating their ability. Biology Major 617 n = 110 84.0 $\pm$ 0.9 (mean $\pm$ 1SE) Direct measures, which were not required previously, will be assessed in the next reporting period.			
Measurement Instrument 2	**INDIRECT MEASURE 2: Exit survey question:** Students' response to the exit survey question "Based on your experience in BIOLOGY at WKU, rate your ability to create scientific products (e.g., analyze data and make graphs or tables, give a presentation, write a scientific paper) (with 100 being excellent)."			
Criteria for Student Success	Biology students will have participated in some form of research while at WKU and feel confident in their ability to perform research.			
Program Success Target for this Measurement	65%	**Percent of Program Achieving Target**	82.1%	
Methods	Biology Major 617 n = 110 82.1 $\pm$ 1.8 (mean $\pm$ 1SE) Direct measures, which were not required previously, will be assessed in the next reporting period.			
Measurement Instrument 3				
Criteria for Student Success				
Program Success Target for this Measurement		**Percent of Program Achieving Target**		
Methods				
Based on your results, circle or highlight whether the program met the goal Student Learning Outcome 2.			**Met**	**Not Met**
Actions (Describe the decision-making process and actions planned for program improvement. The actions should include a timeline.)				

The Biology Assessment Committee will develop a different Student Learning Outcome that has a direct measure for future assessment.
Follow-Up (Provide your timeline for follow-up. If follow-up has occurred, describe how the actions above have resulted in program improvement.)
A new SLO with a direct measure as an instrument will be implemented during the Spring 2020 semester.

Student Learning Outcome 3				
Student Learning Outcome	**Seniors will be prepared for success in biology-related fields.**			
Measurement Instrument 1	**INDIRECT MEASURE: Exit survey question:** Students' response to the exit survey question: "What will you do after graduation (select all that apply)?"			
Criteria for Student Success	The Biology Department seeks to prepare students for graduate or professional schools, biology-related jobs, and/or service-related activities. The number of students accepted into such positions is our message of success.			
Program Success Target for this Measurement	70% will be accepted into biology-related jobs or subsequent training.		**Percent of Program Achieving Target**	45.5%
Methods	(617) 50 of 110 respondents (45.5%) indicated that they had been accepted to graduate or professional school, had secured a biology-related job, and/or were entering a service-related activity (Peace Corp or Americorps). Direct measures, which were not required previously, will be assessed in the next reporting period.			
Measurement Instrument 2				
Criteria for Student Success				
Program Success Target for this Measurement			**Percent of Program Achieving Target**	
Methods				
Measurement Instrument 3				
Criteria for Student Success				

Program Success Target for this Measurement		**Percent of Program Achieving Target**		
Methods				
Based on your results, circle or highlight whether the program met the goal Student Learning Outcome 3.			**Met**	**Not Met**
Actions (Describe the decision-making process and actions planned for program improvement. The actions should include a timeline.)				
The Biology Assessment Committee will develop a different Student Learning Outcome that has a direct measure for future assessment.				
Follow-Up (Provide your timeline for follow-up. If follow-up has occurred, describe how the actions above have resulted in program improvement.)				
A new SLO with a direct measure as an instrument will be implemented during the Spring 2020 semester.				