Weber State University Annual Assessment of Evidence of Learning

Cover Page

Department/Program: Zoology

Academic Year of Report: 2017/18, 2018 / 19

Date Submitted: 11-15-2019 Report author: Ron Meyers

Contact Information: Phone: 801-626-6170

Email: rmeyers@weber.edu

	A.	Brief	Intro	ductory	Statement:
--	----	--------------	-------	---------	-------------------

Please review the Introductory Statement and contact information for your department displayed on the assessment site:

http://www.weber.edu/portfolio/departments.html - if this information is current, please place an 'X' below. No further information is needed. We will indicate "Last Reviewed: [current date]" on the page.

X_{-}	Information is current; no changes	required.
	Information is not current; updates	below.

B. Mission Statement

Please review the Mission Statement for your department displayed on the assessment site: http://www.weber.edu/portfolio/departments.html - if it is current, please indicate as much; we will mark the web page as "Last Reviewed [current date]". No further information is needed. If the information is not current, please provide an update:

$X_{}$	Information is current; no changes	required.
	Information is not current; updates	below.

C. Student Learning Outcomes

Please review the Student Learning Outcomes for your department displayed on the assessment site:

http://www.weber.edu/portfolio/departments.html - if they are current, please indicate as much; we will mark the web page as "Last Reviewed [current date]". No further information is needed.

If they are not current, please provide an update:

X Information is current; no changes required.
Information is not current; updates below.

D-1. Curriculum

Please review the Curriculum Grid for your department displayed on the assessment site: http://www.weber.edu/portfolio/departments.html - if it is current, please indicate as much; we will mark the web page as "Last Reviewed: [current data]". No further information is needed. If the curriculum grid is not current, please provide an update:

_ Information is current; no changes required.

X Information is not current; updates below

Zoology Curriculum Map: core courses required for Zoology major

Emphasis Ratings: I = Introduced, E = Emphasized, U = Utilized, A = Assessed Comprehensively

							Learning	Outcomes					
					Con	cepts				Comp	Competencies		
Number	Title	Hours	1	2	3	4	5	6	1	2	3	4	
Required cour	ses												
ZOOL 2220	Diversity of Animals	4	U	-	-	-	I	I	U	U	I	I	
ZOOL 3200	Cell Biology	4	U	A	U	-	A	E	A	A	A	-	
ZOOL 3300	Genetics	4	A	E	A	-	E	-	A	A	U	U	
ZOOL 3450	Ecology	4	I	-	-	A	-	A	U	A	A	E	
ZOOL 3600	Comparative Physiology	4	U	A	U	E	A	A	A	A	A	U	
ZOOL 3720	Evolution	3	A	-	E	E	E	-	A	I	A	A	
ZOOL 4990	Seminar	1	-	-	-	-	-	-	A	-	A	A	
Elective course	s (4 required)												
ZOOL 3470	Zoogeography	3	U	-	-	Е	-	Е	A	-	A	-	
ZOOL 3500	Conservation Biology	3	U	-	I	U	I	I	I	U	U	E	
ZOOL 4050	Comparative Vertebrate Anatomy*	4	Α	-	-	-	A	-	-	-	-	-	
ZOOL 4100	Vertebrate Embryology*	4	Α	-	I	-	A	-	-	-	-	-	
ZOOL 4120	Histology	4	-	A	-	-	A	-	-	-	-	-	
ZOOL 4210	Advanced Human Physiology	4	-	U	I	-	A	A	A	U	A	I	
ZOOL 4220	Endocrinology	4	-	U	I	-	A	A	A	U	A	I	
ZOOL 4250	Radiation Biology*	4											
ZOOL 4500	Parasitology*	4	E	E	-	E	E	-	U	U	U	-	
ZOOL 4600	Protozoology*	4											
ZOOL 4300	Molecular Genetics	4	I	E	A	-	I	-	U	A	E	U	
ZOOL 4350	Animal Behavior	4	U	-	I	-	I	-	A	A	U	-	
ZOOL 4470	Wildlife Ecology & Management	4	E	-	-	A	-	A	A	A	A	A	
ZOOL 4480	Aquatic Ecology	4	E	-	-	A	E	A	-	A	-	E	
ZOOL 4490	Marine Ecology^	4	-	-	-	-	-	-	-	-	-	-	
ZOOL 4640	Entomology	4	I	-	-	I	A	-	-	-	-	-	
ZOOL 4650	Ichthyology	4	A	-	U	-	A	E	A	A	A	A	
ZOOL 4660	Herpetology	4	E	-	U	A	E	_	E	-	A	Α	
ZOOL 4670	Ornithology	4	U	-	E	U	A	E	U	E	A	A	
ZOOL 4680	Mammalogy	4	A	-	U	-	A	-	A	A	A	A	
Elective suppor	rt courses												
ZOOL 2100	Human Anatomy	4	-	I	-	-	I	-	-	-	-		
* 0	41 4 1.4 4												

^{*} Course not recently taught and not currently in rotation

[^] New course

D-2. <u>High Impact Educational Experiences</u> in the Curriculum

In response to the recent USHE requirement that all students have at least 1 HIEE in the first 30 credit hours and 1 HIEE in the major or minor we are asking programs to map HIEEs to curriculum using a traditional curriculum grid. This helps demonstrate how and where these goals are accomplished.

Courses	Depai	tment	Progra	am use	of Hi	gh Imp	pact Ed	ducatio	nal Ex	xperier	<u>ices</u>	
	Supplemental Instruction ¹	Research ²	Writing ³	Presentations ⁴	In-Class Discussion ⁵	$\rm Evidence\text{-}Based\ Learning^6$	Community Engagement ⁷	Project-based Learning ⁸	Techniques ⁹	Team-based-Learning ¹⁰	Internship ^{1,1}	Pre-Professional /Career Dev
1010 LS Animal Biology			✓				✓	✓		✓		
1020 LS Human Biology	✓	✓	✓			✓		✓		✓		
1030 LS The Nature of Sex						✓						
1110 LS Principles of Zoology	✓	✓	✓			✓		✓	✓	✓		
2220 Diversity of Animals	✓	✓	✓			✓		✓		✓		
3200 Cell Biology	✓	✓	✓	✓	✓	✓		✓	✓	✓		✓
3300 Genetics	✓	✓	✓		✓	✓		✓	✓	✓		✓
3450 Ecology		✓	✓	✓	✓	✓	✓	✓	✓	✓		
3600 Comparative Physiology	✓	✓	✓	√	√	√		✓	✓	✓		
3720 Evolution			✓		√	✓				✓		
4990 Seminar				√	√							
3470 Zoogeography			✓			✓				✓		
3500 Conservation Biology			✓	✓		✓				✓		
3730 Population Biology*												
4050 Comparative Vertebrate Anatomy*												
4100 Vertebrate Embryology*												

Courses	Depar	tment	Progra	am use	of Hi	gh Imp	oact Ec	lucatio	onal Ex	kperiei	<u>ices</u>	
	Supplemental Instruction ¹	Research ²	Writing ³	Presentations ⁴	In-Class Discussion ⁵	Evidence-Based Learning ⁶	Community Engagement ⁷	Project-based Learning ⁸	Techniques ⁹	Team-based-Leaming ¹⁰	Internship ¹¹	Pre-Professional /Career Dev
4120 Histology			✓	✓	✓	✓				✓		✓
4210 Advanced Human Physiology		✓	✓			✓		√		✓		
4220 Endocrinology		✓	✓			✓		✓		✓		
4300 Molecular Genetics		✓	✓	✓	✓	✓		✓	✓	✓		
4350 Animal Behavior		✓	✓	✓	✓				✓	✓		
4470 Wildlife Ecology and Management			✓	✓				✓		✓		
4480 Aquatic Ecology		✓	✓	✓				✓	✓	✓		
4490 Marine Ecology		✓	✓		✓	✓		✓	✓	✓		
4640 Entomology				✓				✓	✓			
4650 Ichthyology		✓	✓	✓		✓		✓	✓	✓		
4660 Herpetology			✓	✓		✓		✓	✓	✓		✓
4670 Ornithology		✓							✓			
4680 Mammalogy		✓	✓	✓	✓	✓		✓	✓	✓		
3099 Teaching the Human Anatomy Laboratory			✓	✓		✓	✓	✓		✓		√
3100 Advanced Human Anatomy			✓	✓		✓	✓	✓		✓		✓
4890 Cooperative Work Experience											✓	✓
2100 Human Anatomy	√					✓				√		
2200 LS Human Physiology	√		✓			✓		✓	✓	√		

^{*} Not offered during the 2018/2019 report period

¹ Supplemental Instruction – Advanced/experience student(s) hold regular meetings

² Research – In-class research typically occurs in the laboratory, and includes data collection, hypothesis testing, exposure to literature and writing

³ Writing – Courses may have lab reports/manuscripts; written homework; written exam questions

⁴ Presentations – Students prepare and present to the class materials related to: research, discussion, and literature

⁵ Discussion – Students read and discuss scientific literature

⁶ Evidence-Based Learning – Classes utilize learning approaches that are "evidence-based"

⁷ Community Engagement – e.g., student projects uploaded to public photo site; students lead tours of lab to local school and community groups

⁸ Project-based Learning – Students engage in a project as a class, in small groups, or individually

⁹ Techniques – Students learn and use scientific methodologies/techniques such as specimen cataloging, identifying animals, experimental techniques

¹⁰ Team-based Learning – Students work in groups, collaborating on research, assignments, projects, including peer-review

¹¹ Students use work, volunteer, internship and externship experiences for "Zoology experience" credit

E. Assessment Plan

Please update the Assessment Plan for your department displayed on the assessment site: http://www.weber.edu/portfolio/departments.html. Keep in mind that reporting will be done biennially instead of annually; that should be reflected in your assessment plan. Please ensure that Gen Ed courses are assessed/reported at least twice during a standard program review cycle.

A complete plan will include a list of courses from which data will be gathered and the schedule, as well as an overview of the assessment strategy the department is using (for example, portfolios, or a combination of Chi assessment data and student survey information, or industry certification exams, etc.), and plans for continuous improvement.

Assessment plan:

The plan is current.

F. Report of assessment results for the most previous academic year:

There are varieties of ways in which departments can choose to show evidence of learning. This is one example. The critical pieces to include are 1) learning outcome being assessed, 2) method(s) of measurement used, 3) threshold for 'acceptable – that is, the target performance, 4) actual results of the assessment, 5) interpretation/reflection on findings 6) the course of action to be taken based upon the interpretation, and 7) how that action will be evaluated.

Evidence of Learning: Courses within the Major

A few courses within the major are being assessed.

I have discussed assessing courses in the major met with all faculty as a department and individually. Although it is still a challenge motivating instructors to actually follow through and assess, there has been improvement. It is also a challenge to coach them to assess in a way to produce the data as requested by the Office of Institutional Effectiveness. I am trying to figure out how I might better accomplish this goal.

Zoology 2100 Human Anatomy - Fall 2018

Evidence of Learning: Courses within the major											
Course: Z00L 2100 Fall 2018; Spring 2019											
Zoology Learning Outcome Assessed	Measurable Learning Outcome	Method of Measurement	Threshold for "Acceptable"	Results of Assessment	Interpretation of Findings	Action Plan/ Action evaluation					
1. EVOLUTION The diversity of life is the result of mutation, adaptation, and selection pressure over time.	This outcome is not assessed for this course (see curriculum grid)										

Evidence of Learnin	Evidence of Learning: Courses within the major											
Course: Z00L 2100 Fall 2018; Spring 2019												
Zoology Learning Outcome Assessed	Measurable Learning Outcome	Method of Measurement	Threshold for "Acceptable"	Results of Assessment	Interpretation of Findings	Action Plan/ Action evaluation						
2. CELLULAR ORGANIZATION All living things consist of one or more	Students will demonstrate their understanding by performance	A set of multiple choice questions	At least 65% of students above 70%	72% above 70%	Threshold exceeded	Continue current practices.						
cells, the units of structure, function, and reproduction.	answering exam questions focused on cells.	A set of 21 multiple choice questions	Combined student performance of 65% or higher	Combined student performance = 79%	Threshold exceeded	Continue current practices.						

Evidence of Learnin	Evidence of Learning: Courses within the major											
Course: Z00L 2100 Fall 2018; Spring 2019												
Zoology Learning	Measurable	Method of	Threshold for	Results of	Interpretation of	Action Plan/						
Outcome Assessed	Learning Outcome	Measurement	"Acceptable"	Assessment	Findings	Action evaluation						
3. GENETICS All living things share basic genetic mechanisms, which are responsible for the organization and continuity of life.	This outcome is not assessed for this course (see curriculum grid)											

Evidence of Learnin	Evidence of Learning: Courses within the major										
Course: ZOOL 2100 Fall 2018; Spring 2019											
Zoology Learning	Measurable	Method of	Threshold for	Results of	Interpretation of	Action Plan/					
Outcome Assessed	Learning Outcome	Measurement	"Acceptable"	Assessment	Findings	Action evaluation					
4. ECOSYSTEMS All organisms are interconnected, interacting with each other as well as with their dynamic environment.	This outcome is not assessed for this course (see curriculum grid)										

Evidence of Learnin	Evidence of Learning: Courses within the major											
Course: ZOOL 2100 Fall 2018; Spring 2019												
Zoology Learning Outcome Assessed	Measurable Learning Outcome	Method of Measurement	Threshold for "Acceptable"	Results of Assessment	Interpretation of Findings	Action Plan/ Action evaluation						
5. STRUCTURE & FUNCTION There is a relationship between molecular	Students will demonstrate their understanding by performance	A set of multiple choice questions	At least 65% of students above 70%	65% above 70%	Threshold met	Continue current practices.						
and organismal structure and function.	answering exam questions focused on structure-function relationships.	A set of 108 multiple choice questions	Combined student performance of 65% or higher	Combined student performance = 83%	Threshold exceeded	Continue current practices.						

Evidence of Learnin	Evidence of Learning: Courses within the major										
Course: Z00L 2100 Fall 2018											
Zoology Learning Outcome Assessed	Measurable Learning Outcome	Method of Measurement	Threshold for "Acceptable"	Results of Assessment	Interpretation of Findings	Action Plan/ Action evaluation					
6. SYSTEMS REGULATION Biological systems are governed by chemical transformations and homeostasis.	This outcome is not assessed for this course (see curriculum grid)										

Evidence of Learning: Courses within the major							
Course: Z00L 2100	Fall 2018; Spring 20)19					
Zoology Learning	Measurable	Method of	Threshold for	Results of	Interpretation of	Action Plan/	
Outcome Assessed	Learning Outcome	Measurement	"Acceptable"	Assessment	Findings	Action evaluation	
I. PROCESS OF SCIENCE Students will use observational strategies to test hypotheses and	This outcome is not assessed for this course (see curriculum grid)						
critically evaluate experimental evidence.							

Evidence of Learning: Courses within the major									
Course: Z00L 2100	Course: Z00L 2100 Fall 2018l; Spring 2019								
Zoology Learning Outcome Assessed	Measurable Learning Outcome	Method of Measurement	Threshold for "Acceptable"	Results of Assessment	Interpretation of Findings	Action Plan/ Action evaluation			
II. QUANTITATIVE REASONING Students will represent diverse experimental data sets graphically and apply statistical methods to them.	This outcome is not assessed for this course (see curriculum grid)								

Evidence of Learning: Courses within the major Course: ZOOL 2100 Fall 2018; Spring 2019							
Zoology Learning Outcome Assessed	Measurable Learning Outcome	Method of Measurement	Threshold for "Acceptable"	Results of Assessment	Interpretation of Findings	Action Plan/ Action evaluation	
III. COMMUNICATION Students will explain scientific concepts to different audiences and work collaboratively to explore biological problems.	This outcome is not assessed for this course (see curriculum grid)						

Evidence of Learning: Courses within the major									
Course: ZOOL 2100	Course: Z00L 2100 Fall 2018; Spring 2019								
Zoology Learning	Measurable	Method of	Threshold for	Results of	Interpretation of	Action Plan/			
Outcome Assessed	Learning Outcome	Measurement	"Acceptable"	Assessment	Findings	Action evaluation			
IV. SCIENCE & SOCIETY Students will develop biological applications to evaluate and address societal problems.	This outcome is not assessed for this course (see curriculum grid)								

Zoology 2220 Diversity of Animals - Spring 2018

Evidence of Learning: Courses within the major							
Course: ZOOL 2220	Spring 2018						
Zoology Learning	Measurable	Method of	Threshold for	Results of	Interpretation of	Action Plan/	
Outcome Assessed	Learning Outcome	Measurement	"Acceptable"	Assessment	Findings	Action evaluation	
1. EVOLUTION The diversity of life is the result of mutation, adaptation, and selection pressure over time.	Students will demonstrate their understanding by performance answering exam questions focused on evolution.	A set of 35 multiple choice questions	Combined student performance of 65% or higher	Combined student performance = 77%	Threshold exceeded	Continue current practices.	

Evidence of Learning: Courses within the major								
Course: Z00L 2220 Spring 2018								
Zoology Learning	Measurable	Method of	Threshold for	Results of	Interpretation of	Action Plan/		
Outcome Assessed	Learning Outcome	Measurement	"Acceptable"	Assessment	Findings	Action evaluation		
2. CELLULAR ORGANIZATION All living things consist of one or more cells, the units of structure, function, and reproduction.	This outcome is not assessed for this course (see curriculum grid)							

Evidence of Learning: Courses within the major							
Course: Z00L 2220	Spring 2018						
Zoology Learning Outcome Assessed	Measurable Learning Outcome	Method of Measurement	Threshold for "Acceptable"	Results of Assessment	Interpretation of Findings	Action Plan/ Action evaluation	
3. GENETICS All living things share basic genetic mechanisms, which are responsible for the organization and continuity of life.	This outcome is not assessed for this course (see curriculum grid)						

Evidence of Learning: Courses within the major									
Course: ZOOL 2220	Course: Z00L 2220 Spring 2018								
Zoology Learning	Measurable	Method of	Threshold for	Results of	Interpretation of	Action Plan/			
Outcome Assessed	Learning Outcome	Measurement	"Acceptable"	Assessment	Findings	Action evaluation			
4. ECOSYSTEMS All organisms are interconnected, interacting with each other as well as with their dynamic environment.	This outcome is not assessed for this course (see curriculum grid)								

Evidence of Learning: Courses within the major									
Course: Z00L 2220	Course: Z00L 2220 Spring 2018								
Zoology Learning Outcome Assessed	Measurable Learning Outcome	Method of Measurement	Threshold for "Acceptable"	Results of Assessment	Interpretation of Findings	Action Plan/ Action evaluation			
5. STRUCTURE & FUNCTION There is a relationship between molecular and organismal structure and function.	Students will demonstrate their understanding by performance answering exam questions focused on structure-function relationships.	A set of 35 multiple choice questions	Combined student performance of 65% or higher	Combined student performance = 78%	Threshold exceeded	Continue current practices.			

Evidence of Learning: Courses within the major								
Course: Z00L 2220 Spring 2018								
Zoology Learning	Measurable	Method of	Threshold for	Results of	Interpretation of	Action Plan/		
Outcome Assessed	Learning Outcome	Measurement	"Acceptable"	Assessment	Findings	Action evaluation		
6. SYSTEMS REGULATION Biological systems are governed by chemical transformations and homeostasis.	Students will demonstrate their understanding by performance answering exam questions focused on homeostasis.	A set of 13 multiple choice questions	Combined student performance of 65% or higher	Combined student performance = 77%	Threshold exceeded	Continue current practices.		

Evidence of Learning: Courses within the major									
Course: ZOOL 2220	Course: Z00L 2220 Spring 2018								
Zoology Learning Outcome Assessed	Measurable Learning Outcome	Method of Measurement	Threshold for "Acceptable"	Results of Assessment	Interpretation of Findings	Action Plan/ Action evaluation			
I. PROCESS OF SCIENCE Students will use observational strategies to test hypotheses and critically evaluate experimental evidence.	Students will demonstrate their understanding by performance answering exam questions focused on how science is done.	A set of 12 multiple choice questions	Combined student performance of 65% or higher	Combined student performance = 75%	Threshold met	Continue current practices.			

Evidence of Learning: Courses within the major								
Course: Z00L 2220 Spring 2018								
Zoology Learning Measur		Method of	Threshold for	Results of	Interpretation of	Action Plan/		
Outcome Assessed Learnin	ng Outcome	Measurement	"Acceptable"	Assessment	Findings	Action evaluation		
Students will underst represent diverse experimental data sets graphically and apply statistical underst underst perform answer data set	strate their tanding by mance ring exam ons focused on	A set of 5 multiple choice questions	Combined student performance of 65% or higher	Combined student performance = 78%	Threshold exceeded	Continue current practices.		

Evidence of Learnin	Evidence of Learning: Courses within the major									
Course: ZOOL 2220	Course: Z00L 2220 Spring 2018									
Zoology Learning Outcome Assessed	Measurable Learning Outcome	Method of Measurement	Threshold for "Acceptable"	Results of Assessment	Interpretation of Findings	Action Plan/ Action evaluation				
III. COMMUNICATION Students will explain scientific concepts to different audiences and work collaboratively to explore biological problems.	Students will demonstrate their understanding by performance answering exam questions focused on communicating information.	A set of 4 multiple choice questions	Combined student performance of 65% or higher	Combined student performance = 75%	Threshold exceeded	Continue current practices.				

Evidence of Learnin	Evidence of Learning: Courses within the major									
Course: Z00L 2220 Spring 2018										
Zoology Learning	Measurable	Method of	Threshold for	Results of	Interpretation of	Action Plan/				
Outcome Assessed	Learning Outcome	Measurement	"Acceptable"	Assessment	Findings	Action evaluation				
IV. SCIENCE & SOCIETY Students will develop biological applications to evaluate and address societal problems.	Students will demonstrate their understanding by performance answering exam questions focused on science and society.	A set of 2 multiple choice questions	Combined student performance of 65% or higher	Combined student performance = 70%	Threshold met	Continue current practices.				

Course: Cell Biology Zoology Learning	Measurable	Method of	Threshold for	Results of	Interpretation of	Action Plan/ Action
Outcome Assessed	Learning Outcome	Measurement	"Acceptable"	Assessment	Findings	evaluation
1. EVOLUTION	Students are able to discuss how evolutionary forces have shaped animals physiology	Method 1: 4 exam questions Method 2: Students interpret the results of a primary research article on evolution of the Zika virus by answering essay questions which are graded by a rubric	Method 1: Combined student performance of 72% or higher Method 2: Combined student performance of 72% or higher	Method 1: Class average >78% Method 2: Class average >82%	Threshold met Threshold exceeded	Will discuss changing Emphasis Rating on Curriculum Grid from "Utilized" to "Emphasized" as it is not covered as much as other Learning Outcomes.
2. CELLULAR ORGANIZATION	Students are able to collect, analyze and/or discuss data about cellular function	Method 1: 88 exam questions	Combined student performance of 72% or higher	Method 1: Class average: 76%	Threshold met	Continue current practices.
3. GENETICS	Students are able to are able to collect, analyze and/or discuss data on how genetic changes/differences alter the physiology of animals	Method 1: 34 exam questions	Combined student performance of 72% or higher	Method 1: Class average:76%	Threshold met	Continue use of assessments. Will discuss changing Emphasis Rating on Curriculum Grid from "Introduced" to "Emphasized" or "Utilized" as it is covered more than other Learning Outcomes.
4. ECOSYSTEMS	Not assessed					

Evidence of Learning Course: Cell Biology						
Zoology Learning Outcome Assessed	Measurable Learning Outcome	Method of Measurement	Threshold for "Acceptable"	Results of Assessment	Interpretation of Findings	Action Plan/ Action evaluation
5. STRUCTURE & FUNCTION	Students are to collect, analyze and/or discuss data on how differences in protein expression lead to differences in cellular function which lead to differences in physiology.	Method 1: 21 exam questions	Combined student performance of 72% or higher	Method 1: Class average: 77%	Threshold met	Continue current practices.
6. SYSTEMS REGULATION	Students are to collect, analyze and/or discuss data on how animals maintain homeostasis despite changes in their internal or external environments.	Method 1: 14 exam questions	Combined student performance of 72% or higher	Method 1: Class average: 76%	Threshold met	Continue current practices.
I. PROCESS OF SCIENCE	Students are able to generate as well as test hypotheses. Students are able to collect and evaluate data as well interpret and evaluate already collected data.	Method 1: 9 exam questions Method 2: Multi-week lab activity done in groups developing, implementing and evaluating methods to quantify the effects of cell type and temperature on cell motility. Students write a lab report graded via rubric.	Combined student performance of 72% or higher	Method 1: Class average: 88% Method 2: Class average: 87%	Threshold exceeded	Continue current practices.

Evidence of Learning Course: Cell Biology						
Zoology Learning	Measurable	Method of	Threshold for	Results of	Interpretation of	Action Plan/ Action
Outcome Assessed	Learning Outcome	Measurement	"Acceptable"	Assessment	Findings	evaluation
II. QUANTITATIVE	Students are able to	Method 1:	Combined student	Method 1:	Threshold exceeded	Continue current
REASONING	analyze	Lab activity done in	performance of 72% or	Class average:		practices.
	physiological data	groups developing,	higher	81%		
	statistically and	implementing and				
	display data	evaluating methods				
	graphically.	to quantify the				
		effects of cell type				
		and temperature				
		on cell motility.				
		Students must				
		create graphs				
		representing the				
		data collected in a				
		lab report. Graded via rubrics.				
		via rubrics.				
		Method 2:				
		Students		Method 2:	Threshold met	
		interpreted figures		72%		
		from a primary				
		research article by				
		answering essay				
		questions which				
		were graded with a				
		rubric.				

	Evidence of Learning Worksheet: Courses within the Major Course: Cell Biology Zool 3200 Fall 2018							
Zoology Learning Outcome Assessed	Measurable Learning Outcome	Method of Measurement	Threshold for "Acceptable"	Results of Assessment	Interpretation of Findings	Action Plan/ Action evaluation		
III. COMMUNICATION	Students can effectively communicate scientific information at different levels and can work collaboratively.	Method 1: Multi-week lab activity done in groups developing, implementing and evaluating methods to quantify the effects of cell type and temperature on cell motility. Students write a lab report graded via rubric. Method 2 Lab notebooks	Combined student performance of 72% or higher	Method 1: Class average: 91%	Threshold exceeded	Continue current practices. Will include assessment of group presentations next semester evaluated by a rubric.		
		were completed for every experiment and graded 3 times by a rubric.		Method 2: Class average: 81%	i nresnoid exceeded			
IV. SCIENCE & SOCIETY	Not assessed							

Zoology 3450 Ecology - Fall 2018

Evidence of Learnin	Evidence of Learning: Courses within the major								
Course: Z00L 3450	Course: Z00L 3450 Fall 2018								
Zoology Learning Outcome Assessed	Measurable Learning Outcome	Method of Measurement	Threshold for "Acceptable"	Results of Assessment	Interpretation of Findings	Action Plan/ Action evaluation			
1. EVOLUTION The diversity of life is the result of mutation, adaptation, and selection pressure over time.	Students will demonstrate their understanding by performance answering exam questions focused on evolution.	A set of 6 multiple choice questions	Combined student performance of 65% or higher	Combined student performance = 98%	Threshold exceeded	Continue current practices.			

Evidence of Learning: Courses within the major									
Course: Z00L 3450	Course: Z00L 3450 Fall 2018								
Zoology Learning Outcome Assessed	Measurable Learning Outcome	Method of Measurement	Threshold for "Acceptable"	Results of Assessment	Interpretation of Findings	Action Plan/ Action evaluation			
2. CELLULAR ORGANIZATION All living things consist of one or more cells, the units of structure, function, and reproduction.	This outcome is not assessed for this course (see curriculum grid)								

Evidence of Learning: Courses within the major								
Course: Z00L 3450 Fall 2018								
Zoology Learning Outcome Assessed	Measurable Learning Outcome	Method of Measurement	Threshold for "Acceptable"	Results of Assessment	Interpretation of Findings	Action Plan/ Action evaluation		
3. GENETICS All living things share basic genetic mechanisms, which are responsible for the organization and continuity of life.	Students will demonstrate their understanding by performance answering exam questions focused on genetics.	A set of 2 multiple choice questions	Combined student performance of 65% or higher	Combined student performance = 90%	Threshold exceeded	Continue current practices.		

Evidence of Learnin	Evidence of Learning: Courses within the major									
Course: Z00L 3450 Fall 2018										
Zoology Learning	Measurable	Method of	Threshold for	Results of	Interpretation of	Action Plan/				
Outcome Assessed	Learning Outcome	Measurement	"Acceptable"	Assessment	Findings	Action evaluation				
4. ECOSYSTEMS All organisms are interconnected, interacting with each other as well as with their dynamic environment.	Students will demonstrate their understanding by performance answering exam questions focused on ecosystems.	A set of 21 multiple choice questions	Combined student performance of 65% or higher	Combined student performance = 95%	Threshold exceeded	Continue current practices.				

Evidence of Learning: Courses within the major									
Course: Z00L 3450	Course: Z00L 3450 Fall 2018								
Zoology Learning	Measurable	Method of	Threshold for	Results of	Interpretation of	Action Plan/			
Outcome Assessed	Learning Outcome	Measurement	"Acceptable"	Assessment	Findings	Action evaluation			
5. STRUCTURE & FUNCTION There is a relationship between molecular and organismal structure and function.	This outcome is not assessed for this course (see curriculum grid)								

Evidence of Learning: Courses within the major								
Course: Z00L 3450 Fall 2018								
Zoology Learning Outcome Assessed	Measurable Learning Outcome	Method of Measurement	Threshold for "Acceptable"	Results of Assessment	Interpretation of Findings	Action Plan/ Action evaluation		
6. SYSTEMS REGULATION Biological systems are governed by chemical transformations and homeostasis.	Students will demonstrate their understanding by performance answering exam questions focused on physiology.	A set of 2 multiple choice questions	Combined student performance of 65% or higher	Combined student performance = 82%	Threshold exceeded	Continue current practices.		
I. PROCESS OF SCIENCE Students will use observational strategies to test hypotheses and critically evaluate experimental evidence.	Students will demonstrate their understanding by performance answering exam questions focused on the process of science.	A set of 2 multiple choice questions	Combined student performance of 65% or higher	Combined student performance = 100%	Threshold exceeded	Continue current practices.		

Evidence of Learnin	Evidence of Learning: Courses within the major								
Course: Z00L 3450 Fall 2018									
Zoology Learning Outcome Assessed	Measurable Learning Outcome	Method of Measurement	Threshold for "Acceptable"	Results of Assessment	Interpretation of Findings	Action Plan/ Action evaluation			
II. QUANTITATIVE REASONING Students will represent diverse experimental data sets graphically and apply statistical methods to them.	Students will demonstrate their understanding by performance answering exam questions focused on data analysis.	A set of 4 multiple choice questions	Combined student performance of 65% or higher	Combined student performance = 88%	Threshold exceeded	Continue current practices.			

Evidence of Learnin	Evidence of Learning: Courses within the major								
Course: ZOOL 3450	Course: Z00L 3450 Fall 2018								
Zoology Learning Outcome Assessed	Measurable Learning Outcome	Method of Measurement	Threshold for "Acceptable"	Results of Assessment	Interpretation of Findings	Action Plan/ Action evaluation			
III. COMMUNICATION Students will explain scientific concepts to different audiences and work collaboratively to explore biological problems.	Students will demonstrate their understanding by performance answering exam questions focused on communicating scientific concepts.	1 multiple choice question	Combined student performance of 65% or higher	Combined student performance = 100%	Threshold exceeded	Continue current practices.			

Evidence of Learning: Courses within the major								
Course: ZOOL 3450 Fall 2018								
Zoology Learning	Measurable	Method of	Threshold for	Results of	Interpretation of	Action Plan/		
Outcome Assessed	Learning Outcome	Measurement	"Acceptable"	Assessment	Findings	Action evaluation		
IV. SCIENCE & SOCIETY Students will develop biological applications to evaluate and address societal problems.	Students will demonstrate their understanding by performance answering exam questions focused on science and society.	A set of 2 multiple choice questions	Combined student performance of 65% or higher	Combined student performance = 97%	Threshold exceeded	Continue current practices.		

<u>End</u> of ZOOL 3450

Zoology 3500 Conservation Biology - Spring 2018

Evidence of Learning: Courses within the major									
Course: Z00L 3500	Course: ZOOL 3500 Spring 2018								
Zoology Learning Outcome Assessed	Measurable Learning Outcome	Method of Measurement	Threshold for "Acceptable"	Results of Assessment	Interpretation of Findings	Action Plan/ Action evaluation			
1. EVOLUTION The diversity of life is the result of mutation, adaptation, and selection pressure over time.	Students will demonstrate their understanding by performance answering exam questions focused on evolution.	A set of 32 multiple choice questions	Combined student performance of 65% or higher	Combined student performance = 94%	Threshold exceeded	Continue current practices.			

Evidence of Learning: Courses within the major								
Course: Z00L 3500 Spring 2018								
Zoology Learning	Measurable	Method of	Threshold for	Results of	Interpretation of	Action Plan/		
Outcome Assessed	Learning Outcome	Measurement	"Acceptable"	Assessment	Findings	Action evaluation		
2. CELLULAR ORGANIZATION All living things consist of one or more cells, the units of structure, function, and reproduction.	This outcome is not assessed for this course (see curriculum grid)							

Evidence of Learning: Courses within the major									
Course: Z00L 3500	Course: Z00L 3500 Spring 2018								
Zoology Learning Outcome Assessed	Measurable Learning Outcome	Method of Measurement	Threshold for "Acceptable"	Results of Assessment	Interpretation of Findings	Action Plan/ Action evaluation			
3. GENETICS All living things share basic genetic mechanisms, which are responsible for the organization and continuity of life.	Students will demonstrate their understanding by performance answering exam questions focused on genetics.	A set of 14 multiple choice questions	Combined student performance of 65% or higher	Combined student performance = 93%	Threshold exceeded	Continue current practices.			

Evidence of Learning: Courses within the major								
Course: ZOOL 3500 Spring 2018								
Zoology Learning	Measurable	Method of	Threshold for	Results of	Interpretation of	Action Plan/		
Outcome Assessed	Learning Outcome	Measurement	"Acceptable"	Assessment	Findings	Action evaluation		
4. ECOSYSTEMS All organisms are interconnected, interacting with each other as well as with their dynamic environment.	Students will demonstrate their understanding by performance answering exam questions focused on ecology.	A set of 100 multiple choice questions	Combined student performance of 65% or higher	Combined student performance = 94%	Threshold exceeded	Continue current practices.		

Evidence of Learnin	Evidence of Learning: Courses within the major								
Course: Z00L 3500	Course: Z00L 3500 Spring 2018								
Zoology Learning Outcome Assessed	Measurable Learning Outcome	Method of Measurement	Threshold for "Acceptable"	Results of Assessment	Interpretation of Findings	Action Plan/ Action evaluation			
5. STRUCTURE & FUNCTION There is a relationship between molecular and organismal structure and function.	Students will demonstrate their understanding by performance answering exam questions focused on structure and function.	A set of 13 multiple choice questions	Combined student performance of 65% or higher	Combined student performance = 86%	Threshold exceeded	Continue current practices.			

Evidence of Learnin	Evidence of Learning: Courses within the major									
Course: ZOOL 3500	Course: Z00L 3500 Spring 2018									
Zoology Learning Outcome Assessed	Measurable Learning Outcome	Method of Measurement	Threshold for "Acceptable"	Results of Assessment	Interpretation of Findings	Action Plan/ Action evaluation				
6. SYSTEMS REGULATION Biological systems are governed by chemical transformations and homeostasis.	Students will demonstrate their understanding by performance answering exam questions focused on physiology.	A set of 27 multiple choice questions	Combined student performance of 65% or higher	Combined student performance = 95%	Threshold exceeded	Continue current practices.				

Evidence of Learning: Courses within the major									
Course: ZOOL 3500	Course: ZOOL 3500 Spring 2018								
Zoology Learning Outcome Assessed	Measurable Learning Outcome	Method of Measurement	Threshold for "Acceptable"	Results of Assessment	Interpretation of Findings	Action Plan/ Action evaluation			
I. PROCESS OF SCIENCE Students will use observational strategies to test hypotheses and critically evaluate experimental evidence.	Students will demonstrate their understanding by performance answering exam questions focused on hypothesis testing.	A set of 18 multiple choice questions	Combined student performance of 65% or higher	Combined student performance = 86%	Threshold exceeded	Continue current practices.			

Evidence of Learning: Courses within the major									
Course: ZOOL 3500 Spring 2018									
Zoology Learning	Measurable	Method of	Threshold for	Results of	Interpretation of	Action Plan/			
Outcome Assessed	Learning Outcome	Measurement	"Acceptable"	Assessment	Findings	Action evaluation			
II. QUANTITATIVE REASONING Students will represent diverse experimental data sets graphically and apply statistical methods to them.	Students will demonstrate their understanding by performance answering exam questions focused on data analysis and statistics.	A set of 20 multiple choice questions	Combined student performance of 65% or higher	Combined student performance = 94%	Threshold exceeded	Continue current practices.			

Evidence of Learning: Courses within the major									
Course: ZOOL 3500	Course: ZOOL 3500 Spring 2018								
Zoology Learning	Measurable	Method of	Threshold for	Results of	Interpretation of	Action Plan/			
Outcome Assessed	Learning Outcome	Measurement	"Acceptable"	Assessment	Findings	Action evaluation			
III. COMMUNICATION Students will explain scientific concepts to different audiences and work collaboratively to explore biological problems.	Students will demonstrate their understanding by performance answering exam questions focused on communicating scientific ideas.	A set of 84 multiple choice questions	Combined student performance of 65% or higher	Combined student performance = 94%	Threshold exceeded	Continue current practices.			

Evidence of Learning: Courses within the major						
Course: ZOOL 3500 Spring 2018						
Zoology Learning	Measurable	Method of	Threshold for	Results of	Interpretation of	Action Plan/
Outcome Assessed	Learning Outcome	Measurement	"Acceptable"	Assessment	Findings	Action evaluation
IV. SCIENCE & SOCIETY Students will develop biological applications to evaluate and address societal problems.	Students will demonstrate their understanding by performance answering exam questions focused on society and science.	A set of 25 multiple choice 115	Combined student performance of 65% or higher	Combined student performance = 94%	Threshold exceeded	Continue current practices.

Zoology 3600 Comparative Physiology

Evidence of Learning: Courses within the major							
Course: ZOOL 360 Zoology Learning	00 Fall 2017 Measurable	Method of	Threshold for	Results of	Interpretation of	Action Plan/ Action	
Outcome Assessed	Learning Outcome	Measurement	"Acceptable"	Assessment	Findings	evaluation	
1. EVOLUTION	Students are able to discuss how evolutionary forces have shaped animals physiology	Method 1: 15 essay exam questions graded with scoring guide	Method 1: Combined student performance of 72% or higher	Method 1: Class average was 85% Method 2:	Threshold exceeded	Continue use of assessments	
	F-9	Method 2: Lab activity with full lab report write up graded using a rubric	Method 2: Class average Combined student performance of 72% or higher	Class average was 84%	Threshold exceeded		
2. CELLULAR ORGANIZATION	Students are able to collect, analyze and/or discuss data about cellular	Method 1: 16 essay exam questions graded with scoring guide	Method 1: Combined student performance of 65% or higher	Method 1: Class average was 82%	Threshold exceeded	Continue use of assessments	
	function	Method 2: Lab activity with full lab report write up graded using a rubric	Method 2: Combined student performance of 72% or higher	Method 2: Class average was 84%	Threshold exceeded		
3. GENETICS	Students are able to are able to collect, analyze and/or discuss data on how	Method 1: 4 essay exam questions graded with scoring guide	Method 1: Combined student performance of 72% or higher	Method 1: Class average was 83%	Threshold exceeded	Continue use of assessments	
	genetic changes/differences alter the physiology of animals	Method 2: Lab activity with full lab report write up graded using a rubric	Method 2: Class average Combined student performance of 72% or higher	Method 2: Class average was 84%	Threshold exceeded		
4. ECOSYSTEMS	Students are to collect, analyze and/or discuss data on physiological adaptations of animals to their environment and how physiology	Method 1: 11 essay exam questions graded with scoring guide	Method 1: Combined student performance of 72% or higher	Method 1: Class average was 86%	Threshold exceeded	Continue use of assessments	

Evidence of Learning: Courses within the major Course: ZOOL 3600 Fall 2017 **Zoology Learning** Measurable Method of Threshold for Results of Interpretation of Action Plan/ Action **Outcome Assessed Learning Outcome** "Acceptable" **Findings** evaluation Measurement Assessment determines the Method 2: Method 2: Method 2: environments Two lab activities with Combined student Threshold exceeded Class average was animals are able to performance of 85% full lab report write 72% or higher ups graded using a live in rubric 5. STRUCTURE & Students are to Method 1: Method 1: Method 1: Threshold exceeded Continue use of Combined student FUNCTION collect, analyze 29 essay exam Class average was assessments questions graded with and/or discuss data performance of 83% on how differences scoring guide 72% or higher in protein expression lead to Method 2: Method 2: Method 2: Threshold exceeded Lab activity with full differences in Class average Class average was cellular function lab report write up Combined student 80% graded using a rubric performance of which lead to differences in 72% or higher physiology 6. SYSTEMS Method 1: Threshold exceeded Students are to Method 1: Method 1: Continue use of REGULATION collect, analyze 38 essay exam Combined student Class average was assessments and/or discuss data questions graded with performance of 81% on how animals scoring guide 72% or higher maintain Method 2: homeostasis despite Two lab activities with Method 2: Method 2: Threshold exceeded Combined student changes in their full lab report write Class average was internal or external ups graded using a performance of 82% rubric environments 72% or higher Method 3: Two lab activities with Method 3: Method 3: worksheets involving Combined student Threshold exceeded Class average was performance of 88% data analysis and interpretation graded 72% or higher using a rubric I. PROCESS OF Students are able to Method 1: Method 1: Method 1: Threshold exceeded Continue use of Combined student **SCIENCE** generate as well as 35 essay exam Class average was assessments test hypotheses. questions where performance of 84% Students are able to figures had to be 72% or higher collect and evaluate interpreted graded data as well with scoring guide interpret and evaluate already

collected data.

Evidence of Learning: Courses within the major

Course: ZOOL 360		1	r	1	1	1
Zoology Learning	Measurable	Method of	Threshold for	Results of	Interpretation of	Action Plan/ Action
Outcome Assessed	Learning Outcome	Measurement	"Acceptable"	Assessment	Findings	evaluation
		Method 2: Three hypothesis driven lab activities with full lab report write ups graded using a rubric	Method 2: Combined student performance of 72% or higher	Method 2: Class average was 83%	Threshold exceeded	Continue use of assessments
		Method 3: Two hypothesis driven lab activities with worksheets involving data analysis and interpretation graded using a rubric	Method 3: Combined student performance of 72% or higher	Method 3: Class average was 88%	Threshold exceeded	Continue use of assessments
II. QUANTITATIVE REASONING	Students are able to analyze physiological data statistically and display data graphically.	Method 1: 20 essay exam questions where students had to calculate answers or make figures graded with scoring guide. Method 2: Four lab activities with full lab report write ups graded using a rubric Method 3: Three lab activities with worksheets involving data analysis and interpretation graded using a rubric	Method 1: Class average >72% Method 2: Class average >72% Method 3: Class average >72%	Method 1: Class average was 78% Method 2: Class average was 83% Method 3: Class average was 88%	Threshold exceeded Threshold exceeded Threshold exceeded	Continue use of assessments Continue use of assessments Continue use of assessments

Evidence of Learning: Courses within the major Course: ZOOL 3600 Fall 2017

Course: ZOOL 360		Mathadae	Thursday I de Com	Danalta of	Intermedian of	Astisu Dlau / Astisu
Zoology Learning	Measurable	Method of	Threshold for	Results of	Interpretation of	Action Plan/ Action
Outcome Assessed	Learning Outcome	Measurement	"Acceptable"	Assessment	Findings	evaluation
			Method 1:	Method 1:	Threshold exceeded	
III.			Combined student	Class average was		Continue use of
COMMUNICATION		Method 1:	performance of	92%		assessments
		Three presentations	72% or higher			
		with different formats				
		graded by peer-		Method 2:		
		review using a rubric	Method 2:	Class average was	Threshold exceeded	
		_	Combined student	84%		
		Method 2:	performance of			
		Lab activity where	72% or higher			
		students collected				
		data in groups and				
		wrote a group lab				
		report.				
IV. SCIENCE &	Students can	Method 1:	Method 1:	Method 1:	Threshold exceeded	Continue use of
SOCIETY	effectively collect	Lab activity assessing	Combined student	Class average was		assessment
	and analyze data	effect of commonly	performance of	90%		
	that can be used to	consumed foods on	72% or higher			
	address a societal	blood glucose levels				
	problem.	with worksheet that				
		has essay questions				
		about role of dietary				
		choices on diabetes				
		prevention/treatment.				
		Graded using a rubric.				

^{*}Direct and indirect: at least one measure per objective must be a direct measure.

Evidence of Learning: Courses within the major Course: ZOOL 3600 Fall 2018

Course: ZOOL 360 Zoology Learning	Measurable	Method of	Threshold for	Results of	Interpretation of	Action Plan/ Action
Outcome Assessed	Learning Outcome	Measurement	"Acceptable"	Assessment	Findings	evaluation
1. EVOLUTION	Students are able to discuss how	Method 1: 12 essay exam	Method 1:	Method 1:	Threshold exceeded	Continue use of assessments
	evolutionary forces have shaped animals physiology	questions graded with scoring guide Method 2:	Class average >72%	Class average was 87% Method 2:	Threshold exceeded	
		Lab activity with full lab report write up graded using a rubric	Method 2: Class average	Class average was 92%		
		0 0	>72%			
2. CELLULAR ORGANIZATION	Students are able to collect, analyze	Method 1: 14 essay exam	Method 1:	Method 1:	Threshold exceeded	Continue use of assessments
	and/or discuss data about cellular	questions graded with scoring guide	Class average >72%	Class average was 84%	m lli	
	function	Method 2: Lab activity with full	Method 2:	Method 2:	Threshold exceeded	
		lab report write up graded using a rubric	Class average >72%	Class average was 92%		
3. GENETICS	Students are able to are able to collect,	Method 1: 5 essay exam	Method 1:	Method 1:	Threshold exceeded	Continue use of assessments
	analyze and/or discuss data on how genetic	questions graded with scoring guide Method 2:	Class average >72%	Class average was 86% Method 2:		
	changes/differences alter the physiology	Lab activity with full lab report write up	Method 2:	Class average was	Threshold exceeded	
	of animals	graded using a rubric	Class average >72%	92%		
4. ECOSYSTEMS	Students are to collect, analyze	Method 1: 18 essay exam	Method 1:	Method 1:	Threshold exceeded	Continue use of assessments
	and/or discuss data on physiological adaptations of	questions graded with scoring guide Method 2:	Class average >72%	Class average was 84% Method 2:		
	animals to their environment and	Two lab activities with full lab report write	Method 2:	Class average was	Threshold exceeded	
	how physiology determines the environments	ups graded using a rubric	Class average >72%	88%		
	animals are able to live in					

Evidence of Learning: Courses within the major Course: ZOOL 3600 Fall 2018

	Course: Z00L 3600 Fall 2018									
Zoology Learning	Measurable	Method of	Threshold for	Results of	Interpretation of	Action Plan/ Action				
Outcome Assessed	Learning Outcome	Measurement	"Acceptable"	Assessment	Findings	evaluation				
5. STRUCTURE &	Students are to	Method 1:	Method 1:	Method 1:	Threshold exceeded	Continue use of				
FUNCTION	collect, analyze	32 essay exam				assessments				
	and/or discuss data	questions graded with	Class average	Class average was						
	on how differences	scoring guide	>72%	82%						
	in protein	Method 2:	Method 2:	Method 2:						
	expression lead to differences in	Lab activity with full lab report write up	Method 2:	Class systems as year	Threshold exceeded					
	cellular function	graded using a rubric	Class average	Class average was 84%	Till'esiloid exceeded					
	which lead to	graded using a rubite	>72%	0470						
	differences in		27 Z 70							
	physiology									
6. SYSTEMS	Students are to	Method 1:	Method 1:	Method 1:	Threshold exceeded	Continue use of				
REGULATION	collect, analyze	35 essay exam	1.00104 11		I III COIICIA CACCCACA	assessments				
112002111011	and/or discuss data	questions graded with	Class average	Class average was						
	on how animals	scoring guide	>72%	82%						
	maintain	Method 2:		Method 2:	Threshold exceeded					
	homeostasis despite	Two lab activities with	Method 2:							
	changes in their	full lab report write		Class average was						
	internal or external	ups graded using a	Class average	84%						
	environments	rubric	>72%							
		Method 3:		Method 3:	Threshold exceeded					
		Two lab activities with								
		worksheets involving	Method 3:	Class average was						
		data analysis and		85%						
		interpretation graded	Class average							
I DDOGEGG OF	0. 1	using a rubric	>72%	16.1.14	m 1 1 1 1 1 1	6				
I. PROCESS OF	Students are able to	Method 1:	Method 1:	Method 1:	Threshold exceeded	Continue use of				
SCIENCE	generate as well as	31 essay exam questions where	Class average	Class systems as year		assessments				
	test hypotheses. Students are able to	figures had to be	>72%	Class average was 86%						
	collect and evaluate	interpreted graded	77270	0070						
	data as well	with scoring guide								
	interpret and	Method 2:		Method 2:						
	evaluate already	Three hypothesis	Method 2:	1.1001100 21	Threshold exceeded					
	collected data.	driven lab activities		Class average was	- In contract chicocaca					
		with full lab report	Class average	86%						
		write ups graded	>72%							
		using a rubric								
		Method 3:								

Evidence of Learning: Courses within the major

Course: ZOOL 360 Zoology Learning	Measurable	Method of	Threshold for	Results of	Interpretation of	Action Plan/ Action
Outcome Assessed	Learning Outcome	Measurement	"Acceptable"	Assessment	Findings	evaluation
outcome Assessed	learning outcome	Two hypothesis driven lab activities with worksheets involving data analysis and interpretation graded using a rubric	Method 3: Class average >72%	Method 3: Class average was 85%	Threshold exceeded	Cvaluation
II. QUANTITATIVE REASONING	Students are able to analyze physiological data statistically and display data graphically.	Method 1: 12 essay exam questions where students had to calculate answers or make figures graded with scoring guide. Method 2: Four lab activities with full lab report write ups graded using a rubric Method 3: Three lab activities with worksheets involving data analysis and interpretation graded using a rubric	Method 1: Class average >72% Method 2: Class average >72% Method 3: Class average >72%	Method 1: Class average was 84% Method 2: Class average was 83% Method 3: Class average was 93%	Threshold exceeded Threshold exceeded Threshold exceeded	Continue use of assessments
III. COMMUNICATION	Students can effectively communicate scientific information at different levels and can work collaboratively.	Method 1: Three presentations with different formats graded by peer- review using a rubric Method 2: Lab activity where students collected data in groups and wrote a group lab report.	Method 1: Class average >72% Method 2: Class average >72%	Method 1: Class average was 84% Method 2: Class average was 81%	Threshold exceeded Threshold exceeded	Continue use of assessments

Evidence of Learn	Evidence of Learning: Courses within the major							
Course: Z00L 3600 Fall 2018								
Zoology Learning	Measurable	Method of	Threshold for	Results of	Interpretation of	Action Plan/ Action		
Outcome Assessed	Learning Outcome	Measurement	"Acceptable"	Assessment	Findings	evaluation		
IV. SCIENCE &	Students can	Method 1:	Method 1:	Method 1:	Threshold exceeded	Continue use of		
SOCIETY	effectively collect	Lab activity assessing	Class average	Class average was		assessment		
	and analyze data	effect of commonly	>72%	92%				
	that can be used to	consumed foods on						
	address a societal	blood glucose levels						
	problem.	with worksheet that						
		has essay questions						
		about role of dietary						
		choices on diabetes						
		prevention/treatment.						
		Graded using a rubric.						

Zoology 4480 Aquatic Ecology - Fall 2017

Evidence of Learning: Courses within the major								
Course: Z00L 4480 Fall 2017								
		Method of Measurement	Threshold for "Acceptable"	Results of Assessment	Interpretation of Findings	Action Plan/ Action evaluation		
The diversity of life is the result of mutation, adaptation, and selection pressure over time. dem		A set of 34 multiple choice questions	Combined student performance of 65% or higher	Combined student performance = 86%	Threshold exceeded	Continue current practices.		

Evidence of Learning: Courses within the major									
Course: ZOOL 4480	Course: Z00L 4480 Fall 2017								
Zoology Learning	Measurable	Method of	Threshold for	Results of	Interpretation of	Action Plan/			
Outcome Assessed	Learning Outcome	Measurement	"Acceptable"	Assessment	Findings	Action evaluation			
2. CELLULAR	This outcome is not								
ORGANIZATION	assessed for this								
All living things	course (see								
consist of one or more	curriculum grid)								
cells, the units of									
structure, function,									
and reproduction.									
•									

Evidence of Learnin	Evidence of Learning: Courses within the major								
Course: Z00L 4480	Course: Z00L 4480 Fall 2017								
Zoology Learning	Measurable	Method of	Threshold for	Results of	Interpretation of	Action Plan/			
Outcome Assessed	Learning Outcome	Measurement	"Acceptable"	Assessment	Findings	Action evaluation			
3. GENETICS All living things share basic genetic mechanisms, which are responsible for the organization and continuity of life.	This outcome is not assessed for this course (see curriculum grid)								

Evidence of Learning: Courses within the major								
Course: ZOOL 4480 Fall 2017								
Zoology Learning	Measurable	Method of	Threshold for	Results of	Interpretation of	Action Plan/		
Outcome Assessed	Learning Outcome	Measurement	"Acceptable"	Assessment	Findings	Action evaluation		
4. ECOSYSTEMS All organisms are interconnected, interacting with each other as well as with their dynamic environment.	Students will demonstrate their understanding by performance answering exam questions focused on ecology.	A set of 133 multiple choice questions	Combined student performance of 65% or higher	Combined student performance = 88%	Threshold exceeded	Continue current practices.		

Evidence of Learning: Courses within the major									
Course: ZOOL 4480	Course: Z00L 4480 Fall 2017								
Zoology Learning Outcome Assessed	Measurable Learning Outcome	Method of Measurement	Threshold for "Acceptable"	Results of Assessment	Interpretation of Findings	Action Plan/ Action evaluation			
5. STRUCTURE & FUNCTION There is a relationship between molecular and organismal structure and function.	Students will demonstrate their understanding by performance answering exam questions focused on structure-function relationships.	A set of 13 multiple choice questions	Combined student performance of 65% or higher	Combined student performance = 89%	Threshold exceeded	Continue current practices.			

Evidence of Learnin	Evidence of Learning: Courses within the major								
Course: Z00L 4480	Course: Z00L 4480 Fall 2017								
Zoology Learning Outcome Assessed	Measurable Learning Outcome	Method of Measurement	Threshold for "Acceptable"	Results of Assessment	Interpretation of Findings	Action Plan/ Action evaluation			
6. SYSTEMS REGULATION Biological systems are governed by chemical transformations and homeostasis.	Students will demonstrate their understanding by performance answering exam questions focused on physiological processes.	A set of 69 multiple choice questions	Combined student performance of 65% or higher	Combined student performance = 88%	Threshold exceeded	Continue current practices.			

Evidence of Learning: Courses within the major							
Course: ZOOL 4480	Fall 2017	·					
Zoology Learning	Measurable	Method of	Threshold for	Results of	Interpretation of	Action Plan/	
Outcome Assessed	Learning Outcome	Measurement	"Acceptable"	Assessment	Findings	Action evaluation	
I. PROCESS OF SCIENCE Students will use observational strategies to test hypotheses and critically evaluate experimental evidence.	This outcome is not assessed for this course (see curriculum grid)						

Evidence of Learning: Courses within the major									
Course: ZOOL 4480	Course: ZOOL 4480 Fall 2017								
Zoology Learning	Measurable	Method of	Threshold for	Results of	Interpretation of	Action Plan/			
Outcome Assessed	Learning Outcome	Measurement	"Acceptable"	Assessment	Findings	Action evaluation			
II. QUANTITATIVE REASONING Students will represent diverse experimental data sets graphically and apply statistical methods to them.	Students will demonstrate their understanding by performance answering exam questions focused on data analysis and statistics.	A set of 6 multiple choice questions	Combined student performance of 65% or higher	Combined student performance = 72%	Threshold exceeded	Continue current practices.			

Evidence of Learning: Courses within the major							
Course: Z00L 4480	Fall 2017	·					
Zoology Learning	Measurable	Method of	Threshold for	Results of	Interpretation of	Action Plan/	
Outcome Assessed	Learning Outcome	Measurement	"Acceptable"	Assessment	Findings	Action evaluation	
III. COMMUNICATION Students will explain scientific concepts to different audiences and work collaboratively to explore biological problems.	This outcome is not assessed for this course (see curriculum grid)						

Evidence of Learnin	Evidence of Learning: Courses within the major								
Course: ZOOL 4480	Course: Z00L 4480 Fall 2017								
Zoology Learning	Measurable	Method of	Threshold for	Results of	Interpretation of	Action Plan/			
Outcome Assessed	Learning Outcome	Measurement	"Acceptable"	Assessment	Findings	Action evaluation			
IV. SCIENCE & SOCIETY Students will develop biological applications to evaluate and address societal problems.	Students will demonstrate their understanding by performance answering exam questions focused on science and society.	A set of 25 multiple choice questions	Combined student performance of 65% or higher	Combined student performance = 89%	Threshold exceeded	Continue current practices.			

Zoology 4680 Mammalogy - Spring 2019

Evidence of Learn	Evidence of Learning: Courses within the major									
Course: ZOOL 4680 Mammalogy Spring 2019										
Zoology Learning Outcome Assessed	Measurable Learning Outcome	Method of Measurement	Threshold for "Acceptable"	Results of Assessment	Interpretation of Findings	Action Plan/ Action evaluation				
1. EVOLUTION	Students are able to recognize, discuss	Method 1: 20 essay exam	Method 1:	Method 1:	Threshold exceeded	Continue use of assessments				
	and construct evolutionary relationships	questions graded with a scoring guide	Class average >72%	Class average was 93%						
	between mammals	Method 2: Lab activity involving	Method 2:	Method 2:	Threshold exceeded					
		phylogeny construction	Class average >72%	Class average was 93%						
2. CELLULAR ORGANIZATION	This outcome is not assessed for this course (see curriculum grid)	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated				
3. GENETICS	Students are able to discuss and utilize genetic information to explain relationships	Method 1: 6 essay questions graded with a scoring grid.	Method 1: Class average >72%	Method 1: Class average was 93%	Threshold exceeded	Continue use of assessments				
	between and evolution of mammals.	Method 2: Lab activity involving phylogeny construction using genetic sequences.	Method 2: Class average >72%	Method 2: Class average was 93%	Threshold exceeded					

Evidence of Learning: Courses within the major Course: ZOOL 4680 Mammalogy Spring 2019 Zoology Learning Method of Interpretation of Measurable Threshold for Results of **Action Plan/ Action Outcome Assessed Learning Outcome** Measurement "Acceptable" Assessment **Findings** evaluation Students are able to Threshold exceeded 4. ECOSYSTEMS Method 1: Method 1: Method 1: Continue use of recognize, discuss 13 essay exam assessments questions graded with and evaluate the Class average Class average was role of mammals in a scoring guide >72% 94% ecosystems Method 2: Method 2: Threshold exceeded Multi-week lab Method 2: activity developing, Class average was implementing and Class average 94% evaluating methods to >72% quantify the density and diversity or behavior of mammals in Northern UT **5. STRUCTURE &** Students are able to Method 1: Method 1: Method 1: Threshold exceeded Continue use of **FUNCTION** recognize structural 19 essay exam assessments differences between questions graded with Class average Class average was mammals and a scoring guide >72% 92% discuss the functional Method 2: Method 2: Threshold exceeded Lab activities Method 2: consequences. involving specimen Class average was identification using Class average 98% dichotomous keys >72% with worksheets graded using a rubric Method 3: Method 3:

Method 3:

>72%

Class average

Multi-week lab

project digitizing

mammal collection

graded using self and

peer-review rubrics

Threshold exceeded

Class average was

98%

Evidence of Learning: Courses within the major Course: ZOOL 4680 Mammalogy Spring 2019 Zoology Learning Method of Threshold for Interpretation of Action Plan/ Action Measurable Results of **Outcome Assessed Learning Outcome** Measurement "Acceptable" Assessment **Findings** evaluation Threshold exceeded Continue use of 6. SYSTEMS Students are able to Method 1: Method 1: Method 1: REGULATION discuss how 9 essay exam assessments questions graded with mammals maintain Class average Class average was homeostasis despite a scoring guide >72% 94% changes to their internal and external environments. I. PROCESS OF Students are able to Method 1: Method 1: Method 1: Threshold exceeded Continue use of **SCIENCE** Multi-week lab pose hypotheses, assessments develop methods to activity developing, Class average Class average was test hypotheses, implementing and >72% 94% troubleshoot evaluating methods to methodological quantify the density challenges and and diversity or analyze and behavior of mammals in Northern UT and interpret data. peer-review II. QUANTITATIVE Students are able to Method 1: Method 1: Method 1: Threshold exceeded Continue use of REASONING collect, analyze and Multi-week lab assessments display data in activity developing, Class average Class average was implementing and figures. >72% 94% evaluating methods to quantify the density and diversity or behavior of mammals in Northern UT

Evidence of Learning: Courses within the major Course: ZOOL 4680 Mammalogy Spring 2019 Action Plan/ Action **Zoology Learning** Method of Interpretation of Measurable Threshold for Results of **Outcome Assessed Learning Outcome** Measurement "Acceptable" **Assessment Findings** evaluation Threshold exceeded III. Students can Continue use of Method 1: Method 1: Method 1: COMMUNICATION effectively Three presentations assessments with different formats communicate Class average Class average was scientific graded by peer->72% 96% information at review using a rubric. different levels and can work Method 2: Method 2: collaboratively. Multi-week lab Method 2: Threshold exceeded activity developing, Class average was implementing and 94% Class average evaluating methods to >72% quantify the density and diversity or behavior of mammals in Northern UT Students are able to **IV. SCIENCE &** Method 1: Method 1: Method 1: Threshold exceeded Continue use of SOCIETY collaboratively work Multi-week lab assessments to collect data for activity developing, Class average Class average was 94% dissemination to implementing and >72% evaluating methods to community quantify the density partners. and diversity or behavior of mammals in Northern UT Method 2: Multi-week lab project digitizing Method 2: Threshold exceeded mammal collection to Method 2: Class average was create a digital Class average 98% collection that could >72% be accessed by outside groups graded using self and peerreview rubrics

Evidence of Learning: Overall Major

Course: Seminar Zool 4990

Additional narrative:

During spring semester 2016 zoology majors enrolled in Zool 4990 participated in the Collegiate Learning Assessment (CLA) test. The CLA test evaluates critical-thinking and written-communication skills of college students. It measures analysis and problem-solving, scientific and quantitative reasoning, critical reading and evaluation, and critiquing argument, in addition to writing mechanics and effectiveness. Over 700 institutions—both in the United States and internationally—have used the CLA to benchmark value-added growth in student learning at their college or university compared to that of other institutions.

Results for the 12 zoology majors taking the test indicated a total score mean of 1110.25, which was below the campus-wide average of 1122.09. According to the CLA test criteria this indicates a score of "basic" to "proficient" on scale from "below basic" to "basic" to "proficient" to "advanced".

Zoology 1010 Animal Biology

Evidence of Learnin	Evidence of Learning: General Education, Life Science Courses							
Course: Z00L 1010								
Gen Ed Learning Goal	Measurable Learning Outcome	Method of Measurement	Threshold for "Acceptable"	Results of Assessment	Interpretation of Findings	Action Plan/ Action evaluation		
Nature of Science. Scientific knowledge is based on evidence that is repeatedly examined, and can change with new information. Scientific explanations differ fundamentally from those that are not scientific.	Students will demonstrate their understanding by performance answering exam questions focused on the nature of science.	A set of 14 multiple choice questions	Combined student performance of 65% or higher	No data this year				

Evidence of Learning: General Education, Life Science Courses									
Course: Z00L 1010	Course: Z00L 1010								
Gen Ed Learning	Measurable	Method of	Threshold for	Results of	Interpretation of	Action Plan/			
Goal	Learning Outcome	Measurement	"Acceptable"	Assessment	Findings	Action evaluation			
Integration of	Students will	A set of 10 multiple	Combined student	No data this year					
Science	demonstrate their	choice questions	performance of						
All natural	understanding by		65% or higher						
phenomena are	performance								
interrelated and share	answering exam								
basic organizational	questions focused on								
principles. Scientific	the integration of								
explanations obtained	science.								
from different									
disciplines should be									
cohesive and									
integrated.									

Evidence of Learnin	Evidence of Learning: General Education, Life Science Courses							
Course: Z00L 1010								
Gen Ed Learning	Measurable	Method of	Threshold for	Results of	Interpretation of	Action Plan/		
Goal	Learning Outcome	Measurement	"Acceptable"	Assessment	Findings	Action evaluation		
Science and Society	Students will	A set of 4 multiple	Combined student	No data this year				
The study of science	demonstrate their	choice questions	performance of					
provides explanations	understanding by		65% or higher					
that have significant	performance							
impact on society,	answering exam							
including	questions focused on							
technological	science and society.							
advancements,								
improvement of								
human life, and better								
understanding of								
human and other								
influences on the								
earth's environment.								

Evidence of Learning: General Education, Life Science Courses									
Course: Z00L 1010	Course: Z00L 1010								
Gen Ed Learning	Measurable	Method of	Threshold for	Results of	Interpretation of	Action Plan/			
Goal	Learning Outcome	Measurement	"Acceptable"	Assessment	Findings	Action evaluation			
Problem Solving &	Students will	This goal was not		No data this year					
Data Analysis Science relies on empirical data, and such data must be analyzed, interpreted, and generalized in a rigorous manner.	demonstrate their understanding by performance answering exam questions focused on problem solving and data analysis.	assessed.							

Evidence of Learning: General Education, Life Science Courses									
Course: Z00L 1010	Course: Z00L 1010								
Gen Ed Learning	Measurable	Method of	Threshold for	Results of	Interpretation of	Action Plan/			
Goal	Learning Outcome	Measurement	"Acceptable"	Assessment	Findings	Action evaluation			
Levels of Organization All life shares an organization that is based on molecules and cells and extends to organisms and ecosystems.	Students will demonstrate their understanding by performance answering exam questions focused on levels of organization.	A set of 18 multiple choice questions	Combined student performance of 65% or higher	No data this year					

Evidence of Learning: General Education, Life Science Courses								
Course: Z00L 1010								
Gen Ed Learning	Measurable	Method of	Threshold for	Results of	Interpretation of	Action Plan/		
Goal	Learning Outcome	Measurement	"Acceptable"	Assessment	Findings	Action evaluation		
Metabolism and homeostasis: Living things obtain and use energy, and maintain homeostasis via organized chemical reactions known as metabolism.	Students will demonstrate their understanding by performance answering exam questions focused on metabolism and homeostasis.	A set of 14 multiple choice questions	Combined student performance of 65% or higher	No data this year				

Evidence of Learning: General Education, Life Science Courses									
Course: Z00L 1010	Course: Z00L 1010								
Gen Ed Learning	Measurable	Method of	Threshold for	Results of	Interpretation of	Action Plan/			
Goal	Learning Outcome	Measurement	"Acceptable"	Assessment	Findings	Action evaluation			
Genetics and evolution: Shared genetic processes and evolution by natural selection are universal features of all life	Students will demonstrate their understanding by performance answering exam questions focused on genetics and evolution.	A set of 38 multiple choice questions	Combined student performance of 65% or higher	No data this year					

Evidence of Learnin	Evidence of Learning: General Education, Life Science Courses								
Course: Z00L 1010	Course: Z00L 1010								
Gen Ed Learning	Measurable	Method of	Threshold for	Results of	Interpretation of	Action Plan/			
Goal	Learning Outcome	Measurement	"Acceptable"	Assessment	Findings	Action evaluation			
Ecological interactions: All organisms, including humans, interact with their environment and other living organisms.	Students will demonstrate their understanding by performance answering exam questions focused on ecological interactions.	A set of 29 multiple choice questions	Combined student performance of 65% or higher	No data this year					

Zoology 1020 Human Biology - Fall 2017 & Spring 2018

Evidence of Learning: General Education, Life Science Courses Course: ZOOL 1020 - Fall & Spring 2017-18, two sections combined; Fall 2018 (one section), Spring 2019 (two sections) **Gen Ed Learning** Measurable Method of Threshold for Results of Interpretation of Action Plan/ **Learning Outcome** Measurement "Acceptable" Findings **Action evaluation** Goal Assessment Threshold exceeded Students will A set of 21 multiple Combined student Combined student Nature of Science. Continue current Scientific knowledge demonstrate their choice questions performance of performance = 76% practices. is based on evidence understanding by 65% or higher performance that is repeatedly A set of multiple Threshold exceeded examined, and can answering exam At least 70% of 73% above 70% Continue current change with new questions focused on choice questions students above practices. information. Scientific 70% the nature of science. 77% above 70% explanations differ fundamentally from 82% above 70% those that are not scientific.

Evidence of Learning: General Education, Life Science Courses									
Course: Z00L 1020	Course: ZOOL 1020 - Fall & Spring 2017-18, two sections combined; Fall 2018 (one section), Spring 2019 (two sections)								
Gen Ed Learning	Measurable	Method of	Threshold for	Results of	Interpretation of	Action Plan/			
Goal	Learning Outcome	Measurement	"Acceptable"	Assessment	Findings	Action evaluation			
Integration of	Students will	A set of 40 multiple	Combined student	Combined student	Threshold exceeded	Continue current			
Science	demonstrate their	choice questions	performance of	performance = 72%		practices.			
All natural	understanding by		65% or higher						
phenomena are	performance								
interrelated and share	answering exam	A set of multiple	At least 70% of	83% above 70%	Threshold exceeded	Continue current			
basic organizational	questions focused on	choice questions	students above			practices.			
principles. Scientific	the integration of		70%	77% above 70%	1				
explanations obtained	science.			77 /0 above 70 /0					
from different				86% above 70%					
disciplines should be									
cohesive and									
integrated.									

Evidence of Learnin	Evidence of Learning: General Education, Life Science Courses							
Course: ZOOL 1020 – Fall & Spring 2017-18, two sections combined; Fall 2018 (one section), Spring 2019 (two sections)								
Gen Ed Learning	Measurable	Method of	Threshold for	Results of	Interpretation of	Action Plan/		
Goal	Learning Outcome	Measurement	"Acceptable"	Assessment	Findings	Action evaluation		
Science and Society	Students will	A set of 42 multiple	Combined student	Combined student	Threshold exceeded	Continue current		
The study of science	demonstrate their	choice questions	performance of	performance = 83%		practices.		
provides explanations	understanding by		65% or higher					
that have significant	performance							
impact on society,	answering exam	A set of multiple	At least 70% of	89% above 70%	Threshold exceeded	Continue current		
including	questions focused on	choice questions	students above			practices.		
technological	science and society.		70%	81% above 70%				
advancements,					1			
improvement of				93% above 70%				
human life, and better								
understanding of								
human and other								
influences on the								
earth's environment.								

Evidence of Learning: General Education, Life Science Courses								
Course: ZOOL 1020	Course: ZOOL 1020 - Fall & Spring 2017-18, two sections combined; Fall 2018 (one section), Spring 2019 (two sections)							
Gen Ed Learning	Measurable	Method of	Threshold for	Results of	Interpretation of	Action Plan/		
Goal	Learning Outcome	Measurement	"Acceptable"	Assessment	Findings	Action evaluation		
Problem Solving &	Students will	A set of 10 multiple	Combined student	Combined student	Threshold exceeded	Continue current		
Data Analysis	demonstrate their	choice questions	performance of	performance = 75%		practices.		
Science relies on	understanding by	•	65% or higher					
empirical data, and	performance		_					
such data must be	answering exam	A set of multiple	At least 70% of	86% above 70%	Threshold exceeded	Continue current		
analyzed, interpreted,	questions focused on	choice questions	students above			practices.		
and generalized in a	problem solving and		70%	88% above 70%				
rigorous manner.	data analysis.			00% above 70%				
				96% above 70%				

Evidence of Learnin	Evidence of Learning: General Education, Life Science Courses								
Course: ZOOL 1020 - Fall & Spring 2017-18, two sections combined; Fall 2018 (one section), Spring 2019 (two sections)									
Gen Ed Learning	Measurable	Method of	Threshold for	Results of	Interpretation of	Action Plan/			
Goal	Learning Outcome	Measurement	"Acceptable"	Assessment	Findings	Action evaluation			
Levels of Organization All life shares an organization that is	Students will demonstrate their understanding by performance	A set of 72 multiple choice questions	Combined student performance of 65% or higher	Combined student performance = 74%	Threshold exceeded	Continue current practices.			
based on molecules and cells and extends to organisms and ecosystems.	answering exam questions focused on levels of organization.	A set of multiple choice questions	At least 70% of students above 70%	78% above 70% 85% above 70% 82% above 70%	Threshold exceeded	Continue current practices.			

Evidence of Learning: General Education, Life Science Courses									
Course: Z00L 1020	Course: ZOOL 1020 - Fall & Spring 2017-18, two sections combined; Fall 2018 (one section), Spring 2019 (two sections)								
Gen Ed Learning	Measurable	Method of	Threshold for	Results of	Interpretation of	Action Plan/			
Goal	Learning Outcome	Measurement	"Acceptable"	Assessment	Findings	Action evaluation			
Metabolism and	Students will	A set of 24 multiple	Combined student	Combined student	Threshold exceeded	Continue current			
homeostasis: Living	demonstrate their	choice questions	performance of	performance = 76%		practices.			
things obtain and use	understanding by		65% or higher						
energy, and maintain	performance								
homeostasis via	answering exam	A set of multiple	At least 70% of	86% above 70%	Threshold exceeded	Continue current			
organized chemical	questions focused on	choice questions	students above			practices.			
reactions known as	metabolism and		70%	88% above 70%					
metabolism.	homeostasis.								
				86% above 70%					

Evidence of Learnin	Evidence of Learning: General Education, Life Science Courses								
Course: Z00L 1020	Course: ZOOL 1020 - Fall & Spring 2017-18, two sections combined; Fall 2018 (one section), Spring 2019 (two sections)								
Gen Ed Learning	Measurable	Method of	Threshold for	Results of	Interpretation of	Action Plan/			
Goal	Learning Outcome	Measurement	"Acceptable"	Assessment	Findings	Action evaluation			
Genetics and evolution: Shared genetic processes and evolution by natural	Students will demonstrate their understanding by performance	A set of 42 multiple choice questions	Combined student performance of 65% or higher	Combined student performance = 80%	Threshold exceeded	Continue current practices.			
selection are universal features of all life	answering exam questions focused on genetics and evolution.	A set of multiple choice questions	At least 70% of students above 70%	93% above 70% 85% above 70% 93% above 70%	Threshold exceeded	Continue current practices.			

Evidence of Learnin	Evidence of Learning: General Education, Life Science Courses								
Course: ZOOL 1020	Course: ZOOL 1020 - Fall & Spring 2017-18, two sections combined; Fall 2018 (one section), Spring 2019 (two sections)								
Gen Ed Learning	Measurable	Method of	Threshold for	Results of	Interpretation of	Action Plan/			
Goal	Learning Outcome	Measurement	"Acceptable"	Assessment	Findings	Action evaluation			
Ecological	Students will	A set of 28 multiple	Combined student	Combined student	Threshold exceeded	Continue current			
interactions: All	demonstrate their	choice questions	performance of	performance = 87%		practices.			
organisms, including	understanding by		65% or higher						
humans, interact with	performance								
their environment and	answering exam	A set of multiple	At least 70% of	83% above 70%	Threshold exceeded	Continue current			
other living	questions focused on	choice questions	students above			practices.			
organisms.	ecological		70%	96% above 70%					
	interactions.			7070 above 7070					
				96% above 70%					

Zoology 1030 Nature of Sex

Evidence of Learning: General Education, Life Science Courses									
Course: Z00L 1030	Course: ZOOL 1030 – Summer, Fall, & Spring 2017-2018								
Gen Ed Learning	Measurable	Method of	Threshold for	Results of	Interpretation of	Action Plan/			
Goal	Learning Outcome	Measurement	"Acceptable"	Assessment	Findings	Action evaluation			
Nature of Science.	Students will	A set of 13 multiple	Combined student	Combined student	Threshold exceeded	Continue current			
Scientific knowledge	demonstrate their	choice questions	performance of	performance = 80%		practices.			
is based on evidence	understanding by		65% or higher						
that is repeatedly	performance			Camplinadatadant					
examined, and can	answering exam			Combined student					
change with new	questions focused on			performance = 83%					
information. Scientific	the nature of science.								
explanations differ				Combined student					
fundamentally from				performance = 81%					
those that are not				7					
scientific.									

Evidence of Learnin	Evidence of Learning: General Education, Life Science Courses							
Course: Z00L 1030	Course: Z00L 1030 – Summer, Fall, & Spring 2017-2018							
Gen Ed Learning	Measurable	Method of	Threshold for	Results of	Interpretation of	Action Plan/		
Goal	Learning Outcome	Measurement	"Acceptable"	Assessment	Findings	Action evaluation		
Integration of	Students will	A set of 7 multiple	Combined student	Combined student	Threshold exceeded	Continue current		
Science	demonstrate their	choice questions	performance of	performance = 87%		practices.		
All natural	understanding by		65% or higher					
phenomena are	performance							
interrelated and share	answering exam			Combined student				
basic organizational	questions focused on			performance = 88%				
principles. Scientific	the integration of							
explanations obtained	science.							
from different				Combined student				
disciplines should be				performance = 85%				
cohesive and								
integrated.								

Evidence of Learnin	Evidence of Learning: General Education, Life Science Courses								
Course: Z00L 1030	Course: Z00L 1030 – Summer, Fall, & Spring 2017-2018								
Gen Ed Learning	Measurable	Method of	Threshold for	Results of	Interpretation of	Action Plan/			
Goal	Learning Outcome	Measurement	"Acceptable"	Assessment	Findings	Action evaluation			
Science and Society	Students will	A set of 6 multiple	Combined student	Combined student	Threshold exceeded	Continue current			
The study of science	demonstrate their	choice questions	performance of	performance = 82%		practices.			
provides explanations	understanding by		65% or higher						
that have significant	performance								
impact on society,	answering exam			0 1: 1 : 1 :					
including	questions focused on			Combined student					
technological	science and society.			performance = 81%					
advancements,									
improvement of									
human life, and better				Combined student					
understanding of				performance = 84%					
human and other				periormanee 0170					
influences on the									
earth's environment.									

Evidence of Learning: General Education, Life Science Courses								
Course: Z00L 1030	Course: Z00L 1030 – Summer, Fall, & Spring 2017-2018							
Gen Ed Learning	Measurable	Method of	Threshold for	Results of	Interpretation of	Action Plan/		
Goal	Learning Outcome	Measurement	"Acceptable"	Assessment	Findings	Action evaluation		
Problem Solving &	Students will	A set of 16 multiple	Combined student	Combined student	Threshold exceeded	Continue current		
Data Analysis Science relies on empirical data, and such data must be analyzed, interpreted, and generalized in a rigorous manner.	demonstrate their understanding by performance answering exam questions focused on problem solving and data analysis.	choice questions	performance of 65% or higher	combined student performance = 83% Combined student performance = 84%		practices.		

Evidence of Learnin	Evidence of Learning: General Education, Life Science Courses							
Course: Z00L 1030	Course: ZOOL 1030 – Summer, Fall, & Spring 2017-2018							
Gen Ed Learning	Measurable	Method of	Threshold for	Results of	Interpretation of	Action Plan/		
Goal	Learning Outcome	Measurement	"Acceptable"	Assessment	Findings	Action evaluation		
Levels of	Students will	A set of 5 multiple	Combined student	Combined student	Threshold exceeded	Continue current		
Organization	demonstrate their	choice questions	performance of	performance = 78%		practices.		
All life shares an	understanding by		65% or higher					
organization that is	performance			Combined student	1			
based on molecules	answering exam			performance = 84%				
and cells and extends	questions focused on			•				
to organisms and	levels of			Combined student	1			
ecosystems.	organization.			performance = 78%				
				, 5,0				

Evidence of Learnin	Evidence of Learning: General Education, Life Science Courses								
Course: Z00L 1030	Course: Z00L 1030 – Summer, Fall, & Spring 2017-2018								
Gen Ed Learning	Measurable	Method of	Threshold for	Results of	Interpretation of	Action Plan/			
Goal	Learning Outcome	Measurement	"Acceptable"	Assessment	Findings	Action evaluation			
Metabolism and homeostasis: Living things obtain and use energy, and maintain homeostasis via organized chemical reactions known as metabolism.	Students will demonstrate their understanding by performance answering exam questions focused on metabolism and homeostasis.	A set of 9 multiple choice questions	Combined student performance of 65% or higher	Combined student performance = 88% Combined student performance = 89% Combined student performance = 89%	Threshold exceeded	Continue current practices.			

Evidence of Learning: General Education, Life Science Courses								
Course: ZOOL 1030	– Summer, Fall, & S	pring 2017-2018						
Gen Ed Learning	Measurable	Method of	Threshold for	Results of	Interpretation of	Action Plan/		
Goal	Learning Outcome	Measurement	"Acceptable"	Assessment	Findings	Action evaluation		
Genetics and evolution: Shared genetic processes and evolution by natural selection are universal features of all life	Students will demonstrate their understanding by performance answering exam questions focused on genetics and evolution.	A set of 20 multiple choice questions	Combined student performance of 65% or higher	Combined student performance = 82% Combined student performance = 82% Combined student performance = 83%	Threshold exceeded	Continue current practices.		

Evidence of Learning: General Education, Life Science Courses									
Course: Z00L 1030	Course: Z00L 1030 – Summer, Fall, & Spring 2017-2018								
Gen Ed Learning	Measurable	Method of	Threshold for	Results of	Interpretation of	Action Plan/			
Goal	Learning Outcome	Measurement	"Acceptable"	Assessment	Findings	Action evaluation			
Ecological	Students will	A set of 8 multiple	Combined student	Combined student	Threshold exceeded	Continue current			
interactions: All	demonstrate their	choice questions	performance of	performance = 80%		practices.			
organisms, including	understanding by		65% or higher						
humans, interact with	performance			Combined student					
their environment and	answering exam			performance = 80%					
other living	questions focused on								
organisms.	ecological			Combined student					
	interactions.			performance = 78%					
				^					

Zoology 1110 Principles of Zoology

Evidence of Learning: General Education, Life Science Courses									
Course: Z00L 1110	Course: Z00L 1110 Spring 2019								
Gen Ed Learning	Measurable	Method of	Threshold for	Results of	Interpretation of	Action Plan/			
Goal	Learning Outcome	Measurement	"Acceptable"	Assessment	Findings	Action evaluation			
Nature of Science. Scientific knowledge is based on evidence that is repeatedly examined, and can change with new information. Scientific explanations differ fundamentally from those that are not scientific.	Students will demonstrate their understanding by performance answering exam questions focused on the nature of science.	A set of 92 multiple choice questions	Combined student performance of 65% or higher	Combined student performance = 85%	Threshold exceeded	Continue current practices.			

Evidence of Learning: General Education, Life Science Courses								
Course: Z00L 1110 Spring 2019								
Gen Ed Learning	Measurable	Method of	Threshold for	Results of	Interpretation of	Action Plan/		
Goal	Learning Outcome	Measurement	"Acceptable"	Assessment	Findings	Action evaluation		
Integration of	Students will	A set of 86 multiple	Combined student	Combined student	Threshold exceeded	Continue current		
Science	demonstrate their	choice questions	performance of	performance = 74%		practices.		
All natural	understanding by		65% or higher					
phenomena are	performance							
interrelated and share	answering exam							
basic organizational	questions focused on							
principles. Scientific	the integration of							
explanations obtained	science.							
from different								
disciplines should be								
cohesive and								
integrated.								

Evidence of Learnin	Evidence of Learning: General Education, Life Science Courses								
Course: Z00L 1110	Course: Z00L 1110 Spring 2019								
Gen Ed Learning	Measurable	Method of	Threshold for	Results of	Interpretation of	Action Plan/			
Goal	Learning Outcome	Measurement	"Acceptable"	Assessment	Findings	Action evaluation			
Science and Society	Students will	A set of 143 multiple	Combined student	Combined student	Threshold exceeded	Continue current			
The study of science	demonstrate their	choice questions	performance of	performance = 82%		practices.			
provides explanations	understanding by		65% or higher						
that have significant	performance								
impact on society,	answering exam								
including	questions focused on								
technological	science and society.								
advancements,									
improvement of									
human life, and better									
understanding of									
human and other									
influences on the									
earth's environment.									

Evidence of Learning: General Education, Life Science Courses									
Course: Z00L 1110	Course: Z00L 1110 Spring 2019								
Gen Ed Learning	Measurable	Method of	Threshold for	Results of	Interpretation of	Action Plan/			
Goal	Learning Outcome	Measurement	"Acceptable"	Assessment	Findings	Action evaluation			
Problem Solving &	Students will	A set of 122 multiple	Combined student	Combined student	Threshold exceeded	Continue current			
Data Analysis Science relies on empirical data, and such data must be analyzed, interpreted, and generalized in a rigorous manner.	demonstrate their understanding by performance answering exam questions focused on problem solving and data analysis.	choice questions	performance of 65% or higher	performance = 85%		practices.			

Evidence of Learnin	Evidence of Learning: General Education, Life Science Courses							
Course: Z00L 1110	Spring 2019							
Gen Ed Learning	Measurable	Method of	Threshold for	Results of	Interpretation of	Action Plan/		
Goal	Learning Outcome	Measurement	"Acceptable"	Assessment	Findings	Action evaluation		
Levels of Organization All life shares an organization that is based on molecules and cells and extends to organisms and ecosystems.	Students will demonstrate their understanding by performance answering exam questions focused on levels of organization.	A set of 44 multiple choice questions	Combined student performance of 65% or higher	Combined student performance = 84%	Threshold exceeded	Continue current practices.		

Evidence of Learnin	Evidence of Learning: General Education, Life Science Courses								
Course: ZOOL 1110	Course: Z00L 1110 Spring 2019								
Gen Ed Learning	Measurable	Method of	Threshold for	Results of	Interpretation of	Action Plan/			
Goal	Learning Outcome	Measurement	"Acceptable"	Assessment	Findings	Action evaluation			
Metabolism and homeostasis: Living things obtain and use energy, and maintain homeostasis via organized chemical reactions known as metabolism.	Students will demonstrate their understanding by performance answering exam questions focused on metabolism and homeostasis.	A set of 102 multiple choice questions	Combined student performance of 65% or higher	Combined student performance = 80%	Threshold exceeded	Continue current practices.			

Evidence of Learning: General Education, Life Science Courses							
Course: ZOOL 1110	Spring 2019						
Gen Ed Learning	Measurable	Method of	Threshold for	Results of	Interpretation of	Action Plan/	
Goal	Learning Outcome	Measurement	"Acceptable"	Assessment	Findings	Action evaluation	
Genetics and evolution: Shared genetic processes and evolution by natural selection are universal features of all life	Students will demonstrate their understanding by performance answering exam questions focused on genetics and evolution.	A set of 27 multiple choice questions	Combined student performance of 65% or higher	Combined student performance = 82%	Threshold exceeded	Continue current practices.	

Evidence of Learning: General Education, Life Science Courses									
Course: ZOOL 1110	Course: Z00L 1110 Spring 2019								
Gen Ed Learning	Measurable	Method of	Threshold for	Results of	Interpretation of	Action Plan/			
Goal	Learning Outcome	Measurement	"Acceptable"	Assessment	Findings	Action evaluation			
Ecological interactions: All organisms, including humans, interact with their environment and other living organisms.	Students will demonstrate their understanding by performance answering exam questions focused on ecological interactions.	A set of 111 multiple choice questions	Combined student performance of 65% or higher	Combined student performance = 81%	Threshold exceeded	Continue current practices.			

Botany/Microbiology/Zoology 1370 Principles of Life Science Spring 2018

Evidence of Learning: General Education, Life Science Courses									
Course: Z00L 1370	Course: Z00L 1370 Spring 2018								
Gen Ed Learning	Measurable	Method of	Threshold for	Results of	Interpretation of	Action Plan/			
Goal	Learning Outcome	Measurement	"Acceptable"	Assessment	Findings	Action evaluation			
Nature of Science.	Students will	A set of 27 multiple	Combined student	Combined student	Threshold exceeded	Continue current			
Scientific knowledge	demonstrate their	choice questions	performance of	performance = 72%		practices.			
is based on evidence	understanding by		65% or higher						
that is repeatedly	performance								
examined, and can	answering exam								
change with new	questions focused on								
information. Scientific	the nature of science.								
explanations differ									
fundamentally from									
those that are not									
scientific.									

Evidence of Learning: General Education, Life Science Courses								
Course: Z00L 1370 Spring 2018								
Gen Ed Learning	Measurable	Method of	Threshold for	Results of	Interpretation of	Action Plan/		
Goal	Learning Outcome	Measurement	"Acceptable"	Assessment	Findings	Action evaluation		
Integration of	Students will	A set of 17 multiple	Combined student	Combined student	Threshold exceeded	Continue current		
Science	demonstrate their	choice questions	performance of	performance = 72%		practices.		
All natural	understanding by		65% or higher					
phenomena are	performance							
interrelated and share	answering exam							
basic organizational	questions focused on							
principles. Scientific	the integration of							
explanations obtained	science.							
from different								
disciplines should be								
cohesive and								
integrated.								

Evidence of Learnin	Evidence of Learning: General Education, Life Science Courses								
Course: Z00L 1370	Course: Z00L 1370 Spring 2018								
Gen Ed Learning	Measurable	Method of	Threshold for	Results of	Interpretation of	Action Plan/			
Goal	Learning Outcome	Measurement	"Acceptable"	Assessment	Findings	Action evaluation			
Science and Society	Students will	A set of 66 multiple	Combined student	Combined student	Threshold exceeded	Continue current			
The study of science	demonstrate their	choice questions	performance of	performance = 72%		practices.			
provides explanations	understanding by		65% or higher						
that have significant	performance								
impact on society,	answering exam								
including	questions focused on								
technological	science and society.								
advancements,									
improvement of									
human life, and better									
understanding of									
human and other									
influences on the									
earth's environment.									

Evidence of Learning: General Education, Life Science Courses								
Course: Z00L 1370 Spring 2018								
Gen Ed Learning	Measurable	Method of	Threshold for	Results of	Interpretation of	Action Plan/		
Goal	Learning Outcome	Measurement	"Acceptable"	Assessment	Findings	Action evaluation		
Problem Solving &	Students will	A set of 244 multiple	Combined student	Combined student	Threshold exceeded	Continue current		
Data Analysis Science relies on empirical data, and such data must be analyzed, interpreted, and generalized in a rigorous manner.	demonstrate their understanding by performance answering exam questions focused on problem solving and data analysis.	choice questions	performance of 65% or higher	performance = 72%		practices.		

Evidence of Learnin	Evidence of Learning: General Education, Life Science Courses								
Course: Z00L 1370	Course: Z00L 1370 Spring 2018								
Gen Ed Learning	Measurable	Method of	Threshold for	Results of	Interpretation of	Action Plan/			
Goal	Learning Outcome	Measurement	"Acceptable"	Assessment	Findings	Action evaluation			
Levels of Organization All life shares an organization that is based on molecules and cells and extends to organisms and ecosystems.	Students will demonstrate their understanding by performance answering exam questions focused on levels of organization.	A set of 72 multiple choice questions	Combined student performance of 65% or higher	Combined student performance = 76%	Threshold exceeded	Continue current practices.			

Evidence of Learning: General Education, Life Science Courses									
Course: Z00L 1370	Course: Z00L 1370 Spring 2018								
Gen Ed Learning	Measurable	Method of	Threshold for	Results of	Interpretation of	Action Plan/			
Goal	Learning Outcome	Measurement	"Acceptable"	Assessment	Findings	Action evaluation			
Metabolism and homeostasis: Living things obtain and use energy, and maintain homeostasis via organized chemical reactions known as metabolism.	Students will demonstrate their understanding by performance answering exam questions focused on metabolism and homeostasis.	A set of 137 multiple choice questions	Combined student performance of 65% or higher	Combined student performance = 68%	Threshold exceeded	Continue current practices.			

Evidence of Learning: General Education, Life Science Courses									
Course: Z00L 1370	Course: Z00L 1370 Spring 2018								
Gen Ed Learning	Measurable	Method of	Threshold for	Results of	Interpretation of	Action Plan/			
Goal	Learning Outcome	Measurement	"Acceptable"	Assessment	Findings	Action evaluation			
Genetics and evolution: Shared genetic processes and evolution by natural selection are universal features of all life	Students will demonstrate their understanding by performance answering exam questions focused on genetics and evolution.	A set of 364 multiple choice questions	Combined student performance of 65% or higher	Combined student performance = 69%	Threshold exceeded	Continue current practices.			

Evidence of Learning: General Education, Life Science Courses									
Course: Z00L 1370	Course: Z00L 1370 Spring 2018								
Gen Ed Learning	Measurable	Method of	Threshold for	Results of	Interpretation of	Action Plan/			
Goal	Learning Outcome	Measurement	"Acceptable"	Assessment	Findings	Action evaluation			
Ecological interactions: All organisms, including humans, interact with their environment and other living organisms.	Students will demonstrate their understanding by performance answering exam questions focused on ecological interactions.	A set of 45 multiple choice questions	Combined student performance of 65% or higher	Combined student performance = 74%	Threshold exceeded	Continue current practices.			

Zoology 2200 Human Physiology Fall 2017

Evidence of Learning: General Education, Life Science Courses								
Course: Z00L 2200 Fall 2017								
Gen Ed Learning	Measurable	Method of	Threshold for	Results of	Interpretation of	Action Plan/		
Goal	Learning Outcome	Measurement	"Acceptable"	Assessment	Findings	Action evaluation		
Nature of Science. Scientific knowledge is based on evidence that is repeatedly examined, and can change with new	Students will demonstrate their understanding by performance answering exam questions focused on	Online section: A set of 53 multiple choice questions	Combined student performance of 65% or higher	Combined student performance = 89%	Thresholds exceeded	Continue current practices.		
information. Scientific explanations differ fundamentally from those that are not scientific.	the nature of science.	Face-to-face section: A set of 38 multiple choice questions		Combined student performance = 79%				

Evidence of Learning: General Education, Life Science Courses								
Course: Z00L 2200 Fall 2017								
Gen Ed Learning	Measurable	Method of	Threshold for	Results of	Interpretation of	Action Plan/		
Goal	Learning Outcome	Measurement	"Acceptable"	Assessment	Findings	Action evaluation		
Integration of	Students will	Online section: A	Combined student	Combined student	Thresholds exceeded	Continue current		
Science	demonstrate their	set of 59 multiple	performance of	performance = 88%		practices.		
All natural	understanding by	choice questions	65% or higher					
phenomena are	performance							
interrelated and share	answering exam							
basic organizational	questions focused on							
principles. Scientific	the integration of	Face-to-face		Combined student				
explanations obtained	science.	section: A set of 113		performance = 86%				
from different		multiple choice						
disciplines should be		questions						
cohesive and								
integrated.								

Evidence of Learnin	Evidence of Learning: General Education, Life Science Courses								
Course: ZOOL 2200	Course: Z00L 2200 Fall 2017								
Gen Ed Learning	Measurable	Method of	Threshold for	Results of	Interpretation of	Action Plan/			
Goal	Learning Outcome	Measurement	"Acceptable"	Assessment	Findings	Action evaluation			
Science and Society	Students will	Online section: A	Combined student	Combined student	Thresholds exceeded	Continue current			
The study of science	demonstrate their	set of 37 multiple	performance of	performance = 91%		practices.			
provides explanations	understanding by	choice questions	65% or higher						
that have significant	performance								
impact on society,	answering exam								
including	questions focused on								
technological	science and society.								
advancements,		Face-to-face		Combined student					
improvement of		section: A set of 52		performance = 85%					
human life, and better		multiple choice							
understanding of		questions							
human and other									
influences on the									
earth's environment.									

Evidence of Learning: General Education, Life Science Courses									
Course: Z00L 2200 Fall 2017									
Gen Ed Learning	Measurable	Method of	Threshold for	Results of	Interpretation of	Action Plan/			
Goal	Learning Outcome	Measurement	"Acceptable"	Assessment	Findings	Action evaluation			
Problem Solving & Data Analysis Science relies on empirical data, and such data must be analyzed, interpreted, and generalized in a rigorous manner.	Students will demonstrate their understanding by performance answering exam questions focused on problem solving and data analysis.	Online section: A set of 78 multiple choice questions Face-to-face section: A set of 66 multiple choice questions	Combined student performance of 65% or higher	Combined student performance = 89% Combined student performance = 84%	Thresholds exceeded	Continue current practices.			

Evidence of Learnin	Evidence of Learning: General Education, Life Science Courses								
Course: ZOOL 2200	Course: Z00L 2200 Fall 2017								
Gen Ed Learning	Measurable	Method of	Threshold for	Results of	Interpretation of	Action Plan/			
Goal	Learning Outcome	Measurement	"Acceptable"	Assessment	Findings	Action evaluation			
Levels of Organization All life shares an organization that is based on molecules and cells and extends to organisms and ecosystems.	Students will demonstrate their understanding by performance answering exam questions focused on levels of organization.	Online section: A set of 60 multiple choice questions Face-to-face section: A set of 107 multiple choice questions	Combined student performance of 65% or higher	Combined student performance = 89% Combined student performance = 84%	Thresholds exceeded	Continue current practices.			

Evidence of Learnin	Evidence of Learning: General Education, Life Science Courses								
Course: ZOOL 2200	Course: Z00L 2200 Fall 2017								
Gen Ed Learning	Measurable	Method of	Threshold for	Results of	Interpretation of	Action Plan/			
Goal	Learning Outcome	Measurement	"Acceptable"	Assessment	Findings	Action evaluation			
Metabolism and homeostasis: Living things obtain and use energy, and maintain homeostasis via organized chemical reactions known as metabolism.	Students will demonstrate their understanding by performance answering exam questions focused on metabolism and homeostasis.	Online section: A set of 90 multiple choice questions Face-to-face section: A set of 199 multiple choice questions	Combined student performance of 65% or higher	Combined student performance = 89% Combined student performance = 83%	Thresholds exceeded	Continue current practices.			

Evidence of Learning: General Education, Life Science Courses						
Course: Z00L 2200 Fall 2017						
Gen Ed Learning	Measurable	Method of	Threshold for	Results of	Interpretation of	Action Plan/
Goal	Learning Outcome	Measurement	"Acceptable"	Assessment	Findings	Action evaluation
Genetics and evolution: Shared genetic processes and evolution by natural selection are universal features of all life	Students will demonstrate their understanding by performance answering exam questions focused on genetics and evolution.	Online section: A set of 32 multiple choice questions Face-to-face section: A set of 15 multiple choice questions	Combined student performance of 65% or higher	Combined student performance = 90% Combined student performance = 78%	Thresholds exceeded	Continue current practices.

Evidence of Learning: General Education, Life Science Courses						
Course: ZOOL 2200 Fall 2017						
Gen Ed Learning	Measurable	Method of	Threshold for	Results of	Interpretation of	Action Plan/
Goal	Learning Outcome	Measurement	"Acceptable"	Assessment	Findings	Action evaluation
Ecological interactions: All organisms, including humans, interact with their environment and other living organisms.	Students will demonstrate their understanding by performance	Online section: A set of 20 multiple choice questions Face-to-face section: A set of 44 multiple choice questions	Combined student performance of 65% or higher	Combined student performance = 91% Combined student performance = 83%	Thresholds exceeded	Continue current practices.

Appendix A

Most departments or programs receive a number of recommendations from their Five/Seven-Year Program Review processes. This page provides a means of updating progress towards the recommendations the department/program is acting upon.

Date of Program Review:	Recommendation	Progress Description
2 December 2013		
Recommendation 1	Strategic shifting of course options to meet student demand	This is occurring
Recommendation 2	Maintenance of a diversity of upper-division offerings	This is occurring
Recommendation 3	Continued support of faculty interest in upper-division courses	This is occurring
Recommendation 4	Continued support of faculty interest in interdisciplinary efforts	This is occurring
Recommendation 5	Continued support of faculty interest in undergraduate research	This is occurring

Appendix B

Please provide the following information about the full-time and adjunct faculty contracted by your department during the last academic year (summer through spring). Gathering this information each year will help with the headcount reporting that must be done for the final Five Year Program Review document that is shared with the State Board of Regents.

Faculty Headcount	2017-18	2018-19
With Doctoral Degrees (Including MFA and other terminal degrees, as specified by the		12
institution)		
Full-time Tenured	10	10
Full-time Non-Tenured (includes tenure-track)		10
Part-time and adjunct	2	2
With Master's Degrees	3	3
Full-time Tenured	0	0
Full-time Non-Tenured	0	1
Part-time and adjunct	2	2
With Bachelor's Degrees		0
Full-time Tenured		0
Full-time Non-tenured		0
Part-time and adjunct		0
Other		0
Full-time Tenured		0
Full-time Non-tenured		0
Part-time		0
Total Headcount Faculty	15	17
Full-time Tenured	10	10
Full-time Non-tenured	0	2
Part-time	4	5

$\textbf{Appendix} \; \textbf{C} - \text{alternative format for Evidence of Learning Reporting; N/A}$

Course:

Program Outcome 1	
Aligned Course Outcome(s):	
Method(s) of measurement:	
Target Performance:	
Actual Performance:	
Interpretation/Reflection on findings:	
Action Plan/Use of Results:	
Intended evaluation of plan (closing the loop):	

Please respond to the following questions.

- 1) First year student success is critical to WSU's retention and graduation efforts. We are interested in finding out how departments support their first-year students. Do you have mechanisms and processes in place to identify, meet with, and support first-year students? Please provide a brief narrative focusing on your program's support of new students:
 - a. Any first-year students taking courses in your program(s).

 Yes. First-year students are supportive in that (1) first-year classes have supplemental instructors, and students are encouraged to attend; (2) we utilize STARFISH to target students who are having difficulties; (3) all faculty in the department hold regular office hours and encourage students to visit; (4) Brian Pilcher, an Instructor in the department is a "Learning Strategist" and holds regular study skills/time management sessions is available for one-on-one meetings.
 - b. Students declared in your program(s), whether or not they are taking courses in your program(s)
 All students must meet with a zoology advisor before declaring their zoology major; they then get information on the correct sequence of classes and specific advisors to contact depending on their career interests. In addition, all declared majors receive a "welcome" e-mail at the beginning of the semester, which contains links to zoology major information such as our social media content, departmental clubs, majors' room access, and how to subscribe to the departmental newsletter.
- 2) A key component of sound assessment practice is the process of 'closing the loop' that is, following up on changes implemented as a response to your assessment findings, to determine the impact of those changes/innovations. It is also an aspect of assessment on which we need to improve, as suggested in our NWCCU mid-cycle report. Please describe the processes your program has in place to 'close the loop'.

Evaluation of our assessment data indicates that we are meeting are learning objectives. Students are meeting or exceeding the thresholds set for these classes. We further interpret this to mean that faculty are achieving their pedagogical goals and should be encouraged to keep up their good work. In those instances where the threshold was not met, the chair will meet with faculty teaching those classes and discuss ways to facilitate changes to teaching strategies that will provide better success at meeting learning outcomes. Future assessment will determine the efficacy of those pedagogical changes.

Glossary

Student Learning Outcomes/Measurable Learning Outcomes

The terms 'learning outcome', 'learning objective', 'learning competency', and 'learning goal' are often used interchangeably. Broadly, these terms reference what we want students to be able to do AFTER they pass a course or graduate from a program. For this document, we will use the word 'outcomes'. Good learning outcomes are specific (but not too specific), are observable, and are clear. Good learning outcomes focus on skills: knowledge and understanding; transferrable skills; habits of mind; career skills; attitudes and values.

- Should be developed using action words (if you can see it, you can assess it).
- Use compound statements judiciously.
- Use complex statements judiciously.

Curriculum Grid

A chart identifying the key learning outcomes addressed in each of the curriculum's key elements or learning experiences (Suskie, 2019). A good curriculum:

- Gives students ample, diverse opportunities to achieve core learning outcomes.
- Has appropriate, progressive rigor.
- Concludes with an integrative, synthesizing capstone experience.
- Is focused and simple.
- Uses research-informed strategies to help students learn and succeed.
- Is consistent across venues and modalities.
- Is greater than the sum of its parts.

Target Performance (previously referred to as 'Threshold')

The level of performance at which students are doing well enough to succeed in later studies (e.g., next course in sequence or next level of course) or career.

Actual Performance

How students performed on the specific assessment. An average score is less meaningful than a distribution of scores (for example, 72% of students met or exceeded the target performance, 5% of students failed the assessment).

Closing the Loop

The process of following up on changes made to curriculum, pedagogy, materials, etc., to determine if the changes had the desired impact.

Continuous Improvement

An idea with roots in manufacturing, that promotes the ongoing effort to improve. Continuous improvement uses data and evidence to improve student learning and drive student success.

<u>Direct evidence</u>

Evidence based upon actual student work; performance on a test, a presentation, or a research paper, for example. Direct evidence is tangible, visible, and measurable.

Indirect evidence

Evidence that serves as a proxy for student learning. May include student opinion/perception of learning, course grades, measures of satisfaction, participation. Works well as a complement to direct evidence.

<u>HIEE - High Impact Educational Experiences</u>

Promote student learning through curricular and co-curricular activities that are intentionally designed to foster active and integrative student engagement by utilizing multiple impact strategies.