

LIFE SCIENCES COURSES AT THE UNIVERSITY OF WYOMING: PROGRAM LEARNING GOALS & OUTCOMES

College: Arts & Sciences
 Program: Life Sciences STEM Majors' Courses

Director: Jonathan Prather
 Year: 2021-2022

GOAL 1: Acquisition, Application and Synthesis of Knowledge						
<i>Students will be expected to...</i>						
	1	2	3	4	5	6
COURSES OFFERED:	acquire fundamental concepts in the fields of cell and molecular biology	acquire fundamental concepts in the field of evolutionary biology	acquire fundamental concepts in the field of genetics	acquire fundamental concepts in the field of ecology	apply biological concepts to new situations	synthesize knowledge to test hypotheses or conclusions
LIFE 1010	X	X	X	X	X	
LIFE 2021	X	X	X		X	X
LIFE 2022	X	X	X	X	X	X
LIFE 2023	X	X	X	X	X	X
LIFE 2100		X		X	X	X
LIFE 3050		X	X	X	X	X
LIFE 3400		X		X	X	X
LIFE 3410				X		
LIFE 3500		X	X	X	X	X
LIFE 3600	X		X		X	

*morphology/structure & function emerged as a category during curriculum mapping for 2000-level courses

GOAL 3: Critical Thinking and Problem Solving						
<i>Students will be expected to...</i>						
	1	2	3	4	5	6
COURSES OFFERED:	differentiate between fact and opinion	recognize and evaluate author bias and rhetoric	develop inferential skills	recognize logical fallacies and faulty reasoning	make decisions and judgments by drawing conclusions using logical, quantitative or statistically-based reasoning	assess the elements of a problem and develop and test a solution based on logic and the best possible information
LIFE 1010	X		X		X	X
LIFE 2021	X				X	X
LIFE 2022					X	
LIFE 2023			X			
LIFE 2100	X		X		X	X
LIFE 3050	X		X	X	X	X
LIFE 3400					X	X
LIFE 3410					X	X
LIFE 3500			X	X	X	X
LIFE 3600			X		X	

GOAL 2: Communication Skills					
<i>Students will be expected to...</i>					
	1	2	3	4	5
COURSES OFFERED:	read and identify key points in scientific writing	summarize key points from oral presentations	be competent in written communication	discuss and present scientific findings verbally	construct effective and appropriate visual displays of information
LIFE 1010	X		X	X	X
LIFE 2021	X	X	X	X	X
LIFE 2022			X	X	X
LIFE 2023	X			X	
LIFE 2100	X		X	X	X
LIFE 3050		X		X	X
LIFE 3400	X	X			
LIFE 3410		X	X	X	X
LIFE 3500	X		X		
LIFE 3600	X	X		X	X

GOAL 4: Research Skills							
<i>Students will be expected to...</i>							
	1	2	3	4	5	6	7
COURSES OFFERED:	understand and appreciate that science and its methodology is a way of knowing	understand how the scientific method is applied to everyday problems	develop testable hypotheses to answer research questions	understand how to design experiments to appropriately test hypotheses	apply appropriate quantitative methods to research data	understand the limitations of science	develop a working concept of research ethics
LIFE 1010	X		X	X	X	X	X
LIFE 2021	X	X	X	X	X	X	X
LIFE 2022	X		X	X	X		
LIFE 2023		X	X	X	X		
LIFE 2100	X	X	X	X	X	X	X
LIFE 3050							
LIFE 3400	X						
LIFE 3410			X		X		
LIFE 3500	X	X	X	X			
LIFE 3600	X	X	X	X	X	X	X

*discipline-specific lab techniques emerged as a category during curriculum mapping for 2000-level courses