Content Goals	Learning objectives	Core c	ourses		List I courses						List II courses									III cou	Electives				
Our students will understand and apply fundamental biological	Our students will be able to explain and apply their understanding of:	195	210	215	216	225	227	237	248	301	310	314	317	321	324	332	341	362	365		367	368	206	207	240
principles from each of the following four major areas of biology: cell	the basic chemical and molecular processes fundamental to living organisms		I					I		D			D	D	D	D	D	D	X		X				
biology; molecular biology and genetics;	the basic form and function of cells		I							D				D	D	D	X	D			X				
organismal biology; and ecology and evolution.	the organization and transfer of genetic information	I	X	X						X			D	X	X	D		D	X						
	the molecular basis of genetics		I	X						X			D	X	D	D		D	X						
	the diversity and adaptations of single- celled organisms	I		D												D			D		D		X	X	
	the diversity and adaptations of multicellular organisms	I		D	D	D	D	D	X	D	D	X		X	X		D		X			D	D	X	X
	the principles of evolutionary biology and the phylogenetic relationships of major groups of organisms	I		D	D	D	D		Х	х	D	X				D			D		Х	D	X	х	
	the ecological relationships between organisms and their environment	I		D	X	D	D	D	X	X	D	X				D	X		D		D	D	D	X	Х
Goal 2. Our students will acquire in-depth knowledge of the major areas of	Our students will be able to explain and apply their understanding of:																								
biology and be able to integrate principles from these areas.	the relationship between structure and function in molecules, cells, and/or organisms	I	X	X	D	X	X		X	D		D	X	D	D	D	D	X	D				X	X	
	the importance of evolutionary theory as a unifying principle in biology	I	X	X	D	X	D	D	D		D	D										D	X	X	X
	interactions between organisms and their abiotic and biotic environment	I		X	X	X	X	D	X		D	X		X	X	D	D		D		X	D	D	D	X
Goal 3. Our students will	Our students will be able to:																								
acquire scientific investigation skills	perform a variety of laboratory techniques	I	X		X			X				X	X		X	X	D	D	X						

field courses	perform a variety of field techniques	I		X	X	X	X	X	X	D				D		D	X	Х	
necessary to apply the methods that biologists use to answer biological questions.	analyze data statistically	I	X				X	X	X	D	D	х	D	D		D	х		

Process goals	Learning objectives	Core	courses	List I courses									List II	course	s				List	III cou	Electives				
Goal 1. Our students will	Our students will be able to:	195	210	215	216	225	227	237	248	301	310	314	317	321	324	332	341	362	365		367	368	206	207	240
develop enhanced critical thinking skills.	identify questions that can be addressed scientifically	I	X			X	X	X	X		D		D	X	X	X	X	D	X		X	D	X		X
	formulate empirically testable hypotheses	I	X		X	X	X	X	X		D		D		X	X	X	X	X			D	X		
	interpret data and draw conclusions from experiments or observational studies	I	X		X	X	X	X	X		D		D		X	D		D	D			D	X	X	
	demonstrate the ability to read, understand, and critically review scientific papers	I	X		X	X	X	X	X		D	X	X		D		D	D			D	D	X	X	D
	place their research and that of others in a broader context	I	X				X				D		X		D	X		D	X			D	X	X	
Goal 2. Our students will engage in the scientific process.	apply the scientific process, including designing and carrying out observational or experimental studies (see Goal 1 above)	I	I	X	X	X	X	X	X		D		X		X	D	X	X	D			D	D		
	present results in appropriate format (see Goal 3 below)	I	X	X		X	X	X	X		X		X		X	X	D	X	D			X	D		
Goal 3. Our students will communicate effectively in	discuss biological processes using correct scientific terminology	I	X	Х	Х	D	Х	X	Х	X	Х	X	X	D	D	D	D	D	D		Х	X	X	Х	Х
written and oral forms.	prepare written and/or oral reports in standard scientific formats appropriate to the audience	I	X	X	X	X	X	X	X		D	X	X	X	D	D	D	X	D			D	D	D	х
I = introduced X = reinforced D = in-depth																									