

**DIVISION 1**  
**Institutional (ILO), Program (PLO), and Course (SLO) Alignment**

Program: <b>Life Science</b>	<b>Number of Courses:</b> 9	<b>Date Updated:</b> 10.23.2015	<b>Submitted by:</b> K. Radcliffe, ext. 2212
------------------------------	--------------------------------	------------------------------------	---

<b>ILOs</b>	<b>1. Critical Thinking</b> <i>Students apply critical, creative and analytical skills to identify and solve problems, analyze information, synthesize and evaluate ideas, and transform existing ideas into new forms.</i>	<b>2. Communication</b> <i>Students effectively communicate with and respond to varied audiences in written, spoken or signed, and artistic forms.</i>	<b>3. Community and Personal Development</b> <i>Students are productive and engaged members of society, demonstrating personal responsibility, and community and social awareness through their engagement in campus programs and services.</i>	<b>4. Information Literacy</b> <i>Students determine an information need and use various media and formats to develop a research strategy and locate, evaluate, document, and use information to accomplish a specific purpose. Students demonstrate an understanding of the legal, social, and ethical aspects related to information use.</i>
-------------	--	---	--	--

**SLO-PLO-ILO ALIGNMENT NOTES:**

*Mark boxes with an 'X' if: SLO/PLO is a major focus or an important part of the course/program; direct instruction or some direct instruction is provided; students are evaluated multiple times (and possibly in various ways) throughout the course or are evaluated on the concepts once or twice within the course.*

*DO NOT mark with an 'X' if: SLO/PLO is a minor focus of the course/program and some instruction is given in the area but students are not formally evaluated on the concepts; or if the SLO/PLO is minimally or not at all part of the course/program.*

<b>PLOs</b>	<b>PLO to ILO Alignment</b>			
	<i>(Mark with an X)</i>			
	1	2	3	4
<b>PLO #1 Language</b> The student will understand and apply principles of the scientific method; recognizing an idea based on reproducible evidence.	X	X		X
<b>PLO #2 Instruments</b> The student will master the use of appropriate biological tools and evaluate evidence gathered to explain biological principles.				X
<b>PLO #3 Structures</b> Students will be able to use language and apply concepts learned to the life sciences.	X			X

SLOs <i>Courses/SLOs highlighted in yellow are not listed in TracDat at all as of 02.12.2015. ip</i>	SLO to PLO Alignment <i>(Mark with an X)</i>			COURSE to ILO Alignment <i>(Mark with an X)</i>			
	P1	P2	P3	1	2	3	4
<b>ANAT 30 Essentials of Anatomy and Physiology: SLO #1 Language</b> Students will be able to use language appropriate to anatomy and physiology and the health sciences.			X	X			X
<b>ANAT 30 Essentials of Anatomy and Physiology: SLO #2 Instruments</b> Students will demonstrate the use of instruments for dissection, histology, and to gather data.		X					
<b>ANAT 30 Essentials of Anatomy and Physiology: SLO #3 Structures</b> Students will be able to identify higher vertebrate body structures, and explain the functions of body systems.			X				
<b>ANAT 32 General Human Anatomy: SLO #1 Language</b> Students will be able to use language appropriate to anatomy and the health sciences.			X	X			X
<b>ANAT 32 General Human Anatomy: SLO #2 Instruments</b> Students will demonstrate the use of instruments for dissection, histology, and to gather data.		X					
<b>ANAT 32 General Human Anatomy: SLO #3 Structures</b> Students will be able to identify higher vertebrate body structures of all body systems.			X				
<b>PHYO 31 Human Physiology: SLO #1 Language</b> Students will be able to use language appropriate to physiological functions and the health sciences.			X	X			X
<b>PHYO 31 Human Physiology: SLO #2 Instruments</b> Students will demonstrate the use of instruments to gather physiological data.		X					
<b>PHYO 31 Human Physiology: SLO #3 Mechanisms</b> Students will be able to describe mechanisms and explain physiological processes that occur in the human body on cellular, organ, systemic, and organismal levels.			X				
<b>BIOL 10 Fundamentals of Biology: SLO #1 Scientific Method</b> The student will understand and apply principles of the scientific method; recognizing an idea based on reproducible evidence.	X		X	X	X		X
<b>BIOL 10 Fundamentals of Biology: SLO #2 Tools</b> The student will be able to use the compound and dissecting microscope to observe cells and microorganisms.		X					
<b>BIOL 10 Fundamentals of Biology: SLO #3 Content Knowledge (Mitosis)</b> The student will be able to describe key activities in cell replication.			X				

SLOs <i>Courses/SLOs highlighted in yellow are not listed in TracDat at all as of 02.12.2015. ip</i>	SLO to PLO Alignment <i>(Mark with an X)</i>			COURSE to ILO Alignment <i>(Mark with an X)</i>			
	P1	P2	P3	1	2	3	4
<b>BIOL 101 Principles of Biology I: SLO #1 Scientific Method</b> The student will understand and apply principles of the scientific method; recognizing an idea based on reproducible evidence.	X		X	X	X		X
<b>BIOL 101 Principles of Biology I: SLO #2 Use of Microscope</b> The student will be able to use the compound and dissecting microscope to observe cells and microorganisms.		X					
<b>BIOL 101 Principles of Biology I: SLO #3 Content Knowledge (Energy Flow)</b> Students will use basic energy principles to explain the flow of energy in living systems, such as those that occur in the cellular metabolic pathways of photosynthesis and cell respiration, or the relationships observed between autotrophs and heterotrophs in ecosystems.			X				
<b>BIOL 102 Principles of Biology II: SLO #1 Scientific Method</b> The student will understand and apply principles of the scientific method; recognizing an idea based on reproducible evidence.	X		X	X	X		X
<b>BIOL 102 Principles of Biology II: SLO #2 Tools</b> The student will be able to use the compound and dissecting microscope to observe cells and microorganisms.		X					
<b>BIOL 102 Principles of Biology II: SLO #3 Content Knowledge (Mitosis)</b> The student will be able to describe key activities in cell replication.			X				
<b>BIOL 15 Environmental Aspects of Biology: SLO #1 Scientific Method</b> The student will understand and apply principles of the scientific method; recognizing an idea based on reproducible evidence.	X		X	X	X		X
<b>BIOL 15 Environmental Aspects of Biology: SLO #2 Content Knowledge (Energy Flow)</b> Students will use basic energy principles to explain the flow of energy in living systems, such as those that occur in the cellular metabolic pathways of photosynthesis and cell respiration, or the relationships observed between autotrophs and heterotrophs in ecosystems.			X				
<b>BIOL 15 Environmental Aspects of Biology: SLO #3 Content Knowledge (Materials Cycling)</b> Students will describe how biologically significant materials move between the biotic and abiotic components of an ecosystem and the role living things play in the cycling of these nutrients.			X				

SLOs <i>Courses/SLOs highlighted in yellow are not listed in TracDat at all as of 02.12.2015. ip</i>	SLO to PLO Alignment <i>(Mark with an X)</i>			COURSE to ILO Alignment <i>(Mark with an X)</i>			
	P1	P2	P3	1	2	3	4
<b>BIOL 17 Marine Biology: SLO #1 Scientific Method</b> The student will understand and apply principles of the scientific method; recognizing an idea based on reproducible evidence.	X		X	X	X		X
<b>BIOL 17 Marine Biology: SLO #2 Content Knowledge (Energy Flow)</b> Students will use basic energy principles to explain the flow of energy in living systems, such as those that occur in the cellular metabolic pathways of photosynthesis and cell respiration, or the relationships observed between autotrophs and heterotrophs in ecosystems.			X				
<b>BIOL 17 Marine Biology: SLO #3 Content Knowledge (Materials Cycling)</b> Students will describe how biologically significant materials move between the biotic and abiotic components of an ecosystem and the role living things play in the cycling of these nutrients.			X				
<b>MICR 33 General Microbiology: SLO #1 Language</b> Students will be able to use language appropriate to microbiological studies and the health sciences.			X	X			X
<b>MICR 33 General Microbiology: SLO #2 Instruments</b> Students will demonstrate the use of instruments to gather data.		X					
<b>MICR 33 General Microbiology: SLO #3 Microbes</b> Student will be able to identify microbes and explain their roles in health and disease.			X				