

Biotechnology Assessment Planning Report

MSCHE Assessment Plan Format

Program Learning Outcome Name	Program Learning Outcome	Outcome Year(s)	Assessment Method	Measurement Scale	Target
Communication 09-12	Communicate effectively, both orally and in writing, factual knowledge of biotechnology and results of research.	2009-2010	Course Assignment	4-5 (surpassing expectations) 3-3.9 (meeting expectations) 2-2.9 (approaching expectations) <2 (not meeting expectations)	80% of students meet or exceed expectations
		2009-2010	Course Grade	87 - 100% = B+, A-, A (surpassing expectations) 73 - 86% = C, C+, B-, B (meeting expectations) 60 - 72% = D, C- (approaching expectations) <60 = F (not meeting expectations)	80% of students meet or exceed expectations
		2009-2010	Course Grade	surpassing expectations - percent 87-100%; or grades B+, A-, A; or scores 4-5 meeting expectations - percent 73 - 86%; or grades C, C+, B-, B; or scores 3 to 3.9 approaching expectations - percent 60 - 72%; or grades D, C- ; or scores 2 to 2.9 not meeting expectations - percent <60; or grade F; or scores 0-1.9	80% of students meet or exceed expectations
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Communication 12-15	Communicate effectively, both orally and in writing, factual knowledge of biotechnology and results of research	2012 - 2013			
		2013 - 2014			
		2014 - 2015			
Knowledge and Application of Mathematics 09-12	Demonstrate an elementary knowledge of basic and applied mathematics and apply it to common practices in biotechnology such as making dilutions, making molar solutions, and analyzing	2009-2010	Course Assignment	4-5 (surpassing expectations) 3-3.9 (meeting expectations) 2-2.9 (approaching expectations) <2 (not meeting expectations)	80% of students meet or exceed expectations

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Knowledge of Biochemistry 09-12	Demonstrate the knowledge of cellular processes and biochemistry that provide a basis for biotechnological and medical applications.	2009-2010	Course Assignment	4-5 (surpassing expectations) 3-3.9 (meeting expectations) 2-2.9 (approaching expectations) <2 (not meeting expectations)	80% of students meet or exceed expectations
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Knowledge	Demonstrate the	2012 -			

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of Biochemistry 12-15	knowledge of cellular processes and biochemistry that provide a basis for biotechnological and medical applications	2013			
		2013 - 2014			
		2014 - 2015			
Synergistic Connections 09-12	Demonstrate ability to make synergistic connections between concepts in biology, mathematics, chemistry, and physics as related to biotechnology.	2009-2010	Course Assignment	4-5 (surpassing expectations) 3-3.9 (meeting expectations) 2-2.9 (approaching expectations) <2 (not meeting expectations)	80% of students meet or exceed expectations
		2009-2010	Course Grade	87 - 100% = B+, A-, A (surpassing expectations) 73 - 86% = C, C+, B-, B (meeting expectations) 60 - 72% = D, C- (approaching expectations) <60 = F (not meeting expectations)	80% of students meet or exceed expectations
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Understanding of Genetic Information 09-12	Demonstrate understanding of the basis of genetic information, how it is expressed, how it is inherited, how it can vary through mutation and recombination, and how it contributes to the diversity and	2009-2010	Course Assignment	4-5 (surpassing expectations) 3-3.9 (meeting expectations) 2-2.9 (approaching expectations) <2 (not meeting expectations)	80% of students meet or exceed expectations

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Understanding of Genetic Information 09-12	evolution of species.	2009-2010	Course Assignment	4-5 (surpassing expectations) 3-3.9 (meeting expectations) 2-2.9 (approaching expectations) <2 (not meeting expectations)	80% of students meet or exceed expectations
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		2011 -	Course	4-5 (surpassing expectations)	80% of students meet or exceed expectations

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		2012	Assignment	3-3.9 (meeting expectations) 2-2.9 (approaching expectations) <2 (not meeting expectations)	80% of students meet or exceed expectations
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Understanding of Scientific Method 09-12	Demonstrate understanding of the scientific method by being able to formulate a hypothesis, designing experiments with proper controls, and analyzing results with respect to the hypothesis.	2009-2010	Course Assignment	4-5 (surpassing expectations) 3-3.9 (meeting expectations) 2-2.9 (approaching expectations) <2 (not meeting expectations)	80% of students meet or exceed expectations
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Work Ability 09-12	Demonstrate the ability to work productively and cooperatively with co-workers and supervisors in a research or clinical setting.	2009-2010	Course Assignment	4-5 (surpassing expectations) 3-3.9 (meeting expectations) 2-2.9 (approaching expectations) <2 (not meeting expectations)	80% of students meet or exceed expectations
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