

NYIT Learning Goals and Program Level Learning Goals Alignment

BIOLOGY

NYIT MISSION	NYIT LEARNING GOALS	PROGRAM LEARNING GOALS
Career Oriented Professional Education	<p><i>By the time of graduation, NYIT students will be able, at the appropriate level (baccalaureate, masters or professional) to:</i></p> <p>Gain a coherent understanding of the knowledge, skills, and values of their discipline</p>	<p>BIOLOGY PROGRAM</p> <p>LO#3 Prepare, identify and analyze biological specimens by anatomical and dissection analyses, histology, microscopy, biochemical and molecular techniques</p> <p>LO#4 Analyze cell structure and function, molecular and biochemical processes and interactions</p> <p>LO#5 Analyze structure-function relationships and distribution of organisms by applying the theory and principles of evolution</p> <p>LO#6 Analyze and explain the flow of genetic information, basic principles on inheritance, recombination and genetic regulation</p> <p>LO#7 Evaluate both anatomical and physiological factors and their contribution to overall health and pathology</p>
Applications Oriented Research	<p>Integrate academic and co-curricular learning to explore concepts and questions that bridge disciplines, professions, and cultures</p> <p>Formulate evidence-based and ethical courses of action or conclusions to address challenges and problems</p> <p>Engage with, respond to, and reflect on political, social, environmental and economic challenges at local, national, and global levels</p>	<p>LO#2 Critically review and communicate scientific data in a quantitative and qualitative manner via oral and written formats</p>
Access to Opportunity	<p>Achieve proficiency in oral and written communication, scientific and quantitative reasoning, critical analysis, technological competency, and information literacy</p> <p>Develop self-efficacy, professionalism, creativity, and an innovative spirit</p>	<p>LO#1 Design and/or conduct investigations to test hypotheses by applying the scientific method</p> <p>LO#2 Critically review and communicate scientific data in a quantitative and qualitative manner via oral and written formats</p>

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CHEMISTRY

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Career Oriented Professional Education	<p><i>By the time of graduation, NYIT students will be able, at the appropriate level (baccalaureate, masters or professional) to:</i></p> <p>Gain a coherent understanding of the knowledge, skills, and values of their discipline</p>	<p>CHEMISTRY PROGRAM</p> <p>LO#3 Synthesize, isolate, separate, identify, quantify and characterize molecules.</p> <p>LO#4 Apply the principles and techniques of analytical, inorganic, organic, biochemistry, and physical chemistry.</p> <p>LO#5 Interpret data by applying principles of instrumental and statistical analysis.</p> <p>LO#6 Apply molecular modeling to stereochemistry, thermodynamics, kinetics and spectroscopy.</p>
Applications Oriented Research	<p>Integrate academic and co-curricular learning to explore concepts and questions that bridge disciplines, professions, and cultures</p> <p>Formulate evidence-based and ethical courses of action or conclusions to address challenges and problems</p> <p>Engage with, respond to, and reflect on political, social, environmental and economic challenges at local, national, and global levels</p>	<p>LO#2 Critically review and communicate scientific data in a quantitative and qualitative manner via oral and written formats</p>
Access to Opportunity	<p>Achieve proficiency in oral and written communication, scientific and quantitative reasoning, critical analysis, technological competency, and information literacy</p> <p>Develop self-efficacy, professionalism, creativity, and an innovative spirit</p>	<p>LO#1 Design and/or conduct investigations to test hypotheses by applying the scientific method</p> <p>LO#2 Critically review and communicate scientific data in a quantitative and qualitative manner via oral and written formats</p>

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BIOTECHNOLOGY

NYIT MISSION	NYIT LEARNING GOALS	PROGRAM LEARNING GOALS
Career Oriented Professional Education	<p><i>By the time of graduation, NYIT students will be able, at the appropriate level (baccalaureate, masters or professional) to:</i></p> <p>Gain a coherent understanding of the knowledge, skills, and values of their discipline</p>	<p>BIOTECHNOLOGY PROGRAM</p> <p>LO#3 Analyze DNA and protein function via instrumentation and recombinant DNA technology.</p> <p>LO#4 Analyze and explain the principles of bioprocessing for the production of recombinant DNA-based pharmaceuticals and therapeutics.</p> <p>LO#5 Evaluate the principles of genetic engineering for the production and application of transgenic plants and animals.</p>
Applications Oriented Research	<p>Integrate academic and co-curricular learning to explore concepts and questions that bridge disciplines, professions, and cultures</p> <p>Formulate evidence-based and ethical courses of action or conclusions to address challenges and problems</p> <p>Engage with, respond to, and reflect on political, social, environmental and economic challenges at local, national, and global levels</p>	<p>LO#2 Critically review and communicate scientific data in a quantitative and qualitative manner via oral and written formats</p> <p>LO#6 Evaluate the ethical, legal, regulatory and societal impact of biotechnology.</p>
Access to Opportunity	<p>Achieve proficiency in oral and written communication, scientific and quantitative reasoning, critical analysis, technological competency, and information literacy</p> <p>Develop self-efficacy, professionalism, creativity, and an innovative spirit</p>	<p>LO#1 Design and/or conduct investigations to test hypotheses by applying the scientific method</p> <p>LO#2 Critically review and communicate scientific data in a quantitative and qualitative manner via oral and written formats</p>