B.S./M.S. Sci & Tech / Molecular Biology-Biotech Program Statements

The vision of the B.S./M.S. Science & Technology / Molecular Biology-Biotechnology program offered by the NJ Center for Science, Technology & Mathematics (NJCSTM) is to advance a reputation as a leading program to train scientist-researchers by both the exemplary skills of our students and faculty and the involvement of professionals to partner with NJCSTM. The mission of this five year, combined degree program is to train students to take their place in a multi-disciplinary science workforce that requires a broad base of fundamental knowledge, concentrated knowledge within one’s discipline, and the ability to make connections between disciplines. A driving goal of this program is to train professionals in biotechnology with both highly developed practical laboratory skills and critical thinking skills and with the potential to further their professional development as scientific technologies advance.

B.S./M.S. Sci & Tech / Mol. Bio/Biotech Student Learning Outcomes (SLOs)

For the Student Earning a B.S./M.S. Degree in Molecular Biology/Biotechnology
It is our expectation that these graduates from the NJCSTM will have the following characteristics:

• SLO1: Graduates will be strong candidates who may continue their education by pursuing doctoral degrees in related fields of study or otherwise seek career employment in the sciences.

• SLO2: Graduates will be versatile and resourceful scientist-researchers who can adjust to this ever-changing field because of their comprehensive, integrated knowledge of applied mathematics, chemistry/physics and biology.

• SLO3: Graduates will be able to combine critical thinking skills, analytical knowledge and practical laboratory skills to design, perform, and analyze scientific problems both as an individual and as effective and productive project team members.

• SLO4: Graduates will have adequate knowledge of the bioethical standards of the science profession and be able to exercise ethical awareness.

• SLO5: Graduates will be able to verbally express themselves and communicate scientific comprehension and knowledge in both formal oral presentations and in written format clearly, concisely and accurately.

• SLO6: Graduates will know the origins of biotechnology in biology and chemistry, modern day theory and application of this field of science and its importance to society.