M.S. Biotechnology Science Program Statements

The vision of the M.S. Biotechnology Science program offered by the NJ Center for Science, Technology & Mathematics (NJCSTM) is to advance the knowledge and skills of students already holding a science bachelor’s degree via a master’s program of science that is current in its content and attractive in its flexibility and design. The mission of this program is to prepare students for employment in the expanding field of biotechnology through course work and laboratory experiences. NJCSTM has three driving goals for this program. First, to train professionals in biotechnology with both highly developed practical laboratory skills and with the potential to further their professional development as scientific technologies advance. Second, to graduate versatile resourceful scientists with the critical ability to adjust to their ever-changing field of employment. And third, to prepare strong candidates for graduation who may wish to continue their education by pursuing their doctorate in a related field of study or otherwise seek career employment in the scientific industry.

M.S. Biotechnology Science Student Learning Outcomes (SLOs)

For the Graduate Student Earning a M.S. Degree in Biotechnology Science

It is our expectation that graduates from the NJCSTM will have these characteristics:

- SLO1: Graduates will possess adequate analytical laboratory and research skills, demonstrate instrumentation operation and applicable software knowledge currently used in biotechnology and related disciplines (genetic engineering, analytical chemistry, bioinformatics, molecular & cellular biology) to enter the biotech or pharmaceutical industry.

- SLO2: Graduates will be able to combine critical thinking skills and analytical knowledge to design, perform, and analyze scientific problems in the laboratory both as an individual and as effective and productive project team members.

- SLO3: Graduates will have adequate knowledge of the bioethical standards of the science profession and be able to exercise ethical awareness.

- SLO4: 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.

- SLO5: Graduates will know the origins of biotechnology, modern day theory and application of this field of science and its importance to society.