

# BIOTECHNOLOGY, M.S.

## LEARNING OUTCOMES

1. Apply core scientific and business principles to distinguish the difference between scientific and commercial success, and gain insight in to the challenge of balancing product usefulness with positive return on investment.
2. Understand how regulation is developed and how it interacts with business and finance to influence the formation and growth of technology companies.
3. Understand and apply modern biotechnology methods and practice, as well as effective written and oral scientific communication, through hands-on participation in the laboratory.
4. Apply knowledge of seven functional specialties (regulatory affairs, quality assurance, biomanufacturing, quality control, non-clinical development, clinical development and project management) to the coordinated process of product development.
5. Understand the processes, technologies, scientific principles and major challenges of the early drug discovery process as it continues to evolve.
6. Evaluate the potential of a product or technology based on the organizational resources required for full commercialization.
7. Understand firm-level strategic development, and apply strategic business principles in day-to-day operations.
8. Demonstrate an ability to identify a global problem, and how biotechnology may offer a novel solution(s).
9. Integrate the technical, sociological and leadership skills that are necessary to design, use and defend a global project management plan.
10. Integrate topics in science, policy, law and business in order to lead the development and commercialization of new and promising technologies.
11. Recognize and apply principles of ethical and professional conduct develop long-term networks and relationships with industry partners.
12. Understand the ethical and safety issues that help shape public policies on biotechnology and its applications.