

# Genomics - Bioinformatics Emphasis, MS

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## Master of Science in Genomics Program Learning Outcomes

At the successful completion of this program, students will be able to:

1. Demonstrate proper safety, aseptic, and sterile laboratory techniques.
2. Perform advanced molecular assays to analyze DNA, RNA, and protein.
3. Apply histological techniques to examine pathological outcomes at tissue and cellular levels.
4. Maintain accurate and detailed laboratory notebooks while performing necessary scientific calculations.
5. Achieve proficiency in techniques associated with animal models or organoid systems.
6. Conduct routine animal husbandry or cell culture tasks, including maintaining experimental animal colonies or cell populations.
7. Design and execute end-to-end experiments in functional genomics and bioinformatics.
8. Operate cutting-edge instruments to collect high-quality experimental data.
9. Perform comprehensive collection, analysis, and interpretation of experimental outcomes.
10. Troubleshoot experimental protocols, equipment malfunctions, and data inconsistencies to optimize workflows and ensure reliable results.