

# MBSP - Molecular Biosciences Program

## **MBSP 561 Molec Biosci Lab Rotation I: 1 Credits (2 Lab)**

Each Molecular Biosciences Program graduate student will complete three laboratory rotations during their first year of graduate study. Each Laboratory Rotation provides students with a six-week period of active research experimentation time. Each Laboratory Rotation is a mini-research project and is designed to allow the student to explore a potential avenue of research for their thesis/dissertation research project in Years 2 and beyond. Students should become familiar with the relevant literature, concepts, methods, reagents, and instruments that will be needed to conduct their experiments and achieve the goals of their research projects. Extensive bench research time will be required to obtain meaningful results. Repeatable up to 1 credits.

## **MBSP 562 Molec Biosci Lab Rotation II: 1 Credits (2 Lab)**

Each Molecular Biosciences Program graduate student will complete three laboratory rotations during their first year of graduate study. Each Laboratory Rotation provides students with a six-week period of active research experimentation time. Each Laboratory Rotation is a mini-research project and is designed to allow the student to explore a potential avenue of research for their thesis/dissertation research project in Years 2 and beyond. Students should become familiar with the relevant literature, concepts, methods, reagents, and instruments that will be needed to conduct their experiments and achieve the goals of their research project. Extensive bench research time will be required to obtain meaningful results. Repeatable up to 1 credits.

## **MBSP 563 Molec Biosci Lab Rotation III: 1 Credits (2 Lab)**

Each Molecular Biosciences Program graduate student will complete three laboratory rotations during their first year of graduate study. Each Laboratory Rotation is a mini-research project and is designed to allow the student to explore a potential avenue of research for their thesis/dissertation research project in Years 2 and beyond. Students should become familiar with the relevant literature, concepts, methods, reagents, and instruments that will be needed to conduct their experiments and achieve the goals of their research project. Extensive bench research time will be required to obtain meaningful results. Repeatable up to 1 credits.

## **MBSP 564 Molec Biosci Lab Rotation IV: 1 Credits (2 Lab)**

Each Molecular Biosciences Program graduate student will complete three laboratory rotations during their first year of graduate study. Each Laboratory Rotation is a mini-research project and is designed to allow the student to explore a potential avenue of research for their thesis/dissertation research project in Years 2 and beyond. Students should become familiar with the relevant literature, concepts, methods, reagents, and instruments that will be needed to conduct their experiments and achieve the goals of their research project. Extensive bench research time will be required to obtain meaningful results. Repeatable up to 1 credits.

## **MBSP 575 Mol BioSci Prgm Rsch Project: 1 Credits (2 Lab)**

This course will fulfill the research requirement of the first year Molecular Biosciences Program (MBSP) doctoral fellows. The fellow (students) will work on a research project under the direction of their advisor.

## **MBSP 579 Programming for Life Scientist: 3 Credits (2 Lec, 2 Lab)**

**PREREQUISITE:** Permission from the Molecular Biosciences Program. The purpose of this course is to provide students with all the knowledge needed to design and then write (or program) data analysis toolkits on their computer. Programming is needed to process vast amount of information by filtering, correlating, aggregating it, tremendously speeding up analyses. Graduate Studies Department

## **MBSP 591 Special Topics: 1-4 Credits (1-4 Lec)**

**PREREQUISITE:** Upper division courses and others as determined for each offering. This course focuses on the impact of basic science on medicine and medical practice. Basic science, clinical research, and investigative medicine will be integrated across five major topics: inflammation, vascular disease, obesity, cancer, and therapeutics Repeatable up to 12 credits.

## **MBSP 594 Molecular Biosc Prgrm Sem: 1 Credits (1 Other)**

This course will fulfill the seminar requirement of the first year Molecular Biosciences Program (MBSP) doctoral fellows. The fellows (students) will attend three seminars sponsored by the MBSP focused on molecular biosciences research. Students will also attend twelve additional departmental or research center-based seminars from the participating MBSP centers and departments. Each student will write a summary of the fifteen attended seminars and turn it into the instructor by the last day.

## **MBSP 613 Scientific Proposal Writing: 3 Credits (3 Lec)**

**PREREQUISITE:** Students need to be in their second year of a STEM discipline. Research scientists and engineers in today's highly competitive world need to develop and acquire research proposal writing skills and knowledge as part of their training for a successful career. The goal of this course is to provide doctoral students with strategies, practical skills and experience in seeking funding for their research as well as writing and evaluating scientific proposals. The student will leave this course with a research proposal that is ready to submit for funding