2023 Spring Molecular Biology Courses						
Class No.	**Course No.**	**Title**	**Instructor**	**Day / Time / Room**	**Cr. Hrs.**	**Semester**
9686	**MBIOL 6200**	**Critical Thinking in Research**	**Darrell Davis** **Eric Huang**	**T, TH / 3:00PM – 5:00PM / EHSEB 1750**	**2.0**	**First Half**
In order to teach the skills required to be a successful independent scientist this course will teach students critical thinking strategies for successful research. This will include how to digest and analyze papers and problem solve, both of which will review and apply material from core courses. The instructors will develop specific course content. Topics may include: How to read a paper (read at home, discuss in class); Survey of the core services; Problem solving with open-ended problems posed on real-life or made-up situations. A focused effort will be made to help students identify topics that they can develop into grants in the Spring term. Grading will be based on participation and individual work.						
15641	**MBIOL 6490**	**Introduction to Biostatistics and Probability for Biosciences**	**Gillian Stanfield** **Mark Metzstein** **Edgar Hernandez**	**M 3:00PM – 3:50PM / T, Th 9:00AM – 10:20AM / EHSEB 4100B**	**2.0**	**First Half**
Statistics is the underpinning of scientific research. This course offers a broad introduction to methods for statistical analysis of biological and biomedical data with emphasis on the fundamental concepts of probability analysis and statistical inference and the practical application of these concepts to experimental design and data analysis. The focus will be on real-world examples that students are likely to encounter in their own research. By the end of the course, students will gain a solid foundation for understanding how to apply statistical analysis to their own data, rigorously interpreting the biomedical literature, and seeking out additional knowledge when needed. An additional component of this class will be an introduction to the statistical software R, which is one of the most used statistical packages in many disciplines.						
9687	**MBIOL 6300**	**Guided Proposal Preparation**	**Tim Formosa** **Clement Chow** **Richard Dorsky**	**T, TH / 3:00PM – 5:00PM / Various Rooms**	**2.0**	**Second Half**
To prepare students for their thesis research, prelims, and qualifying exams, we will offer a guided proposal preparation course in the second half of the Spring semester that builds on their experience earlier in the semester (critical thinking in research, reading of primary literature and problem solving). The guided proposal writing course will provide an opportunity for students to create an original research proposal by critical review of other grants, training in hypothesis generation, scientific writing, and experimental design. The written original grant proposal will be used as a basis for an oral qualifying examination by a faculty committee.						
7214	**MBIOL 7960**	**Research Lab Rotation**	**-**	**-**	**2.0**	**-**
Laboratory rotations for students in the Graduate Program in Molecular Biology. A signed Rotation Verification Form and a copy of the rotation report must be submitted to the Program Office in order to receive a credit.						
Choose 2 electives (see elective list)						
Students must be registered full time for between 9-12 graduate credit hours. Electives vary by year and semester and many are taught every other year. For the purposes of this requirement, a half-semester course is defined as up to two (2) credits, and a full semester course is defined ≥ two-point-five (2.5) credits.						

*** Classroom assignments may change between the time you register and when classes begin. Please check your class schedule for the latest classroom location information before attending class.**