

MOLECULAR GENETICS AND GENOMICS (PH.D.)

Admission Requirements

Admission to the Molecular Genetics and Genomics graduate programs is contingent upon admission to the Graduate School (<http://bulletins.wayne.edu/graduate/general-information/admission/>) and the graduate programs of the School of Medicine (<http://bulletins.wayne.edu/graduate/school-medicine/programs/>). Applicants must have an undergraduate degree with a major in biology or related science. Students with backgrounds in mathematics or computer science are also encouraged to apply, as are students with a Master's degree and significant research experience. A minimum grade point average of 3.0 from the most recent degree is required. Applicants should submit a personal statement, resume, transcript and have three letters of recommendation sent directly to the Program. The Graduate Record Examination is not required, but is recommended. International students must be proficient in English and demonstrate a satisfactory performance on the TOEFL English proficiency examination. Members of the admissions committee will interview select applicants.

Assistantships and Research

Competitively awarded assistantships or fellowships are available to fund students during their studies. All students accepted into the doctoral degree program are considered for financial assistance, and no application forms are necessary for this purpose. All students, whether or not they hold a fellowship or an assistantship, are required to assist the graduate faculty in research and teaching activities as a component of their educational experience.

Program Requirements

Ph.D. students in the graduate program in molecular genetics and genomics enroll in the School of Medicine's Interdisciplinary Biomedical Sciences (IBS) curriculum during their first year. The IBS curriculum includes:

Code	Title	Credits
Required IBS courses		
IBS 7015	Interdisciplinary Cell and Molecular Biology	6
GS 0900	Essential Research Practices: Responsible Conduct of Research	0
Required courses in Molecular Genetics and Genomics		
FPH 7015	Biostatistics I	3
MGG 7015	Introduction to Genetics	2
MGG/IBS 7030	Functional Genomics and Systems Biology	2
MGG 7050	Bioinformatics: theory and practice	3
MGG 7091	Scientific Communication	2
MGG 7460	Research Training in Molecular Biology and Genetics	1-8
MGG 7600	Advanced Human Genetics	3
Elective courses in Molecular Genetics and Genomics		
MGG 7020	Metabolism and Disease	2
MGG 7400	Molecular Biology of Cellular Signalling	2
MGG 8010	Quantitative Data Analysis for Biological and Medical Sciences	2
MGG 8680	Advanced Topics in Molecular Genetics and Genomics	1-3
MGG 8770	Molecular Biology of Mitochondrial Disease	2

Elective and advanced topics courses will be selected to meet student needs. The program will enable the student to demonstrate a basic understanding of molecular genetics and genomics, in order to pass a general examination for candidacy for the Ph.D. degree.

Dissertation: Thirty credits in dissertation research are required in the Ph.D. program. This requirement is fulfilled by registering for the courses MGG 9991, MGG 9992, MGG 9993, and MGG 9994 (Doctoral Dissertation Research and Direction I, II, III, and IV, respectively), in consecutive academic year semesters. Students must write an original research dissertation, have it approved by a dissertation committee, and present it in a public defense.

Academic Scholarship: All course work must be completed in accordance with the regulations of the Graduate School (<http://bulletins.wayne.edu/graduate/general-information/academic-regulations/>) and the School of Medicine (<http://bulletins.wayne.edu/graduate/school-medicine/programs/>) governing graduate scholarship and degrees.