

DIAGNOSTIC GENETIC SCIENCES (POST-BACCALAUREATE CERTIFICATE)

The Diagnostic Genetic Sciences (DGS) certificate program is a two-year educational and clinical post-baccalaureate training program in genetic and genomic testing. It is open to individuals with a bachelor's degree in the biological, laboratory or natural sciences, and who meet the specific course prerequisites and academic standards. Genetic and genomic testing information is used for screening, diagnosing, prognosticating and monitoring many human diseases. Diagnostic genetic scientists are credentialed professionals critical to the research, application and translation of genetics and genomics to personalized or precision medicine. Students in the DGS professional certificate program complete requirements for diagnostic molecular sciences which is accredited by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS) (5600 N. River Rd, Suite 70, Rosemont IL 60018-5119; 773-714-8880). The DGS curriculum includes on-campus didactic and laboratory coursework and an off-site clinical and research internship at an affiliated laboratory. Graduates are eligible to sit for the American Society for Clinical Pathology (ASCP) Board of Certification examination in molecular biology (MB) immediately upon graduation.

Requirements

Course	Title	Credits
Required Courses		
AH 2001	Medical Terminology	2
AH 3021	Environment, Genetics and Cancer	3
AH 3121	Immunology for the Medical Laboratory Sciences	3
AH 4241	Research for the Health Professional	2
DGS 3100	Cytogenetic Technologies	3
DGS 4234	Diagnostic Molecular Technologies	3
DGS 4235	Laboratory in Molecular Diagnostics	2
DGS 4236	Case Studies in Molecular Pathology	1
MLSC 4500	Laboratory Operations and Professional Practice	2
Select four related cognates 2000 level or above as approved by their DGS advisor		12
Required Practicum Courses		
DGS 4402	Specimen Preparation, Nucleic Acid Isolation and Assessment	4
DGS 4503	Amplification Methods	6
DGS 4604	Sequencing Techniques and Data Analysis	3
DGS 4850	Investigative Topics in Laboratory Genetics	1
Select one of the following:		2
DGS 4510	In Situ Hybridization Methods	
DGS 4512	Cloning Techniques	
DGS 4513	Blotting Applications	

DGS 4515 Microbiological Applications of Molecular Diagnostics

Total Credits

49

Clinical Experiences

All students are required to complete a four-month clinical affiliation as a part of the required curriculum. Students are placed in sites for which a valid agreement with the University exists at the time of the placement decision. Travel for internship interviews is required and relocation may be necessary for the final semester.