

# MOLECULAR DIAGNOSTICS, UNDERGRADUATE CERTIFICATE

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The certificate program in Molecular Diagnostics trains students in the newly emerging and rapidly evolving field of laboratory medicine. Students gain a solid foundation and the basic skills necessary for professional employment in Molecular Diagnostic programs in university and hospital laboratories, in new R&D test applications, or in the biotechnology industries serving the Molecular Diagnostics communities.

The certificate is designed to augment the basic education and skills of students currently pursuing a Bachelor of Science degree in Biomedical Sciences or Biological Sciences. With minimal additional courses, students will be able to complete a certificate in Molecular Diagnostics.

The certificate program will also be available to returning, non-degree students who wish to obtain additional credentials in Molecular Diagnostics for career development or enhancement.

## Requirements

Code	Title	Credits
<b>Required</b>		
CHEM 501	Introduction to Biochemistry	3
BIO SCI 325	Genetics	4
Select one of the following:		4
BMS 539 & BMS 540	Public Health Microbiology and Public Health Microbiology Lab	
BIO SCI 539	Laboratory Techniques in Molecular Biology	
Select one of the following:		3-4
BMS 560 & BMS 561	Molecular and Genetic Diagnostics and Molecular Diagnostics Laboratory	
BMS 705 & BMS 561	Molecular Pathology and Molecular Diagnostics Laboratory	
<b>Electives</b>		
Select one of the following:		3-5
BIO SCI 383	General Microbiology	
BIO SCI 315 & BIO SCI 316	Cell Biology and Laboratory in Genetics and Cell Biology	
BMS 534 & BMS 535	Medical Microbiology and Medical Microbiology Laboratory	
BMS 599	Independent Study	
<b>Total Credits</b>		<b>17-20</b>

Although flexibility is built into this certificate program, students will be expected to have basic knowledge of microbiology and genetics and at least one advanced laboratory course (500 level or above) to qualify for the Molecular Diagnostics Certificate.