University of Connecticut
Department of Allied Health Sciences
Diagnostic Genetic Sciences (DGS)

Diagnostic Genetic Sciences (DGS)

The Diagnostic Genetic Sciences (DGS) Program is an accredited program that prepares students for exciting, hands-on careers in molecular diagnostics and genomics. DGS puts you right at the center of modern medicine. Graduates are well prepared to enter the workforce or continue on to graduate or professional school.

What Do DGS Professionals Do?

DGS professionals play a vital role in patient care by helping diagnose disease through advanced molecular and genetic testing. Working behind the scenes in the laboratory, they collaborate with physicians, pathologists, and genetic counselors to support clinical decision-making. Molecular diagnostics and genomics impact many areas of medicine, including inherited disorders, cancer diagnostics, infectious disease testing, pharmacogenomics, and forensic analysis.

Clinical Rotation (Internship Experience)

All DGS students complete a **built-in clinical rotation** at a diagnostic molecular laboratory. Clinical sites are located throughout Connecticut, New England, and beyond. During this internship, students gain real-world laboratory experience and apply what they've learned in the classroom. Each student also completes a research project during the clinical semester, helping them build confidence and professional skills.

Careers After DGS

Graduates of the DGS program pursue careers in a wide range of settings, including hospital-based clinical laboratories, private and reference laboratories, biotechnology and industry, research and development, public health, forensics, and pharmaceutical companies.

Graduate School Pathways

Many DGS graduates choose to continue their education. The program provides a strong foundation for graduate and professional programs such as genetic counseling, bioinformatics or data science, medical or other health professional schools, genomics, and clinical research or clinical trials.

Certification & Professional Credentialing

Graduates are eligible to sit for the **ASCP Molecular Biology Scientist (MB) certification exam**, a nationally recognized credential that prepares students for rewarding careers and advanced study in the fast-growing field of molecular diagnostics.

UCONN
UNIVERSITY OF CONNECTICUT

DEPARTMENT OF ALLIED HEALTH SCIENCES
DIAGNOSTIC GENETIC SCIENCES PROGRAM
(Sample Sequence of Courses§#)
CATALOG YEAR Beginning Fall 2026

YEAR ONE

FALL		SPRING	
CHEM 1124Q or 1127Q General Chemistry I (TOI-6L)	4	CHEM 1125Q or 1128Q General Chemistry II	3-4
ENGL 1007, 1010 or 1011	4	BIOL 1107 General Biology I	4
MATH 1060Q, or higher (MATH 1131Q)	3-4	Common Curriculum TOI	3
Common Curriculum TOI	3	Common Curriculum TOI	3
UNIV 1800 or 1810 First Year Experience course	1	CAHNR TOI (Recommended PATH 1100E)	3
Total credits	15-16	Total credits	16-17

YEAR TWO

FALL		SPRING	
+CHEM 2241 or (CHEM 2443 & CHEM 2444)**	3	+MCB 2610 Fund. of Microbiology	4
STAT 1000Q or 1100Q Statistics	4	Common Curriculum TOI	3
MCB 2400 or 2410 Human Genetics/Genetics	3	Common Curriculum TOI	3
Elective (suggested CHEM2242, if taking 2241)	1-3	W course requirement^	3
Common Curriculum TOI	3	CAHNR TOI	3
Total credits	14-16	Total credits	16

Admission into the DGS program requires separate application*

YEAR THREE- DGS PROGRAM

FALL		SPRING	
AH 2001 Medical Terminology	2	DGS 4234W Dx. Molecular Technologies	3
DGS 3060 Healthcare Genetics and Genomics	3	DGS 4235 Lab. Molecular Diagnostics	2
PATH 3401 Immunobiology	3	MLSC 4500 Lab. Operations	2
DGS Related Cognate	3	AH 3021 Environment, Genetics, and Cancer	3
Elective	3	DGS Related Cognate	3
Total credits	14	Total credits	13

YEAR FOUR- DGS PROGRAM

FALL		SPRING (Clinical Rotation - Approx. January 2 – May 5)	
AH 4241 Research for the Health Prof.	2	DGS 4402 Spec Prep, Nuc. Acid Isolation	4
DGS 4236 Case Studies Molecular Path	1	DGS 4503 Amplification Methods	6
DGS Related Cognate (MCB 2000 suggested)	4	DGS 4604 Sequencing and Analysis	3
DGS Related Cognate	3	DGS 4850 Investigative Topics	1-3
Elective	3	(or DGS 4997 Honors Research)	
Elective	2		
Total credits	15		
		One of the following elective courses:	2
		DGS 4510 *In Situ* Hybridization Methods	
		DGS 4512 Cloning Techniques	
		DGS 4513 Blotting Techniques	
		DGS 4515 Mol. Applications in Microbiology	
		Total credits	16-18

Total credits depend upon electives selected; a minimum of 120 credits are required for graduation. Courses on P/F cannot be used to satisfy general education, CAHNR TOIs, DGS major, and the related cognate courses requirement.

§ This plan of study is a sample. Actual plans of study are subject to change based on advising and student goals.

This plan assumes the **foreign language** requirement is completed prior to admission to the university.

Courses listed in Year 1 and Year 2 need not be taken in the semester indicated; however, it is strongly recommended that all prerequisites and common curriculum requirements are completed prior to Year 3. Courses listed in Year 3 and 4 must be taken in the semester indicated.

***W course requirement**: Students are required to take two "W" skill coded courses. DGS 4234W satisfies the "W" in the major. Students **MUST** take the second "W" as a general education or elective.

+ These courses may be taken in Year 3, if necessary. **A meeting with the DGS Program Director is highly recommended to discuss courses.**

■ Please consult with your academic advisor prior to registering for Q courses.

** Chemistry sequence: The required chemistry sequence depends on career goals and graduate program requirements; students should consult their advisor to choose the appropriate courses.

^ University Common Curriculum and competency requirements can be found here: https://catalog.uconn.edu/undergraduate/common-curriculum/