DIAGNOSTIC GENETIC SCIENCES (DGS)

DGS 3100. Cytogenetic Technologies. (3 Credits)
Study of human chromosome morphology and identification, including chromosome variants and abnormalities. Methodologies in cytogenetic testing for multiple sample types.
Open to students in the Diagnostic Genetic Sciences Program and Diagnostic Genetic Sciences certificates.
View Classes (https://catalog.uconn.edu/course-search/?details&code=DGS%203100)

DGS 3226. Current Genetic Research. (2-3 Credits)
Retrieval, review, and discussion of current primary genetics literature in addition to attending and reviewing University research seminars/guest speakers.
DGS 3100 or MCB 2400 or MCB 2410. Open to DGS majors, others with instructor consent. May be repeated for a total of 6 credits with instructor consent.
May be repeated for a total of 6 credits
View Classes (https://catalog.uconn.edu/course-search/?details&code=DGS%203226)

DGS 3999. Independent Study for Undergraduates. (1-6 Credits)
Designed primarily for students who wish to extend their knowledge in some specialized area in the field of diagnostic genetic sciences.
May be repeated for credit
View Classes (https://catalog.uconn.edu/course-search/?details&code=DGS%203999)

DGS 4095. Special Topics. (1-6 Credits)
Application of the scientific method of inquiry to planning, implementation, evaluating and reporting a study of a problem in cytogenetics.
May be repeated for credit
View Classes (https://catalog.uconn.edu/course-search/?details&code=DGS%204095)

DGS 4234. Diagnostic Molecular Technologies. (3 Credits)
DNA and RNA diagnostic technologies used in clinical settings; clinical applications in prenatal diagnosis; cancer management, transplantation, paternity testing, forensic medicine and microbiology.
MCB 2400 or 2410; AH 3121 or MCB 4211 (which may be taken concurrently); open to students in DGS & MLS Programs, others w/ instructor consent. May not be taken out of sequence after passing DGS 4235, 4503, 4510, 4511, 4514, 4515, 4550.
View Classes (https://catalog.uconn.edu/course-search/?details&code=DGS%204234)

DGS 4234W. Diagnostic Molecular Technologies. (3 Credits)
DNA and RNA diagnostic technologies used in clinical settings; clinical applications in prenatal diagnosis; cancer management, transplantation, paternity testing, forensic medicine and microbiology.
MCB 2400 or 2410; ENGL 1007 or 1010 or 1011 or 2011; AH 3121 or MCB 4211 (can be taken concurrently); open to students in DGS or MLS Prgm, others w/ inst. consent. Cannot be taken out of sequence after passing DGS 4235, 4503, 4510, 4511, 4514, 4515, 4550.
Skill Codes: COMP. Writing Competency
View Classes (https://catalog.uconn.edu/course-search/?details&code=DGS%204234W)

DGS 4235. Laboratory in Molecular Diagnostics. (2 Credits)
Nucleic acid isolation, blotting techniques, fluorescencet in situ hybridization, conventional and real-time polymerase chain reaction. Adhering to clinical laboratory quality guidelines, students obtain practical experience with molecular techniques for the detection and diagnosis of disease.
DGS 4234; open only to students enrolled in the DGS and MLS programs, others with instructor consent.
View Classes (https://catalog.uconn.edu/course-search/?details&code=DGS%204235)

DGS 4236. Case Studies in Molecular Pathology. (1 Credit)
Clinical cases in molecular pathology are presented and discussed.
DGS 4235; open to Diagnostic Genetic Science students and Diagnostic Genetic Sciences certificate students in either Cytogenetics or Molecular concentrations.
View Classes (https://catalog.uconn.edu/course-search/?details&code=DGS%204236)

DGS 4237. Introductory Bioinformatics for Genomics Analysis. (3 Credits)
An introductory bioinformatics course working with genetic and genomic data for clinical and research applications.
DGS 3100 or MCB 2410 or 2413; open to students in the Diagnostic Genetic Sciences program, others with instructor consent.
View Classes (https://catalog.uconn.edu/course-search/?details&code=DGS%204237)

DGS 4246. Contemporary Issues in Human Genetics. (3 Credits)
Historical and contemporary issues relevant to human genetics, including the layperson's understanding of genetic testing and diagnosis; and the ethical, legal, and social issues associated with them.
Open to junior and senior Allied Health Sciences and Diagnostic Genetic Sciences majors and Diagnostic Genetic Sciences certificate students in either Cytogenetics or Molecular concentrations; others with consent of instructor.
View Classes (https://catalog.uconn.edu/course-search/?details&code=DGS%204246)

DGS 4402. Specimen Preparation, Nucleic Acid Isolation and Assessment. (4 Credits)
Practicum experience in specimen preparation for molecular testing, nucleic acid isolation, and nucleic acid quality control assessment.
Students must earn a "C" or better in DGS 4234/W and 4235; open to Diagnostic Genetic Sciences Molecular concentration majors and Diagnostic Genetic Sciences Molecular concentration certificate students.
View Classes (https://catalog.uconn.edu/course-search/?details&code=DGS%204402)

DGS 4503. Amplification Methods. (6 Credits)
Practicum experience in DNA and/or RNA amplification stressing polymerase chain reaction.
student must have earned a "C" or better in DGS 4234, 4235, and 4236; open to Diagnostic Genetic Sciences Molecular concentration majors and Diagnostic Genetic Sciences Molecular concentration certificate students.
View Classes (https://catalog.uconn.edu/course-search/?details&code=DGS%204503)

DGS 4510. In Situ Hybridization Methods. (2 Credits)
Practicum in fluorescence in situ hybridization or other in situ hybridization techniques.
A "C" or better in DGS 4234 and 4235; open to Diagnostic Genetic Sciences Molecular concentration majors and Diagnostic Genetic Sciences Molecular concentration certificate students.
View Classes (https://catalog.uconn.edu/course-search/?details&code=DGS%204510)

DGS 4512. Cloning Techniques. (2 Credits)
Theory and techniques of cloning.
A "C" or better in DGS 4234 and 4235; open to Diagnostic Genetic Sciences Molecular concentration majors and Diagnostic Genetic Sciences Molecular concentration certificate students.
View Classes (https://catalog.uconn.edu/course-search/?details&code=DGS%204512)

DGS 4513. Blotting Applications. (2 Credits)
Theory and techniques of nucleic acid and/or protein blotting (e.g. Southern blot, reverse clot blot).
A "C" or better in DGS 4234 and 4235; open to Diagnostic Genetic Sciences Molecular concentration majors and Diagnostic Genetic Sciences Molecular concentration certificate students.
View Classes (https://catalog.uconn.edu/course-search/?details&code=DGS%204513)

DGS 4515. Microbiological Applications of Molecular Diagnostics. (2 Credits)
Practicum experience in the application of molecular technologies to microbiology.
student must have earned a "C" or better in DGS 4234 and 4235; open only to Diagnostic Genetic Sciences Molecular concentration majors and Diagnostic Genetic Sciences Molecular concentration certificate students; others with consent of the instructor.
View Classes (https://catalog.uconn.edu/course-search/?details&code=DGS%204515)

DGS 4604. Sequencing Techniques and Data Analysis. (3 Credits)
Practicum experience in nucleic acid sequencing and data analysis.
Students must earn a "C" or better in DGS 4234/W and 4235; open to Diagnostic Genetic Sciences Molecular concentration majors and Diagnostic Genetic Sciences Molecular concentration certificate students.
View Classes (https://catalog.uconn.edu/course-search/?details&code=DGS%204604)

DGS 4850. Investigative Topics in Laboratory Genetics. (1 Credit)
Exploration of an area of individual interest in laboratory or clinical genetics.
A grade of "C" or better in DGS 4234 or 4234W, 4235, and 4236; open only to Diagnostic Genetic Sciences majors, others with instructor consent.
View Classes (https://catalog.uconn.edu/course-search/?details&code=DGS%204850)

DGS 4997. Honors Research. (3 Credits)
Design and implementation of an honors research project.
Open only to Diagnostic Genetic Sciences honors students and Diagnostic Genetic Sciences certificate students in either Cytogenetics or Molecular concentrations.
Grading Basis: Honors Credit
View Classes (https://catalog.uconn.edu/course-search/?details&code=DGS%204997)