

Education of the Forensic DNA Analyst in the 21st Century

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Accreditation of forensic DNA testing laboratories requires specific education, training and qualifications for Forensic DNA Analysts and Technical Managers. Furthermore, with the advent of new technologies such as SNP panels, Real-Time PCR, robotics, non-human DNA testing and microarray analysis, individuals who are trained to understand the science, research and validation of these and other methods will be needed by crime laboratories to implement them. In 2001 the University of North Texas Health Science Center started a graduate program to offer a Master of Science degree in Forensic Genetics. This program was developed to provide the forensic community with trained personnel who exceed the educational and training requirements to be a DNA Technical Manager.

The program is two years in length. The first year consists of coursework in molecular biology, biochemistry, ethics, biostatistics, microbiology and immunology, population genetics and a journal club titled "Topics in Forensic and Molecular Genetics". During the summer the students take two courses, Molecular Methods in Forensic Genetics and QA/QC for Forensic DNA Laboratories.

Second year coursework includes Biological Evidence Evaluation, Genetic Data Analysis, Topics in Forensic and Molecular Genetics, Forensic Anthropology, and Expert Testimony in Forensic Science. Electives include Mitochondrial DNA Sequencing, Bloodstain Pattern Analysis, Forensic Hair Comparison, and Forensic Biology: The History and Science of Human Identification. The final project is a 6-8 week internship practicum at a forensic DNA laboratory. Each student is assigned a project ranging from exploratory research to validation studies. They will then present, defend and publish this project.

Graduates of this program have found employment at federal, state, municipal and private DNA typing laboratories. Some have decided to continue their education and have gone into doctoral programs, medical or law schools.