

Forensic Science

A complement of specialized resources, equipment, and talent guides forensic science research at UNT, with a multidisciplinary infrastructure encompassing research in natural sciences and diverse areas—from the development of detection sensors and forensic instrument technologies to toxicology, ballistics, DNA testing, and arson investigations. Researchers and students collaborate with the broader science, criminal justice, medical, and engineering communities to innovate expertise and apply knowledge in challenging “real world” forensic contexts. Professional affiliations include regional police departments, genetics laboratories, and state and federal agencies, including the Attorney General of Texas, the Federal Bureau of Investigation (FBI), the Drug Enforcement Agency (DEA), and the Bureau for Alcohol, Tobacco, Firearms and Explosives (ATF). UNT is committed to technology development and facility expansion to support forensic science education and leadership in the region.

- **Rigorous research coupled with hands-on training in the field and in collaboration with distinguished local, regional, and national agencies**
- **Cross-disciplinary expertise in criminal justice, biology, chemistry, biochemistry, forensic microscopy, and anthropology**
- **Advanced laboratory technologies offer high quality services for DNA testing and criminal investigations**
- **The first forensic science program west of the Mississippi River to be accredited by the American Association of Forensic Sciences**
- **Active membership and participation in regional and national Forensic Societies, including the Southwestern Association of Forensic Scientists (SWAFS) and the American Academy of Forensic Sciences (AAFS)**

Representative Faculty

Teresa Golden, Director of the UNT Forensic Science Program; and Professor of Chemistry: *analytical chemistry; electrochemistry; instrument analysis; and materials chemistry*

Guido Verbeck, Director of the Laboratory of Imaging Mass Spectrometry; and Associate Professor of Chemistry: *mass spectrometry; and analytical instrument design and development*

William E. Acree, Chair and Professor of Chemistry: *gas-liquid chromatography; spectroscopy; and analytical chemistry*

Robert Benjamin, Associate Professor of Biological Sciences: *molecular biology; biochemistry; and DNA analysis to criminal investigations and prosecutions*

Oliver Chyan, Professor of Chemistry: *interfacial electrochemistry; plasma assist functional thin-film materials; and electroanalytical chemistry*

Richard Ernest, Director of the Alliance Forensics Laboratory: *forensic microscopy; firearms identification; and shooting scene and crime scene reconstruction*

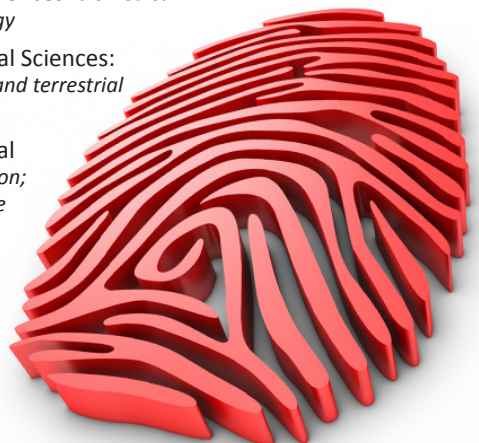
Harrell Gill-King, Professor of Biological Sciences: *biomedical criminalistics; anthropology; and forensic biology*

Art Goven, Chair and Professor of Biological Sciences: *immunotoxicology; comparative immunology; and terrestrial toxicology*

Edward Hueske, Senior Lecturer of Criminal Justice: *forensic chemistry; criminal investigation; crime laboratory management; and crime scene reconstruction*

Andra Lewis-Krick, Lecturer of Criminal Justice: *crime scene investigations; and homicide*

Robby Petros, Assistant Professor of Chemistry: *biomaterials; targeted drug delivery; and organic, organometallic, and polymer synthesis*



Select Research Resources

University of North Texas Forensic Science Program

forensic.unt.edu

The UNT accredited program includes degrees in chemistry, biology, and biochemistry with certification in forensic science. The comprehensive curriculum offers rigorous laboratory training, coursework, and hands-on learning in subjects including courtroom testimony; introduction to law; quality assurance; ethics, professional practice, background; evidence identification, collection, processing; and classes in forensic chemistry, forensic biology, physical methods, and forensic microscopy.

Laboratory of Imaging Mass Spectrometry

www.chem.unt.edu/facilities/UNTLIMS

A UNT-based service facility for the local, national, and international academic and commercial research community, the lab offers a suite of mass spectrometry and imaging instruments, with applications in chemistry, toxicology, and environmental, forensic, and materials science.

Center for Human Identification

www.unthumanid.org

Based at the UNT Health Science Center (UNTHSC) in Fort Worth, Texas, the forensic facility provides the highest quality testing services in the areas of sexual assault, homicide, property crime, and criminal paternity cases, and has worked with the Office of the Attorney General of the State of Texas, state courts, Child and Protective Regulatory Services offices, and law enforcement and legal communities throughout the State of Texas, the USA, and worldwide. The affiliated **Forensics and Investigative Genetics Laboratory** is a collaborative hub for both UNT and UNTHSC researchers.

Laboratory of Forensic Anthropology

www.untchi.org/anthropology.html

The UNT-based lab is a collaborative effort between scientists at UNT and the Center for Human Identification in Fort Worth to advance forensic anthropology — the application of standard scientific techniques developed in physical anthropology to identify human remains, and to assist in the detection of crime. The lab also provides graduate academic training and accredited professional training to law enforcement agencies, medico-legal investigators, and a number of federal agencies.

Department of Chemistry Research Facilities

chemistry.unt.edu/research-facilities

The UNT labs offer a variety of specialized equipment to advance forensic research, including nuclear magnetic resonance spectrometry, gas chromatography, mass spectrometry, Fourier transform Infrared spectroscopy, fluorescence spectroscopy, inductively coupled plasma mass spectrometry, high performance liquid chromatography, UV-vis spectroscopy, Raman spectroscopy, capillary electrophoresis, an X-ray diffraction lab, and both flame and graphite furnace atomic absorption spectroscopy.

Contributing Research Cluster:

Forensic and Investigative Science and Technology Instrument Development

research.unt.edu/clusters/strategic-areas/forensic

