

FORENSIC SCIENCE

Forensic Science Program

We're the only Ohio university to offer a crime scene lab for our students to learn and grow. Hands-on experience begins here.

What You'll Study

Forensic scientists interpret evidence obtained from the scene of a crime. They often identify suspects through tiny traces of scientific evidence. Their research is a difference-maker in acquitting the innocent or convicting the guilty.

We're also set up for more practical experiences. Fingerprinting and blood pattern analysis can be done in our labs.

Our students also get the opportunity to integrate academic studies with the daily operations of a forensic science related facility through our required internship program (https://ysu.edu/sites/default/files/stem/Internship_Manual_Revised_11.13.20.pdf)* their senior year. Each of the required six semester hours translates to 45 on-site hours in the field.

Professor

Robert E. Wardle III, M.S., Associate Professor

Majors

- BS in Forensic Science (<https://catalog.ysu.edu/undergraduate/colleges-programs/college-science-technology-engineering-mathematics/departments-forensic-science/bsas-forensic-science/>)
- BS in Forensic Science 4+1 MS Chemistry Track (<https://catalog.ysu.edu/undergraduate/colleges-programs/college-science-technology-engineering-mathematics/departments-biology-chemistry-forensic-science/forensic-science-four-plus-one-ms-chemistry-track/>)

Certificates

- Certificate in Forensic Science (<https://catalog.ysu.edu/undergraduate/colleges-programs/college-science-technology-engineering-mathematics/departments-forensic-science/forensic-science-certificate/>)

Minors

- Forensic Science Minor (<https://catalog.ysu.edu/undergraduate/colleges-programs/college-science-technology-engineering-mathematics/departments-forensic-science/minor-forensic-science/>)

FSCI 1510 Survey of Forensic Science 3 s.h.

An overview of the history, evolution, and current state of the forensic science discipline. Discussion of the scientific method and its applicability to forensic science, a description of the various sub-disciplines and areas of specialty that contribute to the field as a whole, and a summary of training, education, certification, accreditation, legal, and constitutional issues related to the discipline. There will also be discussion of the basic application of biological, physical, chemical, medical, technological, and behavioral sciences to questions of evidence and law. This course is designed to be accessible to those without a natural science background and provide a comprehensive introduction to those considering further study within the discipline.

Gen Ed: Natural Science, Natural Science 2024.

FSCI 3714 Forensic Science: Crime Scene Investigation 2 s.h.

An introduction to the legal and practical aspects of crime scene investigation. Emphasis on the value of physical evidence and the skills and tools needed to recognize, collect and preserve physical evidence found at a crime scene. Concurrent with: FSCI 3714L.

Prereq.: FSCI 1510 and sophomore standing.

FSCI 3714L Forensic Science CSI Lab 1 s.h.

Laboratory section designed to teach the practical skills employed by criminalists collecting evidence at a crime scene. Students will gain experience using tools, techniques and procedures required to recognize and collect evidence by completing practical exercises.

Prereq.: FSCI 1510 and sophomore standing.

Coreq.: FSCI 3714.

FSCI 3716 Forensic Science Evidence Analysis 2 s.h.

Serves as an introduction to the techniques, instrumentation and procedures used in the examination and analysis of physical evidence in a forensic laboratory setting and the legal aspects regarding the use of laboratory reports in the investigation process. Concurrent with: FSCI 3716L.

Prereq.: FSCI 3714, FSCI 3714L.

FSCI 3716L Forensic Science Evidence Analysis Laboratory 1 s.h.

Laboratory section designed to familiarize students with the tools commonly used in the examination and analysis of physical evidence. Students will gain experience with the instrumentation, techniques, and procedures used for examining physical evidence through a variety of practical exercises.

Prereq.: FSCI 3714, FSCI 3714L.

Coreq.: FSCI 3716.

FSCI 3720 Forensic Fire and Explosion Investigation 3 s.h.

Principles of science including fire chemistry, explosion physics, the application of forensics, and investigation of both fire and explosion scenes. Special emphasis on concepts of fire progression, cause and origin determinations, arson investigation, and bombings. Restrictions: Sophomore status or higher, or permission of forensic coordinator; it is urged that YSU campus students take FSCI 3714/L before this course.

Prereq.: none.

FSCI 4850 Special Topics in Forensic Sciences 3 s.h.

Contemporary issues in criminal justice. Topics are announced prior to enrollment.

Prereq.: Senior standing or permission of instructor.

FSCI 4852 Trace Evidence 3 s.h.

Teaches search methods, recovery procedures, and laboratory analysis for hairs, fibers, and other types of trace evidence in criminal investigations and prosecutions. Emphasis is on major cases that hinged on trace evidence, and the legal and ethical future of trace evidence. Some laboratory exercises with microscopes are included.

Prereq.: FSCI 3714 or concurrent or permission from instructor.

FSCI 4853 Forensic Firearms Examination 3 s.h.

This course features discussion on the forensic science involved in firearms examination, to include gun manufacturing, the physics of ballistics, gunpowder and gun primer residue analysis, serial number restoration, and shooting reconstruction. Legislation concerning handguns and other weapons in the US will also be covered.

Prereq.: FSCI 3714 or concurrent or permission from Instructor.

FSCI 4854 Death Investigation 3 s.h.

A broad overview exploring the various facets of medicolegal death investigation including discussion of history, standard procedures, methods and techniques, safety, scene documentation, cause and manner of death determination, autopsy, toxicological analysis, and other issues related to the discipline. Course content will include graphic images, descriptions, and discussion. May include depictions of a sexual nature, nudity, the aftermath of violent actions, and/or catastrophe.

Prereq.: Junior standing or permission of instructor.

FSCI 5814 Practice and Ethics in Forensic Science 3 s.h.

Overview of the forensic science discipline as it relates to the criminal justice system including discussion of legal aspects, constitutional considerations, expert testimony, the role of the expert witness, and ethical standards and dilemmas. Also includes discussion of current events and the evolution and future of the forensic sciences.

Prereq.: FSCI 3714 and FSCI 3714L.

Gen Ed: Capstone 2024.