

Intensive Study in Forensic Science

Grades 7th-9th

This Intensive Studies in Forensic Science program will expose students to the science and techniques used to analyze evidence collected from crime scenes. The program is designed to challenge students and provide them with the real world experience of a forensic scientist. The instructors of the program are experts in the field and will provide students with a general overview of many of the subdisciplines of forensic science as well as practical hands-on experiences. Students will hone their observation, creativity, and intellectual skills, while also enjoying an exciting and adventurous week, working side-by-side with forensic experts.

Participants will be introduced to the knowledge and skills required to process crime scenes, while learning how science is used to analyze evidence in forensic laboratories.

While in the program, students will:

- Document and collect evidence from a crime scene, including sketching, photographing, and maintaining proper documentation of the evidence.
- Receive hands-on training in how to process and analyze the main types of evidence encountered in forensic laboratories, including controlled substances, blood, DNA, latent prints, firearms, and trace evidence. Through the analysis of mock crime scenes, students will appreciate that in the real world all of these subdisciplines collaborate to ultimately solve a crime.
- Be introduced to other forensic science subdisciplines. The subdisciplines covered change from year to year but may include art, anthropology, entomology, and pathology. Again, students will be given hands-on training in these subdisciplines from experts in the field.
- Process a mock crime scene under the supervision of forensic experts. Students will work in small groups to collect evidence at the scene, analyze the evidence in the laboratory, and to interpret their laboratory findings.
- Be introduced to the legal side of forensic science with the opportunity to observe and participate in a mock trial.
- Present their evidence and analytical results to parents on the last day of the program.
- Learn about the various opportunities available for careers in forensic science as well as the education required for those careers.

Academic Focus

Students will learn how crime scene investigators collect evidence from crime scenes and how forensic scientists analyze the evidence in the laboratory, draw conclusions from their analyses, and then ultimately present their findings in a court of law. Each day, educational presentations will be given by forensic experts from various forensic science subdisciplines. Students will then have the opportunity to gain practical experience in the methods and techniques presented during lectures. Students will work in the university laboratories in small groups (4-6 students), with a graduate teaching assistant leading them through the practical exercises. Students will also have the opportunity to learn about the legal proceedings in a criminal case, with one session held in a mock courtroom on campus and led by a professor from the MSU College of Law. The week will end with students testifying to some of their laboratory findings.

Some highlights of previous practical exercises include: documenting, photographing, and collecting evidence from mock crime scenes; performing a biological profile to determine age and sex of skeletal remains; reconstructing a shooting scene using projection rods and laser light to determine the direction of the shots; analyzing white powder samples for the presence of pharmaceutical drugs; comparing glass, fibers, and hair from a crime scene to identify a suspect; casting shoe and tire impressions for comparison with known shoes and tires; and observing an autopsy performed on a euthanized pig by a practicing forensic pathologist.

MSU professors and forensic experts are also on hand during the laboratory exercises to offer assistance. Throughout the week, students will also learn academic requirements and career pathways for forensics scientists by speaking with graduate students, MSU professors, and forensic experts in an informal setting.