

Facilities and Instruments

The Department of Biological Sciences at Fayetteville State University has provided the Forensic Science Program with many modern instruments and facilities that enable the students to gain the knowledge and skills needed in forensic science and the biotechnology. Here is a list of the major instruments.

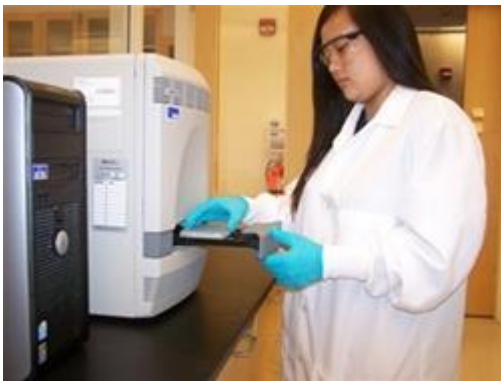
ABI PRISM 310 Genetic Analyzer

The 310 Genetic Analyzer is an automated single- capillary genetic analyzer that is designed to perform a range of applications, such as: DNA sequencing, DNA fragment analysis, SNPs Validation and Discovery, linkage mapping, and mutation detection. Forensic science students perform DNA analysis on the Genetic Analyzer to identify DNA sequences and compare them to known DNA samples.



7500 Real Time PCR System

Real Time PCR (qPCR)



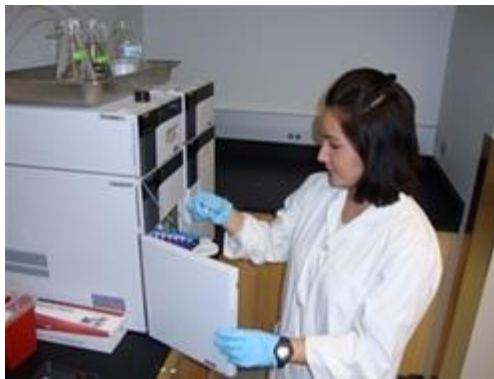
Polymerase Chain Reaction (PCR)

PCR is an instrument that is used to amplify a segment of DNA to millions of copies over time. PCR is used to diagnose diseases, identify bacteria and viruses, clone DNA to identify mutations and match criminals to crime scenes.



High Performance Liquid Chromatography HPLC

HPLC is a technique used to separate, identify and quantify components in a mixture of chemical and organic compounds. It is used in forensic science to identify drugs and toxins as a part of criminal investigation.

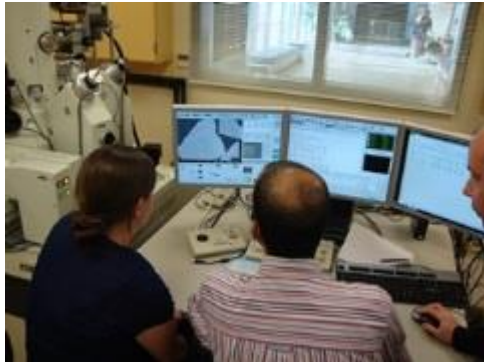
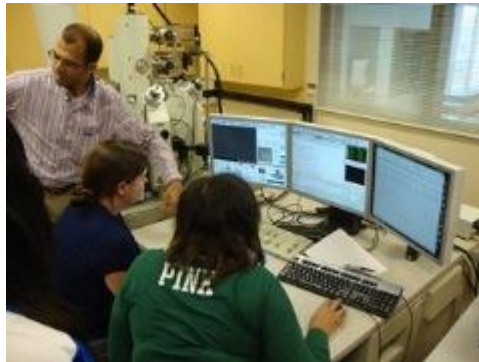
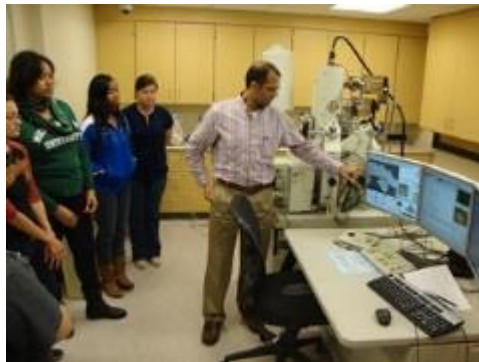


Gas Chromatograph-Mass spectrometry (GC-MS)

GC-MS is like HPLC but is specific to samples that are gases or liquid vapors. It is used in identifying chemicals, drug detection, environmental analysis, fire investigation, and trace elements.

Electron Microscopy at SENCN-MIC

<http://www.sencn-mic.info/index.htm>



Other instruments

Forensic Science program has also the following:

1. Biological Photometer.
2. Centrifuge/ Spinning Systems.
3. (-20/-80°C) Freezers/ Refrigeration systems.
4. Gel Electrophoresis systems.
5. High Resolutions OLYMPUS Microscopes.

Facilities

The Forensic Science program is equipped with many smart classrooms technologies and fully equipped laboratories.