

A laboratory setting with various pieces of glassware. In the foreground, a large beaker contains a yellow liquid with a glass rod. To the right, a round-bottom flask holds a pink liquid. Below these, several petri dishes are visible, some containing blue agar. The background is a soft, out-of-focus white.

CAREERS IN FORENSIC SCIENCE

FORENSIC PATHOLOGY

- Deaths that are unexpected or are thought to be caused by injury or poison are always investigated for the purpose of determining whether it was a homicide.

FORENSIC PATHOLOGISTS

- **Must graduate from medical school and then complete 5 years of postgraduate training.**
- **There are about 500 in the U.S.**
 - **25 have a medical degree as well as a law degree**

DUTIES OF A PATHOLOGIST

- Investigate the cause of death (primary duty)
- Reviewing medical history
 - Is an autopsy necessary
 - Sudden and Unexpected
- Reviewing Witness statements
 - Determining validity
- Scene Examination

DUTIES

- **Autopsy Examination**
 - Can be difficult due to moral objections
 - Entails the removal of internal organs from the chest, abdomen, and head
 - Organs are weighed and dissected to determine injury or disease
- **Obtain appropriate specimens**
 - **Toxicology**
 - Urine, blood, bile, and vitreous fluid
 - Blood and urine are checked for drugs and alcohol

DUTIES

- **Microscopic Examination**
 - Small portions of internal organs
- **DNA analysis**
 - Either blood dried on absorbant paper or hairs with roots
- **Photography**
- **Report preparation**
- **Testimonies**

OTHER CAREERS IN FORENSICS

- **Forensic Anthropology**
 - ID and examination of human skeletal remains
 - PhD in anthropology and years of experience
- **Forensic Entomology**
 - The study of insects in relation to criminal investigations

CAREERS

- **Forensic Psychiatry**

- Examines the relationship between human behavior and legal proceedings (ex: competency to stand trial)
- Medical doctors who completed a residency in Psychiatry

- **Forensic Palynologist**

- An expert in the use of pollen and spores to help solve criminal cases
- Undergraduate degree in botany or geology

OTHER CAREERS IN FORENSICS

- **Forensic Odontology**
 - ID of victims that are in an unrecognizable state
 - Need a DDS plus additional training
- **Forensic Engineering**
 - Failure analysis, accident reconstruction, and causes and origins of fires and explosions
 - At least a BS in engineering
- **Crime Scene Investigator**
 - Search for, collect, and preserve evidence from a crime scene. Conduct field testing
 - A BS in Chemistry, Biology, or physics

OTHER CAREERS IN FORENSICS

- **Forensic Toxicology**
 - Identifies and analyzes drugs, poisons, and chemicals and determines their effect on the human body
 - BS in a physical science, strong chemistry background, and pharmacology training
- **Forensic Artist**
 - Age progression, composite imagery, facial reconstructions to identify missing individuals, criminals, or unidentified homicide victims

OTHER CAREERS IN FORENSICS

- **Forensic Geologist**
 - Use soil and rocks to aide in criminal investigations
 - Employed by the FBI
 - Also serve in Intelligence Work

CHARACTERISTICS OF A FORENSIC SCIENTISTS

- **Curious and persistent**
- **Enjoy solving mysteries and puzzles**
- **Works well with details**
- **Enjoy challenges**
- **Enjoy working hard**
- **Enjoy using logic to solve problems**

EDUCATIONAL REQUIREMENTS

- **General chemistry I and II for science majors (with labs)**
- **Organic Chemistry I and II (with labs)**
- **Biology I and II for majors (with labs)**
- **Physics I and II for majors (with labs)**
- **Calculus**
- **Statistics for Science majors**
- **Many specialty courses such as : biochemistry, molecular biology, genetics, multiple chemistry courses, cell biology, microbiology, pharmacology, and calculus II**