

Explore HEALTH Careers.org

Do something that matters. For yourself. For others.

Forensic Science

Overview

Forensic science lies at the intersection of science and the law. The word “forensic” comes from the Latin word *forensis*, which means “to the forum” or with regard to debate or discussion.

Forensic scientists contribute to legal debates by applying scientific methods to the investigation of legal problems. Health care providers in this field include doctors, dentists, and toxicologists. In many cases, they serve as frontline workers at the scene of a disaster or crime.

Interest in this fascinating field has exploded with the popularity of television series including “CSI” and “Bones.” Community colleges and four-year universities have responded by creating and expanding educational programs in forensic science. Before enrolling in any program, make sure the curriculum has been accredited by the [American Academy of Forensic Science](http://www.aafs.org/default.asp?section_id=resources&page_id=colleges_and_universities#fepac) (http://www.aafs.org/default.asp?section_id=resources&page_id=colleges_and_universities#fepac).

Forensic scientists use chemistry, physics, biology, mathematics, and even psychology to help protect people, serve justice and promote better public health. In addition to working with law enforcement to help solve crimes, forensic scientists investigate environmental contamination, doping by athletes, and employee drug use. The data they collect is used by public health officials to prevent illness and injury.

Students may be interested in the [Young Forensic Scientists Forum](http://www.aafs.org/yfsf/index.htm) (<http://www.aafs.org/yfsf/index.htm>), hosted by the American Academy of Forensic Science.

This field overview was reviewed and approved by Max Houck, M.A., Director, [Forensic Science Initiative, West Virginia University](http://fsi.research.wvu.edu/) (<http://fsi.research.wvu.edu/>).

Explore HEALTH Careers.org

Do something that matters. For yourself. For others.

Crime Scene Investigator (CSI)

Overview

Crime scene investigators (CSIs) go by many names, including evidence technician, crime scene technician, forensic investigator, crime scene analyst, criminalistics officer and more.

In the past, most CSI's were trained police officers, and today most still work out of police stations. However, the role is increasingly being given to "civilians" with scientific, rather than law enforcement, expertise.

CSIs spend most of their time in the field, working at crime scenes. The CSI's job is to:

- Secure the crime scene
- Take detailed measurements
- Sketch and diagram the scene
- Take photographs
- Document all evidence taken from the scene (location, nature, etc.)
- Package and label evidence for transfer to the lab
- Attend and photograph autopsies
- Write a report detailing evidence collection procedures and conclusions
- Testify to their findings in court
- Maintain equipment and restock portable evidence collection kits

The physical evidence collected by CSIs may include fingerprints, footprints, trace materials, hair and fibers and biological evidence found at the scene and on the victim's body.

The evidence collected by the CSI is then transferred to a lab, in strict accordance with chain-of-evidence procedures. In the lab, technicians, including forensic chemists, forensic biologists and forensic toxicologists, analyze the samples. CSIs rarely process evidence, unless they have special training in fingerprint processing or blood spatter analysis, for example.

The CSI then prepares a written report detailing how and where all the evidence was collected. CSIs often must testify in court about their findings.

A CSI's work is often messy, smelly, long and physically demanding. But a CSI finds the reward in uncovering the physical evidence that explains how a crime was committed and "whodunit."

This career profile was reviewed and approved by Max Houck, M.A., Director, [Forensic Science Initiative, West Virginia University](http://fsi.research.wvu.edu/) (<http://fsi.research.wvu.edu/>).

Working Conditions

A CSI must be prepared to work:

- Long shifts, on call, day or night, on holidays and on weekends
- Anywhere a crime has occurred, including areas that may be unsafe and/or unsanitary
- While wearing protective clothing, eyewear, gloves and other safety equipment
- Carrying heavy equipment
- In every type of environment, from cramped basements to dense brush to a knee-deep murky ponds
- In all types of weather
- With body parts, bodily fluids, and remains in every state of decomposition
- Around offensive smells and emotionally disturbing sights
- With the latest technology - and to continually learn new technologies and methodologies

Carefully and methodically, even when under severe time pressures

With a wide range of people, including law enforcement, lab personnel, and attorneys

Seeing the results of crimes on a daily basis can be emotionally taxing on the CSI. The workload can be overwhelming and the pressure to “work faster” intense. Being on call can take time away from family and friends, leading to burnout.

Academic Requirements

Educational requirements are often set by the hiring agency. Some require a two-year degree, while others demand a bachelors or even masters degree with extensive study in both scientific subjects and criminal justice.

If you are interested in becoming a CSI, start asking questions now. If you want to work as a CSI in a specific city or county, contact the police department or sheriff’s department and ask whether the local CSIs are trained as police officers or civilian CSIs. In many areas, police officers “double duty” as CSIs, spending the rest of their time doing police work.

If you decide to train as a police officer, you will likely need several years of experience before you can apply to work as a CSI.

Think ahead. Most CSIs eventually stop working in the field and go back to police work or transfer to the lab as forensic technicians.

Keep your record clean. CSIs must undergo background checks and, while a perfect record is not essential, you will have to answer for any legal infractions, even traffic tickets.

In high school

- Take plenty of science courses

- Participate in science fairs, creating projects that utilize scientific methods to solve mysteries

- Join the debate team to practice public speaking skills and build confidence

In college

- Major in chemistry, biology, physics, molecular biology, or a related science

- Some colleges offer degrees in forensic science. Make sure the program requires at least 24 semester hours of either chemistry or biology and math.

- Take elective courses in law enforcement, criminal justice and crime scene processing

After college

- A master’s degree in forensic science is increasingly required to qualify for jobs in certain jurisdictions. Look for a program that emphasizes laboratory science and research, with coursework in crime scenes, physical evidence, ethics and quality assurance as well as interaction with working forensic laboratories.

- To become certified, the criminalist must study for and pass an exam administered by the American Board of Criminalistics

- Continuing education is required throughout the career

Professional Associations

American Academy of Forensic Sciences

International Crime Scene Investigators Association (<http://www.icsia.org/faq.html>)

Association for Crime Scene Reconstruction

Funding Opportunities

[Search for funding opportunities in this field](http://www.explorehealthcareers.org) (<http://www.explorehealthcareers.org>)

Enrichment Programs

Search for enrichment programs in this field (<http://www.explorehealthcareers.org>)

Source

fsi.research.wvu.edu

Learn more about this field:

Forensic Science (<http://www.explorehealthcareers.com/en/Field.22.aspx>)

Salary: \$27,683 - \$52,471

Years in school: 2 - 6 *

Job outlook: Excellent

* after high school graduation

Reproduction is permitted with appropriate attribution: Reprinted courtesy of ExploreHealthCareers.org, funded in part by the Robert Wood Johnson Foundation of Princeton, NJ, and administered by the American Dental Education Association, 1400 K Street, NW, Suite 1100, Washington, DC 20005.
www.adea.org, 202-289-7201

Explore **HEALTH** Careers.org

Do something that matters. For yourself. For others.

Forensic Biologist

Overview

Forensic biologists examine blood and other bodily fluids, hair, bones, insects, plant and animal remains to help identify victims and support criminal investigations.

Using leading-edge technology in the lab and in the field, forensic biologists collect and analyze biological evidence found on clothing, weapons and other surfaces to determine the time and cause of death.

Detailed logs are kept and written reports prepared. Attention to detail is critical, because a single mistake can cause the evidence to be thrown out of court. Senior-level forensic biologists may testify in court about their findings.

In addition to biology, forensic biologists may become experts in:

- DNA analysis
- Forensic anthropology
- Forensic pathology
- Forensic entomology
- Forensic botany
- Biological chemistry

In addition to helping solve crimes, forensic biologists may investigate environmental contamination or other public health threats.

This career profile was reviewed and approved by Max Houck, M.A., Director, [Forensic Science Initiative, West Virginia University](http://fsi.research.wvu.edu/) (<http://fsi.research.wvu.edu/>).

Working Conditions

Working so closely with biological material (including every sort of fluid found in the human body) can be messy, smelly and generally unpleasant.

Field work is particularly dirty work. At crime scenes, forensic biologists collect leaves, insects and other biological material and examine the victim's clothing and remains (which may be in an advanced state of decomposition). They may sift through the surrounding dirt and even garbage looking for biological evidence.

In the lab, forensic biologists examine this evidence using microscopes and other technology. They photograph and catalog the evidence and perform DNA and other tests on the samples.

The work can be repetitive and boring, but the reward comes in finding a critical piece of evidence investigators can use to solve the crime.

Academic Requirements

Forensic biologists are scientists. Most graduate from a 4-year college with a degree in biology, biochemistry, molecular biology or forensic biology. They need extensive laboratory experience and may take courses in genetics, biostatistics, and general and organic chemistry. They also must be knowledgeable in physics and math.

A masters degree in forensic science is usually required in order to advance as a forensic biologist in a crime laboratory.

Preparation Timeline

A successful forensic biologist must have a strong commitment to the highest standards of scientific procedure. Forensic biology is painstaking work that demands patience and attention to detail.

In high school

Take all the science courses you can.

Participate in science fairs, conducting experiments that involve biological examination and identification.

Participate in team sports or other team-related extracurricular activities.

In college

Major in biology or forensic biology with heavy coursework in chemistry, physics and mathematics.

Take electives in criminal justice, but not at the expense of science courses.

Pursue internships involving field work and investigation.

Some colleges offer degrees in forensic science. Make sure the program requires at least 24 semester hours of biology and math.

Take elective courses in law enforcement, criminal justice and crime scene processing

After college

A master's degree is increasingly required to qualify for jobs in certain jurisdictions. Look for a program that emphasizes laboratory science and research, including interaction with working forensic laboratories.

Continuing education is required throughout the career

Professional Associations

American Academy of Forensic Sciences (www.aafs.org)

American Society for Microbiology (<http://www.asm.org/>)

American Society for Crime Lab Directors (<http://www.asclcd.org/>)

Funding Opportunities

[Search for funding opportunities in this field](http://www.explorehealthcareers.org) (<http://www.explorehealthcareers.org>)

Enrichment Programs

[Search for enrichment programs in this field](http://www.explorehealthcareers.org) (<http://www.explorehealthcareers.org>)

Source

fsi.research.wvu.edu

Learn more about this field:

[Forensic Science](http://www.explorehealthcareers.com/en/Field.22.aspx) (<http://www.explorehealthcareers.com/en/Field.22.aspx>)

Salary: \$27,683 - \$52,471

Years in school: 4 - 8 *

Job outlook: Excellent

* after high school graduation

Reproduction is permitted with appropriate attribution: Reprinted courtesy of ExploreHealthCareers.org, funded in part by the Robert Wood Johnson Foundation of Princeton, NJ, and administered by the American Dental Education Association, 1400 K Street, NW, Suite 1100, Washington, DC 20005.
www.adea.org, 202-289-7201

Explore HEALTH Careers.org

Do something that matters. For yourself. For others.

Forensic Chemist

Overview

Forensic chemists analyze nonbiological trace evidence found at crime scenes in order to identify unknown materials and match samples to known substances.

Working in a lab, they run tests on samples collected by investigators. They use a variety of techniques, including microscopy, optical analysis (UV, infrared, X-ray), gas chromatography, and other technologies.

They carefully document their findings and write reports that are used to support criminal investigations. Forensic chemists may also testify to their findings in court.

This career profile was reviewed and approved by Max Houck, M.A., Director, [Forensic Science Initiative, West Virginia University](http://fsi.research.wvu.edu/) (<http://fsi.research.wvu.edu/>).

Working Conditions

Forensic chemists usually work in a laboratory setting, often as employees of local, state or federal government. They often stand or sit for long periods of time, perform repetitive tasks and use highly technical equipment.

They must follow strict procedures regarding the handling and documentation of evidence, as well as scientific protocols to ensure the quality and reliability of tests and equipment.

The pressure from law enforcement personnel to speed results can be intense, so the forensic chemist must be able to prioritize well and work efficiently while ensuring that the results obtained are accurate.

Testifying in court requires strong communication skills, including the ability to remain calm in the face of cross examination and explain complex scientific procedures in a manner juries can understand.

Academic Requirements

A forensic chemist generally has a bachelor's degree in chemistry, clinical chemistry, or another scientific field. Some universities now offer masters degrees and even PhDs in forensic chemistry. Be sure any program you choose is accredited by the [American Academy of Forensic Science](http://www.aafs.org) (www.aafs.org).

Preparation Timeline

In high school

- Take advanced science courses, including AP chemistry and biology
- Join the debate team to master the art of public speaking.
- Participate in sports to learn teamwork.
- Do a science fair project that uses the techniques of forensic chemistry in a creative way.
- Construct scale models to hone your fine motor skills and learn patience.

In college

- Major in chemistry
- Some colleges offer degrees in forensic science. Make sure the program requires at least 24 semester hours of chemistry and math.
- Take elective courses in law enforcement, criminal justice and crime scene processing

After college

A master's degree in forensic science is increasingly required to qualify for jobs in certain jurisdictions. Look for a program that emphasizes laboratory science and research, with coursework in crime scenes, physical evidence, ethics and quality assurance as well as interaction with working forensic laboratories.

Continuing education is required throughout the career

Professional Associations

American Academy of Forensic Sciences (www.aafs.org)

American Chemical Society (<https://portal.acs.org/portal/acs/corg/memberapp>)

The International Association of Forensic Toxicologists (<http://www.tiaft.org>)

American Association for Clinical Chemistry (<http://www.aacc.org/AACC/>)

Association of Analytical Chemists

Funding Opportunities

Search for funding opportunities in this field (<http://www.explorehealthcareers.org>)

Enrichment Programs

Search for enrichment programs in this field (<http://www.explorehealthcareers.org>)

Source

fsi.research.wvu.edu

Learn more about this field:

Forensic Science (<http://www.explorehealthcareers.com/en/Field.22.aspx>)

Salary: \$27,683 - \$52,471

Years in school: 4 - 6 *

Job outlook: Excellent

* after high school graduation

Reproduction is permitted with appropriate attribution: Reprinted courtesy of ExploreHealthCareers.org, funded in part by the Robert Wood Johnson Foundation of Princeton, NJ, and administered by the American Dental Education Association, 1400 K Street, NW, Suite 1100, Washington, DC 20005.
www.adea.org, 202-289-7201

Explore HEALTH Careers.org

Do something that matters. For yourself. For others.

Forensic Odontology

Overview

Forensic odontologists are highly experienced, specially trained dentists who use their expertise to help identify unknown remains and trace bite marks to a specific individual.

Forensic odontologists or forensic dentists are typically called in to:

- Identify human remains that cannot be identified using fingerprints or other means
- Identify bodies in mass fatalities, such as plane crashes and natural disasters
- Determine the source of bite mark injuries, in cases of assault or suspected abuse
- Estimate the age of skeletal remains
- Testify in cases of dental malpractice

The forensic odontologist may be called in by police officers, the medical examiner or the coroner.

In death cases, the forensic odontologist attends the autopsy and takes photographs, cranial measurements, dental impressions and xrays from the remains. These exemplars are then compared to those of known missing individuals. If a match can be made, the remains can be identified.

In cases where bite marks are found on the body of a victim or suspected perpetrator, or on food, chewing gum or another item, the forensic odontologist uses the same procedure to determine the source of the bite marks.

The forensic odontologist then writes a detailed report explaining what was done and what conclusions can be made. The forensic odontologist must be prepared to explain the process and justify the findings in court.

This career profile was reviewed and approved by Max Houck, M.A., Director, [Forensic Science Initiative, West Virginia University](http://fsi.research.wvu.edu/) (<http://fsi.research.wvu.edu/>).

Working Conditions

Forensic odontologists usually work as regular dentists much of the time, performing forensic examinations as needed at the request of local law enforcement or the medical examiner.

In death cases, the forensic odontologist may go to the crime or disaster scene. Otherwise, the measurements and xrays are taken as part of the autopsy.

Since crimes and disasters can happen at any time, a forensic odontologist “on call” must be ready to work long hours, day or night, on holidays and on weekends.

The work is highly detailed, demands extremely fine motor skills and requires extraordinary precision and accuracy. Complex equipment, including computers, microscopes and other technologies, may be used in the identification process.

Forensic odontology requires attention to detail and the ability to work patiently to complete a lengthy process step-by-step without rushing.

Accurate and complete records must be kept, and the forensic odontologist must be able to make conclusions based solely on the physical evidence available.

Such close involvement with the investigation of crimes and mass disasters can be emotionally disturbing.

Academic Requirements

A forensic odontologist must first earn a Doctor of Dental Science (DDS) degree to become a dentist. Then extensive additional training is obtained in the techniques and methods of forensic odontology, along with hands-on experience, often by shadowing a more senior professional.

To become board certified by the [American Association of Forensic Science \(www.aafs.org\)](http://www.aafs.org), the forensic odontologist must work 25 cases, accumulate 350 qualification points by attending meetings and other professional development programs, and pass a qualifying exam.

Professional Associations

[American Society of Forensic Odontology \(http://www.newasfo.com/\)](http://www.newasfo.com/)

[American Academy of Forensic Science \(www.aafs.org\)](http://www.aafs.org)

[American Board of Forensic Odontology \(http://www.abfo.org/\)](http://www.abfo.org/)

Funding Opportunities

[Search for funding opportunities in this field \(http://www.explorehealthcareers.org\)](http://www.explorehealthcareers.org)

Enrichment Programs

[Search for enrichment programs in this field \(http://www.explorehealthcareers.org\)](http://www.explorehealthcareers.org)

Source

fsi.research.wvu.edu

Learn more about this field:

[Forensic Science \(http://www.explorehealthcareers.com/en/Field.22.aspx\)](http://www.explorehealthcareers.com/en/Field.22.aspx)

Salary: \$150,000 - \$185,000

Years in school: 4 - 8 *

Job outlook: Excellent

* after high school graduation

Reproduction is permitted with appropriate attribution: Reprinted courtesy of ExploreHealthCareers.org, funded in part by the Robert Wood Johnson Foundation of Princeton, NJ, and administered by the American Dental Education Association, 1400 K Street, NW, Suite 1100, Washington, DC 20005.
www.adea.org, 202-289-7201

Explore HEALTH Careers.org

Do something that matters. For yourself. For others.

Forensic Pathologist

Overview

Forensic pathologists, or medical examiners, are specially trained physicians who examine the bodies of people who died suddenly, unexpectedly, or violently. The forensic pathologist is responsible for determining the cause (the ultimate and immediate reasons for the cessation of life) and manner of death (homicide, suicide, accidental, natural, or unknown).

To determine the identity of the victim and the time, manner and cause of death, the forensic pathologist:

- studies the medical history,
- evaluates crime scene evidence including witness statements,
- performs an autopsy to uncover evidence of injury or disease, and
- collects medical and trace evidence from the body for further analysis.

In addition to anatomy, the forensic pathologist may draw upon specialized knowledge and training in:

- toxicology
- firearms/ballistics
- trace evidence
- serology (blood analysis), and
- DNA technology.

A forensic pathologist may be appointed as a Medical Examiner by a legal jurisdiction such as a city, county or state.

Clinical forensic pathologists examine living patients, usually in cases where sexual assault or abuse is suspected.

Once all the evidence is analyzed, the forensic pathologist prepares a written report, and may also testify to these findings in court.

This career profile was reviewed and approved by Max Houck, M.A., Director, [Forensic Science Initiative, West Virginia University](http://fsi.research.wvu.edu/) (<http://fsi.research.wvu.edu/>).

Overview

Forensic pathologists, or medical examiners, are specially trained physicians who examine the bodies of people who died suddenly, unexpectedly, or violently. The forensic pathologist is responsible for determining the cause (the ultimate and immediate reasons for the cessation of life) and manner of death (homicide, suicide, accidental, natural, or unknown).

To determine the identity of the victim and the time, manner and cause of death, the forensic pathologist:

- studies the medical history,
- evaluates crime scene evidence including witness statements,
- performs an autopsy to uncover evidence of injury or disease, and
- collects medical and trace evidence from the body for further analysis.

In addition to anatomy, the forensic pathologist may draw upon specialized knowledge and training in:

- toxicology
- firearms/ballistics
- trace evidence
- serology (blood analysis), and

DNA technology.

A forensic pathologist may be appointed as a Medical Examiner by a legal jurisdiction such as a city, county or state.

Clinical forensic pathologists examine living patients, usually in cases where sexual assault or abuse is suspected.

Once all the evidence is analyzed, the forensic pathologist prepares a written report, and may also testify to these findings in court.

This career profile was reviewed and approved by Max Houck, M.A., Director, [Forensic Science Initiative, West Virginia University \(http://fsi.research.wvu.edu/\)](http://fsi.research.wvu.edu/).

Working Conditions

Investigation into cause of death. They ensure that procedures regarding evidence collection are followed, and coordinate their work with law enforcement operations.

Some work full-time for the city, county, or federal government, while others work in hospitals, medical schools or with a private or group practice that contracts autopsy services to government agencies.

A typical workday can last 10-12 hours or longer, particularly if the forensic pathologist must examine a distant death site.

Forensic pathologists spend most of their time in the lab, performing autopsies or examining tissue samples under the microscope. This can involve standing for extended periods and working with small tools.

The rest of the workday is divided between writing official reports and making court appearances.

The physical demands are not great, but over time, the forensic pathologist may become emotionally affected by continual exposure to graphic violence.

Academic Requirements

High school diploma

4 years of college, earning a bachelor's degree in any major while completing course requirements for medical school

4 years of medical school, earning an M.D. or D.O. degree

4-5 years of training in anatomic, clinical and/or forensic pathology,

1 year of residency or fellowship in forensic pathology

Board certification after passing the exam

Preparation Timeline

What does it take to become a forensic pathologist?

Long, hard work. It takes a minimum of 13 years of education and training *after* high school to become a forensic pathologist.

Strength in all areas of science. Forensic pathology draws on biology, physics, chemistry, even psychology and anthropology.

Very good communication skills. Half the job of being a forensic pathologist is writing reports and giving testimony.

Intestinal fortitude. Forensic pathology is probably the most gruesome, smelly, disgusting job in medicine.

Confidence in your skills. Forensic pathologists must defend their conclusions in the face of opposition from lawyers, the media and even the victims' families.

In high school

Take advanced math, science and English courses

Develop strong writing skills

Practice public speaking in class and by joining the debate team

In college

You can choose any undergraduate major, including a humanities degree, but you must take all the science and math courses required to get into medical school

If you choose to major in forensic science, be sure the program is accredited and includes at least 24 semester hours of chemistry or biology and math, as well as all the prerequisites for medical school

Seek out experiences that expose you to different cultures and perspectives

Consider learning a foreign language

In medical school

Focus on patient care

Do an autopsy pathology rotation as an elective to make sure this is the right specialty for you

Explore opportunities to work or do a rotation at the local medical examiner's office

Professional Associations

American Academy of Forensic Sciences (<http://www.aafs.org/>)

National Association of Medical Examiners (<http://www.thename.org/>)

National Board of Medical Examiners (<http://www.nbme.org/>)

American Society for Investigative Pathology (<http://www.asip.org/>)

Funding Opportunities

Search for funding opportunities in this field (<http://www.explorehealthcareers.org>)

Enrichment Programs

Search for enrichment programs in this field (<http://www.explorehealthcareers.org>)

Source

www.aafs.org

Learn more about this field:

Forensic Science (<http://www.explorehealthcareers.com/en/Field.22.aspx>)

Salary: \$105,000 - \$500,000

Years in school: 13 - 15 *

Job outlook: Excellent

* after high school graduation

Reproduction is permitted with appropriate attribution: Reprinted courtesy of ExploreHealthCareers.org, funded in part by the Robert Wood Johnson Foundation of Princeton, NJ, and administered by the American Dental Education Association, 1400 K Street, NW, Suite 1100, Washington, DC 20005.
www.adea.org, 202-289-7201

Explore **HEALTH** Careers.org

Do something that matters. For yourself. For others.

Forensic Toxicologist

Overview

Forensic toxicologists perform scientific tests on bodily fluids and tissue samples to identify any drugs or chemicals present in the body.

As part of a team investigating a crime, a forensic toxicologist will isolate and identify any substances in the body that may have contributed to the crime, such as:

- alcohol
- illegal or prescription drugs
- other chemicals
- poisons
- metals
- gases, such as carbon monoxide

Working in a lab, the forensic toxicologist performs tests on samples collected by crime scene investigators. They use highly sophisticated instruments, chemical reagents and precise methodologies to determine the presence or absence of specific substances in the sample.

The work requires patience and the ability to follow specific steps to achieve reliable results. The forensic toxicologist must document every step of the process, and take care to follow rules regarding chain of custody for physical evidence.

The field of forensic toxicology has grown to include drug testing for employers and traffic enforcement officials, testing of animal samples for wildlife criminal investigators, testing for “date rape” drugs and performance-enhancing substances.

Forensic toxicologists also work on cases involving environmental contamination, to determine the impact of chemical spills on nearby populations.

Investigators rely on the forensic toxicologist to make reliable conclusions about the impact a specific amount of a specific substance would have on a specific individual. Often, this requires the professional to form an educated opinion based on science and experience.

If asked to testify in court, the forensic toxicologist must be prepared to justify that opinion and to explain complex methodologies in terms a jury can understand.

This career profile was reviewed and approved by Max Houck, M.A., Director, [Forensic Science Initiative, West Virginia University](http://fsi.research.wvu.edu/) (<http://fsi.research.wvu.edu/>).

Working Conditions

Most forensic toxicologists work in labs run by law enforcement agencies, medical examiners or private drug testing facilities. They often must sit or stand for long periods of time. The tests they perform require very fine motor skills and a dogged commitment to following rigorous scientific protocols.

Working with bodily fluids and tissue samples can be messy and smelly. The forensic toxicologist is also exposed to details about often heinous crimes, which can cause mental anguish.

The workload can be significant, and when the samples come from a crime scene, the pressure to perform tests faster can be strong. The forensic toxicologists must be able to resist this pressure, work efficiently without rushing, and prioritize effectively.

Academic Requirements

The science of forensic toxicology is constantly advancing.

The best candidates for a career in the field will be individuals who are sincerely fascinated by the effects chemicals can have on the human body. Keeping pace with new technologies, new methodologies - and new chemicals - demands constant learning.

A forensic toxicologist generally has a bachelor's degree in chemistry, clinical chemistry, pharmacology or another scientific field. Some universities now offer masters degrees and even PhDs in forensic toxicology. Be sure any program you choose is accredited by the American Academy of Forensic Science.

Professionals who have several years of experience in the field can obtain certification from [The American Board of Forensic Toxicology](http://www.abft.org/) (<http://www.abft.org/>), [The American Board of Clinical Chemistry](http://apps.aacc.org/abcc/) (<http://apps.aacc.org/abcc/>) and the American [Board of Toxicology](http://www.abtox.org/) (<http://www.abtox.org/>).

Professional Associations

[American Academy of Forensic Science](http://www.aafs.org/) (www.aafs.org) [The Society of Forensic Toxicology](http://www.societyofforensictoxicology.org/)
[The International Association of Forensic Toxicologists](http://www.tiaft.org/) (http://www.tiaft.org)

Funding Opportunities

[Search for funding opportunities in this field](http://www.explorehealthcareers.org) (<http://www.explorehealthcareers.org>)

Enrichment Programs

[Search for enrichment programs in this field](http://www.explorehealthcareers.org) (<http://www.explorehealthcareers.org>)

Source

fsi.research.wvu.edu

Learn more about this field:

[Forensic Science](http://www.explorehealthcareers.com/en/Field.22.aspx) (<http://www.explorehealthcareers.com/en/Field.22.aspx>)

Salary: \$34,527 - \$64,578

Years in school: 4 - 8 *

Job outlook: Excellent

* after high school graduation

Reproduction is permitted with appropriate attribution: Reprinted courtesy of ExploreHealthCareers.org, funded in part by the Robert Wood Johnson Foundation of Princeton, NJ, and administered by the American Dental Education Association, 1400 K Street, NW, Suite 1100, Washington, DC 20005.
www.adea.org, 202-289-7201