

Advice about a Career in Forensic Science

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A major caution before we begin. Forensic scientists work in the justice system. If you have a criminal record, you have virtually no chance of getting a job as a forensic scientist. If you use drugs (and in Miami, even tobacco) you usually can forget it. Life ain't fair! There are lots of good jobs that overlook youthful indiscretions but the justice system does not.

It all begins with what you want to do. There are six general areas of practice (any I've left out I don't know enough about to give even free advice). If you know that you are interested in one of the areas, click on it and go directly to that discussion.

- medical examiner,
- crime laboratory analyst,
- crime scene examiner,
- forensic engineer
- academic assistance - psychology (including psychological profilers) / social science / statistics
- technical assistance - computer analyst, polygraph, composite drawing.

How do you decide what you want to do? Read the following descriptions then go talk to someone who does the types of work you think you might like. The following descriptions are obviously quite brief and probably even biased but they give you a starting point.

Medical Examiner - The highest pay but you have to be able to handle cutting up dead bodies, 7+ years of college and uncertain work hours. Although there are routine protocols, the ingenious ways people kill people create sufficient variety to combat boredom and provide a problem-solving challenge. The **medical examiner** usually requires a medical degree. Select a residency that provides a forensic emphasis. A chemistry or biology degree at the undergraduate level is a good major. If at FSU, you should take the crime detection & investigation course as one of your undergraduate electives as you will not have an opportunity for this course at medical school. The Orange County Medical Examiner's web site gives more information on the services of the [medical examiner](#).

The **forensic odontologist** has similar educational requirements to the medical examiner except in dentistry. They generally are dentists who practice as consultants rather than as full-time forensic scientists.

Crime Laboratory Analyst - Reasonably good pay and you generally work indoors with relatively stable work hours and relatively clean samples but the cases are often quite repetitive and routine. The microanalysis section probably provides the most variety but currently it is being phased out or scaled down in most crime laboratories. It will come back but look for slim pickings during the current "bottom-line" management fad. The **crime laboratory** usually requires a bachelor's degree in a natural science for any of the specialties. The best degree overall is **chemistry**. If you are interested in DNA testing, then **biology** with genetics and biochemistry is required. If you are interested in trace evidence examination, good electives for the chemistry degree include optical mineralogy, microbiology, botany and textile courses. You should, of course, take the crime detection & investigation course as one of your electives. See below for other specific courses available at FSU. Occasionally evidence is encountered that requires other specialties, such as **entomology**, **anthropology**, **zoology** and **botany**. These areas may be adequate to obtain employment but do not expect to work exclusively in the specialty as not even a large laboratory receives enough evidence in those areas to fill an individual's

time. One combination that would probably get you a job in a crime lab would be a major that contained sufficient background to do both forensic archeology and DNA on the samples recovered.

I have not recommended taking a forensic science major at the undergraduate level for the past 25 years and have seen no reason to change my mind during that time. In fact, the trend appears to be in the graduate direction as Michigan State University, one of the premier traditional schools in forensic science, dropped its undergraduate degree a couple of years ago. There are two reasons for my opinion. One, the emphasis in forensic science is first on the science and then on the forensics. You hardly have time in four years to get a decent grounding in science, especially with the current legislative restrictions on how many hours you can take. Two, the undergraduate degree is not fair to the student. If the job market for forensic scientists is weak, you will have trouble getting a job with a chemical firm with a forensic science degree. On the other hand, if you have a traditional chemistry degree, you can always get a job in a crime laboratory if they are available. And, if none are available, you are more likely to get a decent job somewhere and can then move into a forensic science career when crime laboratory jobs are more plentiful. This is not a criticism of undergraduate forensic science programs. Most of them produce students better qualified to be chemists than a straight chemistry degree but personnel officers do not think, they only follow their hiring manual and forensic science is not in it while chemistry is.

I am not belittling the forensic aspects of the job. On the contrary, I believe that they are imperative but should be taken at the graduate level and should include rigorous studies in the scientific method, statistics and the logic of evidence as well as the traditional emphasis in court presentation. Courses at FSU useful as preparation for a career in forensic science are listed [below](#). If you are interested in a graduate degree in forensic science, there are a number of options available. These can be investigated at sites maintained by the [AAFS](#) and [Forensic Science Education Resource](#).

Forensic Engineer - You will deal with traffic accidents, fire investigations, and a variety of wrongful injury cases. The work is much like that of the crime scene examiner but with fewer bodies and better hours and generally much higher pay. You earn that pay by the degree you obtain. The **forensic engineer** requires an engineering degree. The usual specialties include electrical engineering, mechanical engineering, civil engineering, materials engineering and traffic engineering. The web site for a [local company](#) gives more information as well as the FSU/FAMU School of [Engineering](#).

Crime Scene Examiner - You will work whenever and wherever crime occurs, indoors or outdoors, day or night, and have to be able to deal with dead bodies and other messy situations but there certainly is a lot less routine. The pay is not great but few folk voluntarily leave a crime scene section for other duties. The intellectual challenge is still there and the scientific basis of the field is developing. Some tasks will become more routine and more sophisticated but overall it could be an exciting time for the next decade. The **crime scene examiner** should have a bachelor's degree either in a natural science with emphasis in law enforcement and crime scene processing or a criminal justice degree with emphasis in natural science. Currently some state agencies have such a requirement and I believe that most agencies soon will. Forensic **archeology** would be excellent preparation. A listing [below](#) (following the Table of Courses) outlines a suggested approach for someone interested in doing more than just picking up stuff at a crime scene. Another approach is to combine crime scene investigation and psychology for the job now known as psychological profiling. (See below.)

The **psychologist**, **social scientist** and **statistician** generally are in some academic setting and apply their specialty to an investigation or trial on a part-time basis. Psychological profilers, however, are becoming more involved with investigations on a full-time basis. **Technical analysts** usually are attached to an investigative unit and generally work in a lab-like environment but respond similarly to crime scene personnel. Additional information on forensic science careers is at the [American Academy of Forensic Sciences](#) webpage. Check it out, they are the principal forensic science organization in the United States. Another site for information about forensic science careers are: [Forensic DNA Consulting](#).

If you are interested in **psychological profiling**, my understanding is that those agencies hiring profilers actually want an investigator / crime scene analyst / psychologist. This means almost a double major in psychology and criminal justice and experience as an investigator. Although the academic part could be accomplished with a major in psychology and a minor in criminology, it could better be accomplished with a psychology undergraduate degree and a criminology master's with electives in psychology. Electives at the undergraduate level should include crime scene processing and the crime detection and investigation course as these are not available at the graduate level. The criminology emphasis should be in law enforcement and forensic science.

Recognize that there are a very, very *limited* number of jobs available in profiling and none of them involve visions as portrayed on TV. Rather they include science and statistics. Right now you either better like straight criminal investigation &/or crime scene analysis and use your knowledge of psychology to enhance them, or look for another career. One school that you might check out for more information about a graduate degree is John Jay University in New York City.