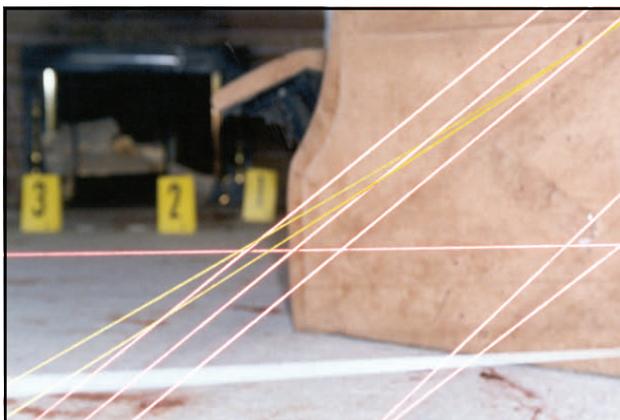




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Preparing for a Career in Criminalistics



**A Guide for Current
&
Prospective Students**
2nd Edition

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FORWARD

I have been very fortunate in my law enforcement career to meet some truly extraordinary people. The character and professionalism of these people is what, in my opinion, makes all our sacrifices worth while. One of these individuals is Dan Montgomery, former Chief of Police for the City of Westminster, Colorado. Dan is a cop's cop. A guy who spent his entire adult life fighting crime and protecting the community. He's seen just about all there is to see and has a refreshing manner of telling you how it is. He doesn't pull punches and he speaks his mind. They definitely broke the mold after him. I asked Chief Montgomery to write down some thoughts for the prospective students to give them the proper perspective on a career in law enforcement. What follows is not only good advice for our profession, but in life as well.

“10 TIPS FOR SUCCESS & SURVIVAL”

Over a 45-year career in law enforcement, I have learned a few things from very smart people that have been extremely helpful to me personally, and professionally. I call these things, “10 Tips for Success & Survival,” and would urge anyone who is at all concerned about being successful in the criminal justice field, or any field for that matter, to take note. I have seen too many people fail over the years. And they failed because they didn't pay attention to, or forgot about one or more of these “10 Tips for Success & Survival.”

1. Work hard, do good, be kind (McFall).
2. Be SPIRIT-driven. SPIRIT is an acronym for service, pride, integrity, responsibility, innovation and teamwork (McFall). Provide quality service; take pride in who you are and what you do; have impeccable integrity; be responsible and accept responsibility for your actions and decisions; be innovative, think outside the box; and be a team player.
3. Practice the, “Golden Rule.” Treat others like you want to be treated and treat them with courtesy, respect and dignity.
4. Work hard at maintaining harmony. Life is all about relationships and interpersonal skills, so be tough on issues, but easy on each other. People get hired because of their technical abilities, but they get fired, lose their jobs, or wallow in mediocrity, because they can't get along with others.
5. Be an optimist and not a pessimist. Optimists see the opportunity in every difficulty. Pessimists see the difficulty in every opportunity. Don't be an Eeyore and drag everyone down with your complaining.
6. Be humble and eat a little humble pie on occasion. People make many mistakes, but they aren't a failure until they start blaming others (Churchill).

7. Be in control. The mind is a strange thing. It can make a heaven of hell or a hell of heaven. The choice is yours and yours alone (Milton).
8. Have a good sense of humor and have fun on the job. If you're not having fun on the job, you're not doing it right (Rominger).
9. Be objective and see the big picture. Open up your mind and dig deeper to see the whys behind the whats.
10. Manage interpersonal conflicts effectively. Conflicts involving value systems, e.g. what is right, wrong, good, bad, proper, improper, etc., usually can't be resolved, and at best can only be managed. Conflicts that involve facts, information or data can usually be resolved once the facts, information or data are clarified. Know the difference, and know too that it takes a significant emotional event in one's life to change one's value system.

Write these down, keep them close, and pay attention. Believe me, they will help you succeed and survive. Good luck to you in your future endeavors.

Dan Montgomery;
Chief of Police (retired), City of Westminster, Colorado

From the Author: A note about my writing style in this document. I've decided to write this in a familiar, almost conversational style as if I were talking to a student.

INTRODUCTION:

This guide was written for prospective and current students who wish to prepare for a *successful and fulfilling* career in forensic science and crime scene investigation. I use the terms *successful* and *fulfilling* because every position, and every individual, is a little different. Not every position in forensics will be right for you. Every position presents varying duties and responsibilities. It may take some time for you to appreciate these differences but if you consider the suggestions in this guide you will likely be well informed and make better decisions about planning your professional future. I have been a criminalist for over a decade and I can tell you it is the most rewarding career I could have ever hoped for.

When I began my career in the mid 1990's the professional climate was not nearly as competitive. Today, with the increasing popularity of criminalistics in various media and burgeoning academic programs, the competition for employment has significantly increased. Every year thousands of students and working professionals compete for these coveted positions. It is not uncommon to have several hundred applications submitted for a single position. While many university programs do a very good job in preparing their students, others sadly do not. In addition, your education is only one part of your career preparation. Other issues relating to your personal life and work history may be equally important to prospective employers. Now I am not suggesting that if you follow these suggestions you will be guaranteed a job. These suggestions merely serve as a guideline of issues to consider in planning your career. Aspects of your community, educational institution, and other considerations may dictate different approaches for your career development. These suggestions are merely opinions I have formed over my career. The bottom line is that your future is in your hands. Ultimately you must ask yourself an important question. Would you rather have the career that *you want*, or simply an unsatisfying job that pays the bills? The most dedicated students are much more likely to acquire the former.

WHAT DOES IT MEAN TO BE A CRIMINALIST?

If you're reading this paper I'm guessing that you have some understanding of the field of criminalistics and what it entails. As such I will not waste space defining the various fields of forensic science. But in terms of *planning your career*...what does it mean to be a criminalist? It should be an easy question to answer but it really depends on who you ask and where you are. This question has been debated for many years and it seems as though there are as many definitions as there are professionals. To simplify the answer I will say that it is generally accepted that there are two kinds of professionals; *specialists* and *generalists*. A friend and colleague of mine likes to refer to these positions as lab rats (specialists) and field mice (crime scene investigators). Not every laboratory (employer) makes such clear distinctions however. In my opinion it is ideal to have a combination of the two. As a specialist, you will have a better appreciation of the influences of field conditions relating to,

and influencing, the physical evidence (or lack there of). Similarly, crime scene investigators who specialize in some field (say fingerprint identification) will likely do a better job in recognizing and preserving evidence so that it can be properly evaluated in the laboratory. In the interest of simplicity however I will discuss the basic differences between these two types of positions.

Specialists are individuals who specialize in a specific field of forensic science. This is exemplified by the “bench” analyst. In these positions the analyst *typically* works in a laboratory environment and examines evidence that has been collected and brought in from a crime scene or subject (victim, suspect, witness). Examples of these positions may include a drug chemist, trace evidence analyst, DNA analyst, fingerprint examiner, firearms examiner, or questioned document examiner. Often times these positions have business hours (9am to 5pm) and are in a controlled laboratory environment. The work can be somewhat repetitive although many people enjoy this type of predictability. I am not suggesting that the work is boring, not at all, just more predictable and defined than field work. Usually analysts generate reports that identify or classify evidence of unknown origin; i.e. the sample is



cocaine, the blood sample contains DNA from the victim, the fingerprint was produced by the witness, etc. These analyses often answer the “who” and “what” questions of an investigation although the analysis is dependant on the completeness of the field investigation. If the evidence is not properly collected or preserved it may not be accurately interpreted in the laboratory. These positions *may* pay higher wages and have greater opportunities for career advancement but each laboratory will differ. Some laboratories require employees to be on-call for major crime scenes and do limited field work. Specialist positions often require advanced educational degrees and are typically found in major metropolitan areas. If you are applying for a specialist position it would be very wise to determine the expectations of the employer for this position.

Generalists, on the other hand, are typically exemplified by the crime scene investigator. Generalists may not have any specific expertise in the identification sciences like the ones mentioned above. These professionals generally respond to crime scenes to locate, document, and collect items of physical evidence which is then submitted to the specialist. The working conditions and hours can vary widely from week to week and scene to scene. You may be working in extreme cold, extreme heat, and with little or no sleep. Working in the field means that you will get up close and personal with victims, both living and dead. You will be in close proximity to death in all of its forms. This can be very unsettling, especially with young children. These investigators typically work either business hours with periods of on-call, or they work in shifts. You may work a full day at the office and get called out to a major scene just as your head hits the pillow that night. With shift



work you may get days, mid's, or graveyard shift for months on end. There will be times you work over 24 hours without sleep. You may (probably will) be called to work on your birthday, anniversary, or a major holiday like Christmas. Now it may seem as if I'm trying to steer you clear of this type of position. Nothing could be further from the truth. Many criminalists, including myself, deal with these issues all the time and have fulfilling lives and careers. The uncertainty of working conditions and potential for long hours, however, may be something for you to consider. Generally, these positions pay less and have fewer opportunities for career development. These jobs can be found in virtually every medium sized and larger law enforcement agency in both urban and rural areas.

As I said above, these are general descriptions of criminalistics which even some criminalists won't agree with. I'm fortunate enough (in my opinion) to work for an agency which combines these duties. I'm responsible for responding to crime scenes and bringing the evidence back to the laboratory for examination (at least in the areas I specialize in). I prefer this type of employment because it gives me a comprehensive appreciation for forensic investigations. By bringing the evidence from the field, to the laboratory, and then to the courtroom, I feel I have a better understanding of evidentiary issues than I would have if I was employed only as a generalist or specialist. Not every agency offers positions like this, and some for good reason.

Obviously there are other related professions such as death investigators, private investigators, and commissioned detectives all of which have different duties and responsibilities. Some agencies require their crime scene technicians to be commissioned. This means applying to, and completing, a police or sheriff's academy. These positions have both advantages and disadvantages. One advantage is that you can always find work as a police officer if you're willing to move. A disadvantage, however, is that you may be more easily transferred to other positions within the department as the need arises with management.

IS A CAREER IN FORENSICS RIGHT FOR YOU?

As you can imagine a lot of students have contacted me about pursuing a career in forensics. Unfortunately, some of them have developed an unrealistic perception of the field. Various television shows and books have contributed to these views. While the general criticism of these shows may be somewhat deserved, they do help to inspire and inform young people about a career they may not have otherwise considered. In this regard they are beneficial in that they promise to generate a greater diversity in prospective students. But is it the right career for you? In order to determine this you need to start by asking some pointed but important questions.

Question #1: Are you employable?

This may seem like a stupid question to have to ask but I am continually surprised by people who think they can get hired in law enforcement with various transgressions in their background. Are you a current or recent drug user? By recent I mean in the last few years at least. While some employers may be willing to overlook minor drug use in years past, many will not. In any event, if you are competing against another equally qualified applicant with no drug history (which you will be) who do you think they're likely going to hire. Drug use, especially recent drug use, is a handicap you can't afford in this business. Likewise, other

criminal arrests such as domestic violence, obstruction, assault, DUI, burglary, etc. will be equally debilitating to your application. Do you have excessive debt, gambling addictions, alcoholism, abandoned children (dead beat dad issues), or other issues that speak to moral corruption?

I don't mean to imply that all criminalists are free of mistakes in their lives and are morally pure. Having these types of things in your past however serve as an indicator for law enforcement to be wary of your capacity for good judgment. With any application process you will have your background investigated. Law enforcement will interview friends, family, past employers, co-workers, etc. How will these people describe you? Have you ever been fired from a job, betrayed a loyalty, or dishonored a friend? All of these things may reflect poorly on you.

Many students also post information about themselves on internet sites such as My Space. I know that these sites have their attractions but you would be well advised to consider the content of your posting. Some savvy agencies are now searching these sites as a part of the background investigation. The content of your postings may have significant repercussions on your application. I'm not suggesting that you sacrifice your social life, but consider how you live that life. Videos or pictures of you passed out on the frat house floor are probably not how you want to represent yourself. On that note, I have seen a trend lately with some students choosing what I consider questionable e-mail identities. E-mail addresses like "bloodlover1" or "Ilivefordeath" might seem cool to your peers but to be honest they are a little creepy. It's healthy for you to have an interest in crime but there are professional and non-professional ways of displaying that interest.

Question #2: Do you have the right personality?

Criminalists by their very nature are puzzle solvers. It requires dedication, attention to detail, and a willingness to see a problem through to its solution. Procrastination and mediocrity are unfavorable character traits to possess. This type of work demands patience, diligence, integrity, and neutrality. Are you the type of person whose word is their bond? Can you be trusted with secrets? Are you dependable? Can you work dispassionately? By that I mean can you work on cases without letting your emotions influence your decision making? These are critical virtues of the criminalist. Can you work well with others? Solving crime requires a team effort. You may be expected to work well with people you might otherwise not get along with. Additionally, most criminalists work in law enforcement. Police and Sheriff agencies work under a paramilitary style of command. Can you take orders from others who may lack your training, experience, and expertise? You may be supervised by individuals who are younger than you, have different political views, religious views, etc. and you will be expected to work effectively with them. If you don't think you can set aside these types of issues to serve the community and victim then this may not be the right career for you.

Question #3: Are you willing to make sacrifices?

Ask yourself, what are you prepared to do to gain employment? Are you willing to relocate out of your home state, away from friends, family, and everything familiar to you? Are you willing

to acquire significant school loan debt to obtain a quality education? Are you prepared to study hard in school and put in extra hours on your homework instead of going to a party? These types of jobs are hard to come by and generally attract significant competition. You must work to continually improve upon yourself if you hope to remain competitive. You must be willing to sacrifice the familiar for a chance to get a foot in the door. These jobs are not given away, they are earned. Those who work hard will be noticed and appreciated; those who don't are unlikely to be given much notice.

CHOOSING THE RIGHT UNIVERSITY

Choosing the right university will likely be the most important decision you make as you begin to plan your career. With the increasing popularity of forensic related television shows and books, more and more students are pursuing this field. Many universities have seen a profitable investment in these programs and dozens of forensic degrees are being offered all over the United States. Before enrolling in a university however, there are several things to consider when choosing a university program. Tuition costs have risen nearly 500% in the last 25 years so it is important that you spend your money wisely. Many students incur significant debt during their time in college so you want to be sure that you consider your options wisely. Choose a program that will likely give you an advantage over other applicants. By that I mean it's important to select a university that has a well known and respected program. There are several things you should look for in a quality program.



First and foremost, be sure that the university you choose has a four year degree program. Associate degrees will not separate you from the other applicants and will likely be viewed as an "incomplete" education in this field. Ask tough questions of your department head. Are the instructors qualified to teach the course topic. This may surprise you but I have seen some accredited programs in which the professors teaching crime scene investigation have never worked as a crime scene investigator. It should go without saying that the best teachers are going to be individuals who have actually been employed in the field they are trying to teach you. Remember, just because someone once worked as a patrol officer or detective doesn't mean that they have experience as a criminalist. These are very different positions even though they work together in law enforcement. You wouldn't expect a crime scene investigator to know how to do a felony traffic stop, or clear a building. Nor should you expect a patrol officer to know how to process the scene of a homicide or make a fingerprint identification.

How diverse is the program curriculum? Would it be considered a generalist course of study or specialized? If specialized, does it offer a field you are interested in? If choosing a specialized field you would be wise to choose one that has cosmopolitan employment opportunities, such as a drug chemist, DNA analyst, or fingerprint examiner. While some fields sound very intriguing, such as forensic entomology, anthropology, and geology, there are very few employers who can justify such a position. Fewer positions means fewer opportunities for employment. You're

spending a lot of money on your education so you need to ensure that your efforts will be rewarded. Ask if your professors offer collaborative or supervised research projects with students. This can be an added bonus to your education. Working on research teams will strengthen lessons learned in classroom and give you a perspective many students lack.

Other things to consider include class size and student to teacher ratios. Does the program have established intern programs with local laboratories? Have the professors tracked employment placement of graduating students? These questions, among others, will help you gauge the success of the program. Ask to speak with former students who have gained employment in forensics. These students likely have gained insight about the program and any perceived strengths or weaknesses. Remember, these students have been hired. Obviously, they have done something right in their educational development. They may be a wellspring of information for you as you pursue your studies.

Be wary of smaller colleges and avoid internet based programs. While some universities do offer some courses on line, these are typically continuing education courses designed for working professionals who are already employed in forensics. Internet courses sound attractive to many students. What could be better than learning forensic science and crime scene investigation from the comfort of your living room? Learning in the classroom with hands on exercises and practical labs or field exercises, that's what. How can you learn to properly process a crime scene on a computer? The answer is...you can't. Remember, if you were the employer would you want someone who's actually worked hands on with this material, or someone who's merely watched it on TV? Some technical and community colleges advertise criminal justice and forensic degrees but many of these degrees will not be taken seriously by law enforcement due to their lack of practical exposure, teacher qualifications, and course diversity compared to other programs. There's nothing wrong with starting your education at a community college and for many students it's the only affordable option to begin with. If this is your only choice, use your first few years wisely. Maintain a high GPA and get sufficient counseling on college loan options. This will maximize your chances of getting into a program that will make you as marketable as possible.

CHOOSING THE RIGHT CURRICULUM

The next time you're in a large class take a look at the students around you. What would make me want to hire you when I could hire any one of them? These students, and many like them, will be your competition. What sets you apart from the crowd? A competitive applicant is one with a diverse educational experience. Every student will have to declare a specific major. Not every student will enroll in a forensic science program. Aside from degrees specifically designed for the forensic scientist several general science degrees may also be beneficial. Degrees in biology, genetics, and chemistry are all good choices. While every university has its own core curriculum for each degree, there are some classes you may want to add even if they are not required.

Courses in Philosophy such as reasoning, ethics, and logic and critical thinking, will prove invaluable to you. Classes in trigonometry, physics, anatomy, and statistics will be equally valuable. Also consider non-traditional courses such as public speaking and debate, or

composition writing. Remember, part of your job will be writing reports and testifying to juries in court. You will be expected to be an advocate of your forensic analysis and defend it as you would defend a thesis. Classes in drafting (CAD), photography, videography, and graphic design (Photoshop) are also good choices. These types of classes will prepare you for crime scene related tasks which will be almost as important as your formal degree. Even courses in criminology, sociology and cultural anthropology will be beneficial in that they will teach you that not everyone lives and acts as you do. This will help erase paradigms you may have formed about how people “should” act under certain circumstances. Few people truly understand the criminal fraternity, including professionals like me. The way they think, form relationships, justify their actions, and the means by which they survive are often very foreign to the beliefs and values we’re raised with. In time you will learn, but getting a jump start during your education will be well worth it.

GETTING PROACTIVE ABOUT YOUR EDUCATION

I can’t overemphasize the importance of starting early. Many students wait until the final semester of their senior year before realizing that a degree may not set them apart from their peers. Very often students believe that a degree is all they need. Nothing could be further from the truth. I remember a student one time expressing disbelief that an employer would be looking for something more than just a degree. Virtually every person you will be seriously competing against will also have a degree. It is the minimum benchmark by which you will likely be evaluated against your peers. It shouldn’t surprise you then to learn that employers are looking for other qualifications by which to evaluate you as a future employee. There are several things you can do to strengthen your résumé and demonstrate your value as an employee. The sooner you begin addressing these issues the more competitive you’re likely to be.

Enhance your learning experience:

There are several things you can do to augment your education aside from just attending classes. Many universities, especially those with established forensic programs, have regularly scheduled speakers from the professional community. Make an effort to attend these lectures. Consider taking notes on the presentation or asking to write a short paper on it for extra credit. Some universities also have student organizations that you can join. These clubs can be very beneficial to you and it would be well worth your while to get involved. If your university doesn’t have such a club, consider forming one. It would show tremendous leadership on your part to organize students and create a forum of mutual learning and support. Contact local experts and invite them to present lectures to your organization. When they accept, use the opportunity wisely. Develop some meaningful questions that will assist you in preparing for a job in the field.

Expand your reading list while in school:

Aside from the required reading in your courses there are a lot of well written books that you should read. The internet provides resources you can use to locate inexpensive used books. Websites such as www.abebooks.com, www.alibris.com, and www.ebay.com are excellent

resources. Many students are conditioned to believe that they should only be reading current text on the subject of forensics. While this philosophy has merit to a point, it fails to recognize the valuable contributions made in the past. Some of the best books I've read on criminal investigation were written long before I was born. You should also be reading various forensic journals as they come out. It takes time on your part but familiarizing yourself with the current research and case studies will provide you with practical knowledge and talking points for interviews. Ask your professor for suggested supplemental reading that may be suited to your particular course of study. If funds are really short, consider asking your librarian to acquire certain book and journal titles for the university library. They will be more inclined to do so if the request comes from a student organization or your professor. Remember, even if your library doesn't stock forensic journal or book titles, all accredited libraries will have an interlibrary loan system and many have electronic access to various journal issues over the internet.

Consider joining a professional organization:

Many forensic organizations, such as the Association for Crime Scene Reconstruction (ACSR), International Association for Identification (IAI), and the American Academy of Forensic Sciences (AAFS) have student chapters or student memberships. Each of these organizations also has an annual conference. While membership dues and conference registrations can be burdensome costs, it would be wise to consider such a sacrifice. These conferences not only provide outstanding training, they serve as a means to network with professionals in the field. The IAI also has numerous regional and state divisions. These divisions often have annual or bi-annual conferences as well. These local conferences are usually smaller and more intimate giving the student a better chance to mingle with the local professionals. Many professional organizations also offer grants or tuition reimbursement programs that will help students offset the cost of training.

Getting an internship:



It should go without saying that there are more students than there are internships. Strangely, a great many students do not make a serious effort to seek out and obtain such positions. Many students wait until the final semester of their senior year before searching out internships and are frustrated by the apparent shortage. You should be aware that internships and volunteer work are different even though the terms are interchanged by some students. Many agencies prefer internships because the student, generally, has some expectations and performance benchmarks determined by the university. Most internships are unpaid and many involve some duties that are best described as “grunt work”. Some students mistakenly believe that they are above such duties, or that their time should be spent working on evidence or going to crime scenes.

It would be wise to remember that none of us get to choose our assignments. As a criminalist you may work a high profile homicide one day and a simple recovered stolen vehicle case the next. No duty should be beneath you no matter what level of training and experience you have. Each crime has a victim and each victim deserves your best

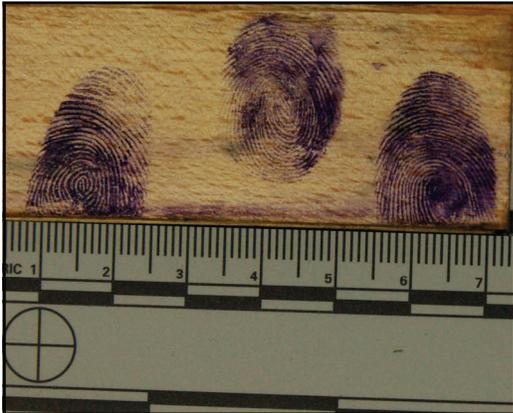
work. Many agencies don't allow students to work on actual cases for very good reasons, so don't be surprised if you don't get hands on experience with actual evidence. Truth be told, even with these limitations, there are many ways to gain proficiency on certain tasks without handling evidence. The only difference between a beer bottle taken from the trash can and a beer bottle collected from a homicide scene is geography. The techniques used to process that bottle are the real asset to be gained from an internship. Students would be wise to focus on the real objective of developing their technique rather than the origin of the training tool.

One of the biggest mistakes I see students make is a lack of commitment and dedication to the duties of the internship. Some feel that since they are unpaid they do not have to demonstrate the same commitment as paid employees of the agency. Some come to work with surprisingly little appreciation of the significance their actions may have on their future employment. Students should never forget that they are always being tested. Your performance as an intern will likely have some kind of influence on your employment applications. Think of your internship as a dress rehearsal for your career. It provides an employer with an opportunity to judge your character, decision making skills, and work ethic. It provides a glimpse as to what kind of employee you will make. I once had an intern show up 30 minutes late on his first day! He nonchalantly sauntered in as if he'd only missed the first part of a Wednesday night frat party. It would be a mistake to think that you can approach your internship like any other job. The actions you take, decisions you make, and enthusiasm with which you work will be communicated to future employers. Treat your assignments seriously and you will be taken seriously.

Many agencies don't offer internship programs. This is an unfortunate situation for many students to face. Oftentimes agencies don't have programs because they don't have a structured set of objectives or course of study to follow. Students show up and the agency doesn't know quite what to do with them. These sessions often dissolve into a show and tell format with little structure and no defined benchmarks for learning. They are fundamentally unfair to the student and the agency. If local agencies don't have a structured program in place, and you can't find an internship, consider working with your professor to develop a structured program that law enforcement will buy into. Internships are much easier to manage when they are structured and more fulfilling to the student as well. Consider developing a course of study that resembles your class syllabus. Focus on the "big picture", then present your model to your professor or even a local laboratory for fine tuning. You may be surprised at the response. The key is to have clearly defined benchmarks so the student can continually be evaluated and improve their skills.

If competition is fierce you may need to consider an internship within a closely allied field. Internships within the medical examiners office, district attorney's office, private forensic lab, or even the patrol side of law enforcement may all prove beneficial. I've known some students who have even worked in various medical labs which is certainly better than nothing. If you plan accordingly you should be able to get an appropriate internship within forensics but remember not to overlook other professions as well.

Do a research project:



I am always perplexed by students who spend years at a research university in a forensics program without doing any research. Universities are ideal environments to conduct forensic research studies. Some universities do an outstanding job of making research opportunities available to students. Others are less proactive, but the opportunity may still exist. Consider working with your professor to design a meaningful project to work on. You may also want to contact local scientists to get their advice on various project ideas. Local criminalists may actually be working on projects and may allow you to collaborate. You won't know unless you ask.

There are unlimited options but some ideas may include comparative studies of blood reagents, best practices for processing certain types of evidence, or evaluation of new products or methods. Review forensic journals and see if there are studies you wish to expand upon or test in your area. Work with your professor to design a project that may eventually be published. There are several journals and newsletters you may consider submitting your paper to. Ideally you should choose a peer reviewed publication but it is not essential. Having a published research paper on your curriculum vitae will definitely set you apart from some other applicants and demonstrate your ability to conduct research by applying the scientific method. It is also a lot of fun in my opinion and will help you develop your writing style. A lot of people, even professionals, are intimidated to write something for publication. Don't let yourself fall into that trap. We all have something to teach as well as something to learn. No one should expect you to write a Nobel prize winning paper and you should focus on the real benefits of science which is sharing your observations with your fellow professionals. By means of this vehicle we advance our understanding of forensics.

Making a portfolio:

Artists, interior designers, and architects have used portfolios for years to show their work product to employers and clients. Portfolios can be equally valuable to the student seeking a job in forensics. For those who are unfamiliar with the term, think of a portfolio as a kind of photo album of your work product. Portfolios are ideal for the forensic student because much of the work you produce can be represented visually. Make an effort to document the various assignments you undertake during your internship and class work. As you complete tasks in your class, lab assignment, or internship you should be documenting them. A well rounded portfolio may include such things as crime scene photographs, enhancement of fingerprints and footwear impressions, match analysis, photographic enhancement, casting, crime scene diagrams (both hand drawn and computer generated), examples of note taking, and report writing to name a few. Portfolios can be presented in either a booklet format or digitally on a laptop. I recommend that you bring a good quality color copy to leave with the oral board interviewing you so that they have an opportunity to peruse it at their leisure. You may always request that it be returned to you at a later date to save money. I have been very impressed with the work I have seen from some students. I have also interviewed students who have completed

internships and had exposure to a variety of projects but have nothing to show for it. It would be unwise of you not to document the skills you've learned during your educational development. Students often tell me they are concerned that they have no work experience when they interview for a job. While that may be technically true, having a professional quality portfolio will demonstrate that you are capable of good work and that you have had exposure to various processing techniques.

There is one important issue concerning your portfolio. A portfolio is a representation of the work you are capable of. You should take great care to ensure that the final version is both professional looking and error free. Consider having your professor or internship advisor review the document for errors or poor quality documentation. Remember, professional criminalists will be reviewing this document. Put considerable time and effort into this project. If you plan on putting one together the night before your job interview you'll likely do more harm than good to your chances of gaining employment. Some key things to try and avoid include, out of focus photographs (unless by design, but be prepared to explain), misspellings, poor construction (pages pasted or taped loosely on backings), incomplete or vague representations, and unnecessary "glitz". Keep the portfolio in a business professional format, style, and font.

The Résumé:

The resume will likely provide the employer with their first impressions of you. For this reason it is important to have a well written and professional looking resume. Everyone has a difficult time writing their first resume. There are several suggestions I have for designing your resume. First, prepare it in a business style format and font. Some students feel they have to "jazz up" the appearance of their resume to compensate for a perceived lack of qualifications. Professionals such as interior designers or graphic artists may appreciate colorful and artistic looking papers, fonts, etc. but law enforcement will likely view these as juvenile. Keep it plain and simple. Also, keep your resume title on point. If the position you are seeking is a drug chemist don't title your resume for a general criminalist position. Add meaningful keywords that adequately describe yourself in the vernacular of the profession. Descriptors such as "self motivated", "logical", or "group worker" are all good choices if they truly apply to you. Think about your personal statement. This is an important portion of your resume. In essence it is an abstract statement about your character, work ethic, and professionalism. A statement such as *"Hard working, self motivated, student with specialized skills in the forensic examination of evidence in laboratory and field environment utilizing a team based problem solving approach"* is one such example. In addition, there are a number of questions I get from students regarding the format of the resume. The most common are addressed below in the hopes they may get you started in the right direction. Having said that, every department will have different requirements. You may have to customize your resume for each department. Don't be afraid to contact the human resources department of that particular agency to discuss these matters. They will likely be very receptive. Remember, they want to have the best information from you to best evaluate your qualifications and work ethic.

1. Should my resume be one page or two?

Each department will have different requirements, check with them before submitting your resume. Most good human resource managers don't have a hard and fast rule about page length. You certainly don't want to limit your resume by excluding pertinent information relevant to the position. At the same time you don't want to have page after page of irrelevant information such as favorite hobbies and experiences.

2. Should I put my G.P.A. on my resume?

This is a slightly tricky issue. If you have a high GPA such as a 3.0 or higher then I would say, yes, include it on the resume. If it is lower than a 3.0 I would leave it off and focus instead on other qualities such as course of study, special projects, research, etc.

3. Should I include internships and volunteer work on my resume?

Absolutely. Employers are looking for experience, not whether or not you've been paid while gaining it. Include these positions as well as any particular skills you have gained (i.e. photography with an ALS).

4. What should I put on my resume if I don't have a lot of experience?

First, if you follow the advice in this guide you shouldn't be faced with this question. If, however, you lack certain work experience try to focus on your studies. Not only on your forensic courses but other courses that may be appealing to the employer such as foreign language skills, computer work, and lectures attended.

5. Should I list my high school studies?

I would say this is of less importance to most employers unless they ask for it.

The Curriculum Vitae:

Many students, and some professionals, fail to create a curriculum vitae. A curriculum vitae (CV) is an accounting of your relevant work experience, training, and education. There are many formats to choose from and I would suggest reviewing several professional ones to use as a guideline. Don't be afraid to customize the format to your liking but please keep it in a business professional style. This is not a document for you to demonstrate your abilities to work with clip art. A CV is not a resume. Frankly, I don't care much for resumes but almost every employer will ask for one. As a professional I could care less what someone writes in a resume and I almost never review them. However, human resource employees will use your resume to evaluate you against your peers so take it seriously. I want to read as much as I can about an applicant and I can only get that from a proper CV. When you are starting out it would be wise to document the various classes you have taken, lectures you have attended, published papers, and any presentations you may have given.

The importance of networking:

The importance of networking cannot be overstated. Aside from internships and research projects you've completed, you'll likely be submitting letters of recommendation as well. Letters of recommendation help to partially fill that void of a limited work history. These letters are supposed to be from individuals who have an intimate knowledge of your work history, personality, or ethics. They are generally given more weight if offered by someone within the field of law enforcement or forensic science, than from a previous employer (non-law enforcement) or a personal friend. Typically, the only way to get such a letter is through internships or employment within forensics.



I try to attend several conferences and training seminars a year and I'm always surprised at the number of students who never make an effort to mingle with the working criminalists. I know this can be scary for some people, especially introverts like me, but it may well open doors and opportunities that would otherwise be closed to you. Truth be told, I've had to make an effort over the years to meet other criminalists. It's hard for me to do but given an opportunity to sit and talk with strangers I'll likely take it. Most criminalists don't bite. We're not going to hang you from a yard arm for breaking our inner circle. In fact, quite the opposite is true. I enjoy talking with students so I can better understand their needs, views on education, and what projects they're working on. You shouldn't feel compelled to talk about forensics either, or try to impress us with your knowledge on a particular subject. Criminalists are people too and we like to talk about hobbies, movies, and current events. It may be a more comfortable way for you to "break the ice" and begin a conversation with someone.

Networking offers two distinct advantages for the student. First, it may open doors for internships or employment opportunities. Second, it may lead to professional recommendations which can be very valuable to the applicant. Speaking only for myself, I would be much more impressed with a letter of recommendation from someone I knew than from some professor at a college I'm unfamiliar with. The truth is, no one writes a bad letter of recommendation. As an employer, many of these letters will have similar messages and components. If I know the recommender, however, it may hold more weight with me than a form letter from a professor who may or may not know you all that well. The bottom line is you have to talk to the professionals and get involved. Use these opportunities wisely and don't pass up a chance to meet some of the best people you'll ever know.

FINDING JOB OPPORTUNITIES

Looking for potential employers should begin well before you graduate. I'm not suggesting that the jobs will wait for you but you can begin investigating the types of positions and agencies you're interested in. Start by keeping an list of agencies you find that you're interested in and keep checking them for employment openings. Some students have utilized

commercial head hunting services but some of these are not well equipped to find the right job for you in these highly specialized fields. Additionally, most employers have to pay a fee to be listed on these services and most government agencies simply won't do that. One service that I highly recommend is the Job Placement Services offered by Ron Smith and Associates (www.ronsmithandassociates.com). Ron Smith is a former director of the Mississippi State Crime Lab and an advocate for forensic science students. For a nominal annual fee a student can search for a particular position in any state or region of the country. Members can also set up customized e-mail alerts for positions or regions they are interested in. A new feature of the service allows non-members to do a free search of the number of job postings in a particular field by region. So anyone could log on and find out that there were, for example, twenty-five latent fingerprint jobs posted for the southwestern United States. You'll have to subscribe to the service to get the specifics of each job. It is not uncommon for the database to have as many as 150 job postings. For the price it is service that you can not do without. This database may contain employers outside the United States as well which increases employment opportunities for you. Students pay a nominal \$150.00 annual fee for unlimited searches.

PREPARING FOR THE JOB INTERVIEW

Many students are unaware of this but the interview process actually begins with the application. Every agency will have a slightly different application process but there are some consistent expectations all organizations have. First is whether the applicant can follow simple instructions. If the application requires you to use blue ink, use it. If it requires a notary seal then get one. I remember the first application I had filled out to be a patrol officer. I was well know to the Sgt. reviewing the applications and I had gotten it in well before the deadline. I had forgotten to get it notarized however. He promptly threw it in the trash can without telling me it was incomplete. When I inquired a few weeks later why I hadn't gotten a call back for an interview I was told my application was rejected. Now, at first I was angry. Why would my friend and co-worker discard my application without warning? Then I realized that I had made a cardinal error. What message did this send the employer? I realized then that I would have to demonstrate an ability to follow instructions if I was to be taken seriously.



Another mistake applicants sometimes make is that they demonstrate poor penmanship and sentence structure. Some agencies pay particular attention to your writing because legibility is very important in our work. Imagine if you wrote an evidence log or item description that no one (even you) could later read? The application is often an indicator of how legible your writing is. Of equal importance is your spelling and sentence structure. No one expects you to be an English major but you should be able to communicate on an adult level. I remember one applicant who actually used text messaging abbreviations in her application. Sentences like "B4 i gradu8 id lk 2 get a job w u" are not going to impress many employers.

Interviews are intimidating by design. They are often designed to make you uncomfortable and on edge to test your response to stress. The job interview is the pop quiz from your potential employer and I advise you to be well prepared. First, prepare yourself to be uncomfortable. The sooner you accept the fact that the environment is supposed to be stressful, the more quickly you should adapt to that environment. This is where classes in public speaking and mingling with strangers will pay off. You have to make yourself comfortable in an uncomfortable situation. Understand how you respond to stress and look for those indicators during the interview. When I get stressed I tend to ramble as I speak. As an applicant I want to recognize that response to stress so I can avoid doing it in an interview.

Recognize that we live in a world where first impressions carry a lot of weight. It would be nice to live in a world free of stereotypes but that isn't always the case. Your appearance can have significant impact on how you're perceived. Most employers expect that you will arrive in business attire. For men that means a jacket and tie (with the shirt tucked in). For women that may mean a business suit or knee length skirt, blouse and jacket (no mini-skirts). Select colors that are business appropriate (no loud color combinations) and please iron or dry clean your clothing. You won't likely get points for "hip" outfits even if you look like the latest cast member on "CSI". Coming into an interview with wrinkled clothing might send a message that you don't take the interview too seriously. Men should also be familiar with any policies the prospective agency has regarding tattoos, facial hair, and head hair length. Some agencies allow laboratory personnel to have facial hair and some do not. If you have a beard and won't part with it, you may have fewer employment opportunities. In any event, arrive at your interview with either a well trimmed moustache and/or beard, or be clean shaven and foot the bill for a haircut.

Some additional thoughts on tattoos and piercings. Some television shows glamorize criminalists with excessive tattoos and piercings. I doubt any employer would deny an application simply because you have a tattoo or piercing (or a dozen), but the placement and visibility of them may be an issue. Remember that you will be presenting evidence in a court of law. Jurors have a stereotypical impression of what a professional criminalist should look like. It's not always fair but it is the world we live in. If you plan on getting a tattoo or piercing you would be wise to consider the visibility of it. Tattoos on your neck, face, lower arms and excessive piercings on your head tend to make you look more like a reformed gang member or pole dancer than a professional scientist. Tattoos depicting weapons, violence, derogatory terms or symbols (swastikas, marijuana leaves, etc.) are also distracting and may be very offensive to the general public.

Your personal appearance is only one component of your presentation. Consciously and unconsciously your behavior is being evaluated as well. I would recommend addressing individuals by their proper last name (i.e. Mr. Adair) or as "Sir" or "Ma'am" when speaking to them. Most oral board members will introduce themselves to you as you enter the room. If they don't, introduce yourself and offer a firm handshake. Make an effort to remember their names. After all, you'll be expected to remember the names of victims, witnesses, and suspects during your work duties. Sit up straight in your chair and keep your hands on the table or in your lap with your feet flat on the floor. Look at people when you are addressing them and speak in a clear voice. Avoid chewing gum (and especially blowing bubbles), chewing your hair, staring

out the window as you talk, and covering your mouth when you speak. Avoid using filler words such as “um”, “like”, and “you know”, etc excessively during a conversation. I interviewed a man once for a position in our laboratory. He had over a decade of experience and was as qualified as one would hope, but during the interview he slouched in his chair to the point I thought he was about to kick off his shoes and put his feet up on the table. That posture, combined with his extremely casual style of dress, sent a message that he could care less if he got the job or not (and he didn't). I don't mean to imply that the way you look or dress will be the deciding factor for your application. I merely suggest that, all things considered, if you are equally qualified with another applicant, why present yourself poorly to the employer in dress and demeanor.

Some students feel that they shouldn't apply for certain jobs because they don't meet the minimum qualifications outlined in the advertisement. This is a big mistake. Employers always ask for the qualities of an ideal applicant but they don't always get them. Sometimes an applicant who looks good on paper does poorly during the interview or background portions. If you're the next qualified applicant you may be offered the position. At the very least, by going through the application process, you will begin to familiarize yourself with the various phases of the process. The more interviews you do the easier they will become. The more polygraphs you do the more familiar the questions will be. No student should expect to get hired after the first interview. You should expect to get passed over at least a dozen times before you're hired. This is quite normal and you should prepare yourself for failure at first. Don't be deterred. Use those failures as opportunities to learn how to improve upon yourself and your presentation. Ask the oral board members for input on your interview and apply their suggestions to future interviews.

Having said that you should be familiar with the job you are applying for if you truly desire the position. I am continually puzzled by applicants who can't answer simple questions about the field of study they are applying for. For example, if you are applying for a position as a latent fingerprint examiner and you can't articulate what is meant by the acronym ACE-V then don't be surprised when you don't get a call back. Likewise I have seen applicants who can't describe what tasks they would perform after arriving at the scene of a homicide. Now most employers are not looking for a yearbook answer but you should be able to discuss, in overall terms, what types of actions you would likely take and in what order. Answers such as “well, I've never actually worked a homicide scene so I'm not sure”, while patently honest, are not impressive. Any college graduate from a Criminalistics program should be able to discuss most of the duties of the crime scene investigator even if just broadly. Remember, there will be experts on your oral board. They will easily recognize if you are familiar with the field. You may be the most educated drug chemist in the world but if you are applying for a position as a footwear examiner do yourself a favor and study up.

It has always amazed me how even some professional criminalists aren't prepared for the interview process. Some falsely believe that their years of experience alone should guarantee employment. As a student, you should not be intimidated when competing against an experienced examiner. As I said above, some professionals look good on paper but fall apart during the interview process. I have had the opportunity to interview a number of professionals who couldn't adequately answer basic questions about crime scene investigation. If you are

well prepared you may have the opportunity to pass these professionals by during the interview process. I remember interviewing two young ladies for a senior position in our laboratory. Both had an M.S. in forensics, had completed internships, and had been fairly active with several organizations. They were competing against criminalists from all over the country, some with decades of experience. They presented professional looking portfolios and were very articulate in describing the various projects they had worked on. Ultimately they finished second and third in the hiring process, losing out to a very experienced criminalist with 25 years of experience. The thing to consider is that they placed higher than every other working criminalist who interviewed for the job (very surprising to me). When two positions opened up about a year later they were the first ones called. Both of these ladies now work in that laboratory and one has since been promoted to a supervisory position.

Finally, be positive. Remember, figuratively, you're there to sell yourself. It's OK to admit your limitations but try not to dwell on them. Stay focused on your attributes, not your shortcomings. Starting every sentence with "I know I probably don't meet the qualifications for this job but..." doesn't do you any good. In all likelihood, the employer will not need help from you in identifying your limitations. So focus on your strengths. The last question I almost always ask an applicant is "Is there anything you'd like to add at this point?". This is an opportunity to summarize your strengths and the reasons why you should be hired. Don't let this opportunity slip away. If someone asks you to promote yourself, and you pass it up, what message does that send? Take the initiative and get one last sales pitch in if you can. You can also use this opportunity to ask questions about salary, benefits, retirement, and other relevant issues regarding the position.

The polygraph:

If you are successful in the oral interview you'll likely be asked to take a polygraph exam or CVSA (computer voice stress analysis). The polygraph test is a common tool used by employers during your background investigation. Some applicants are very intimidated by this test. Like the oral interview it is designed to be stressful. The most important thing to remember is to be truthful in your answers. These examiners do this for a living and they are experts at recognizing deception. No employer expects to hire an angel. We have all done things in our past that we are embarrassed about. But here's a little secret that many people don't realize. Employers are more concerned with your ethics and truthfulness than they are with your past transgressions. I've seen plenty of people in law enforcement lose their jobs, not for what they did, but for lying about what they did. This is a very important distinction for you to recognize. Honesty and integrity speak more to your character than any excuses you might have for hiding embarrassing behavior. Also, be prepared that examiners will likely ask you about things you may never have been caught doing or arrested for. Things like infidelity, conspiracy, and various crimes will most likely be discovered through this test. Better that you disclose these things first, than having it present itself as deception in a polygraph.

During your internship you should make every effort to go through a mock interview by members of the laboratory staff. Many agencies also employ polygraphists and you would benefit by going through some polygraph or CVSA (computer voice stress analysis) testing as well. At the very least it will prepare you mentally for what the process will entail. We often

fear what we don't understand and by going through the process you will acclimate yourself to the unknown.

APPLYING FOR OTHER LAW ENFORCEMENT OR RELATED POSITIONS

A lot of students have asked me if they should apply for any position in law enforcement just to "get their foot in the door". While this strategy may have some merit it may also divert your career path. If you accept a position as a police officer, coroner's investigator, property evidence technician, private investigator, security guard, or similar position you should realize that these jobs have their own skill sets to develop. Every day you spend learning that career is a day you may be falling behind in Criminalistics. Be careful about the choices you make regarding your career. Sometimes what appears to be the easier path takes you further from your destination.

SOME FINAL WORDS

I hope that the information contained in this guide will be helpful to you. I do not intend the information in this guide to be all inclusive. While I have addressed some major issues in planning your career there will undoubtedly be conditions in your local area that may dictate a slightly different approach. I would highly recommend that you work closely with your professor, local criminalists, and fellow students while planning your career path. It will take a great deal of work on your part to make yourself competitive. The sooner you begin this process the better off you'll be. Remember, these positions aren't just given away, they're earned. If you want to be successful you have to make a serious commitment to improve upon yourself. You'll likely be competing against both professional criminalists and well educated students. It is a highly competitive field and you'll be at a slight disadvantage from the start. Anything you can do to improve your qualifications will be well worth it. Don't give up on your goals. Forensics is the most fulfilling career I can imagine. I've met some of the best people I will ever know and I feel great satisfaction in providing a service to my community. I can't imagine a life without it. Wherever your career takes you I wish you the best of luck in your endeavors.