



The Forensic Criminology Institute

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Criminology, Criminalistics, and Forensic Science: A Student's Guide to Higher Education

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For a number of years now, we have worked with different Government Institutions and Universities throughout Mexico. We have done so support of various Criminology and Criminalistics degree programs and initiatives. More specifically, we have done so in support of students and student-professionals.

Two problems have identified, shared nation-wide: 1) A lack of current textbooks; most Universities use either very old textbooks with outdated information, or no textbooks at all; and 2) A basic misunderstanding of terminology and the structure of higher education. Through the *Forensic Press*¹ initiative, we are working to address the first problem, by publishing quality forensic textbooks in Mexico available at a low cost. This quick reference guide is meant to help address the second.

It has become clear to the authors that the majority of those teaching and studying criminology and criminalistics have learned what they know primarily from watching films and television. This has been allowed to occur because of the absence of quality or informed professional references; and the absence of qualified forensic professionals working in association with such programs. Consequently, and though well meaning, those associated with degree programs throughout Mexico can be found not only

¹ Visit www.forensic-press.com.

embracing inaccurate information, but repeating it². This has created a community of forensic educators where the blind are leading the blind.

In order to assist students with process of identifying and enrolling in degree programs that are most suited to their education and related employment goals, we offer the following conceptual summaries. These presented in two sections: *Basic Forensic Terminology* and *Degree Programs*.

Basic Forensic Terminology

In order to understand the relationship between criminology and forensic science, the following terms must be carefully read and properly understood.

Criminology

Criminology is generally defined as the scientific study of crime and criminals. As described in Reckless (1955, pp. 6–7):

...[I]t is clear that criminology is not only a behavioral science but also an applied science and science of manipulation and social control. ...It receives contributions from experts in such disciplines as biology, anthropology, physiology, medicine, psychiatry, psychology, social administration, economics, law, political science, and penology and corrections.

The many conceptual definitions of criminology create myriad intersections between crime, criminality, and scientific study that have made criminologists out of practitioners and researchers from almost every background.

For professionals who engage in the study of crime environments and causes, criminology is a social science; for those who study the actions, choices, psychology or personality of criminals, it is a cognitive or behavioral science; and for those who study the correlations between biological factors and criminal behavior, it is a science rendered from chemistry and genetics.

The broad field of *Criminology* must not be confused with specific practice of *Criminalistics*, though it often is.

Forensic

In a legal context, the term *forensic* means court³. It is not a reference to *science* or anything *scientific*, necessarily. However, this is sometimes what the use of the term is

² This is not a problem that is unique to Mexico. In the United States, for example, the same problem exists because many educators and students don't bother to read, despite having access to competent and informed professional resources.

³ This term is not to be confused with the subject of "forensics", which relates to the art of arguing and debating, with no relationship to the issues of courtroom admissibility or expertise. Most people confuse the terms, and this is a quick way to distinguish those who are properly educated and trained as forensic practitioners from those who are not.

intended to imply. The term forensic is merely a descriptor, meaning whatever profession or subject matter comes next is intended to be of and for the courtroom. If this term is used, to describe a professional, it means that they testify in court as an expert in their field. If a professional uses the word “forensic” to describe themselves, and they do not testify in court, then they are either ignorant or fraudulent.

Forensic Science

Forensic science is the application of scientific methodology, knowledge, and principles to the resolution of legal questions, whether criminal or civil (Chisum and Turvey, 2012; Houck and Seigal, 2010; James and Nordby, 2003; Saferstein, 2010; and Thornton and Peterson, 2007). It suggests the scientific examination of evidence, whether it be physical, digital, or behavioral. This definition, which generally consistent across the forensic science literature, is intentionally general and inclusive. There are, in fact, many different forensic sub-disciplines, including (but certainly not limited to) criminalistics, crime reconstruction, forensic pathology, forensic anthropology, forensic toxicology, forensic entomology, forensic mental health (psychology and psychiatry); and forensic criminology (Chisum and Turvey, 2012; Houck and Seigal, 2010; James and Nordby, 2003; Saferstein, 2010; Seigel, Saukko, and Knupfer, 2000).

A forensic scientist is a professional with a scientific education and background that also: examines evidence with the scientific method, using scientific knowledge and following scientific protocols; and does so with the expectation of testifying in court as an expert.

If a scientist has not qualified in court as an expert, then they are not a forensic scientist.

Criminalistics

A criminalist is a particular type of forensic scientist who performs objective testing on physical evidence in a crime lab. Indeed, there are more than a few different subspecialties within laboratory criminalistics. As explained by the California Association of Criminalists: “A criminalist is a person with a background in science, typically having at least a baccalaureate degree in an area such as chemistry, biology, forensic science, or criminalistics. ... a criminalist applies scientific methods and techniques to examine and analyze evidentiary items and testifies in court as to his or her findings.”⁴

This definition makes it clear that criminalists are those forensic scientists trained to examine physical evidence and then testify about their findings as forensic experts in court. This means you must be a scientist; you must examine physical evidence in a lab; and you must testify in court. Otherwise, you are not a criminalist.

Forensic Criminology

Forensic Criminology is the scientific study of crime and criminals for the purposes of addressing investigative and legal issues (Turvey and Petherick, 2010). It is a science, it

⁴ See: <http://www.cacnews.org/membership/criminalistics.shtml>

is a behavioral science, and it is a forensic science. The underlying theories and methods are not meant to be constructs developed in the courts of law but rather in the courts of science (Thornton, 1994). Like any other scientific practice, it exists beyond legal or national borders as a realm unto itself as it must to be a true discipline. It includes sub-disciplines such as criminal investigation, forensic psychology, forensic victimology, crime analysis, and criminal profiling.

If a criminologist has not qualified in court as an expert, then they are not a forensic criminologist.

Degree Programs

In order to understand where you are as a student, and what might be next for you, the following basic list of undergraduate and post-graduate degree programs described⁵.

Associate Degree

An Associate Degree is generally offered as two year undergraduate program. These programs require students to complete coursework of approximately 60 hours. They are taken either to satisfy a basic certification requirement for a profession or trade; or as preparation for an eventual Bachelor's Degree program. The Associates Degree is generally abbreviated as either AA (Associate of Arts) or AS (Associate of Science)

However, those pursuing a Bachelor's Degree will likely skip the step of getting an Associate Degree unless there is some immediate professional advantage.

Bachelor's Degree

A Bachelor's Degree is the result of a degree program that typically offers a Bachelor's of Arts or a Bachelor's of Science. The minimum University requirement for a Bachelor's degree is 120 semester hours, or 180 quarter hours. Full time students take 4-5 years to accomplish this; while part time students can take much longer.

The Bachelor's Degree is generally abbreviated as either BA (Bachelor's of Arts) or BS (Bachelor's of Science). There are specialized bachelor's degree as well, but these are less common.

Diplomado, or Post-Graduate Certificate / Diploma

Referred to as a Post-Graduate Certificate or Diploma in the United States, a Diplomado (aka Diplomat) is a professional credential achieved by completing 120 hours of study in a particular specialized subject matter. It is meant to prepare the

⁵ See also: <http://collegiatepursuits.com/different-types-of-college-degrees/> and <https://bigfuture.collegeboard.org/find-colleges/college-101/quick-guide-your-college-degree-options>.

student with a graduate degree for a graduate degree program, such as an MS or and MA. It is also typically designed to meet the basic requirements for beginning specialized professional work; or to obtain basic professional certifications.

A post-graduate diploma generally takes a number of months to complete, and should be taught by those actually doing the work that they are teaching. Otherwise, it has limited professional value. Many individuals and private institutions offer Diploma programs on their own, outside of accredited institutions, but these have limited value in the professional community.

Graduate Degrees

A Graduate Degree is the result of an advanced level degree program taken after receiving a bachelor's degree. They are offered through accredited institutions. There are generally two kinds: The Masters Degree and the PhD (Doctorate of Philosophy).

Masters

The Masters Degree is broken into two types: the Master of Arts and Master of Science, with an associated speciality (e.g., Master of Arts in Criminology; Master of Science in Forensic Science). A Masters Degree is generally abbreviated as either MA (Master of Arts) or MS (Master of Science). An MA is associated with the arts and humanities, and an MS applies to scientific and technical degrees that emphasize specialized skill development. In addition, an MA is usually a terminal degree; while an MS degree generally prepares students for doctoral program.

Masters Degree programs typically take 1-2 years to complete as a full time student. They must also be taught by those with a PhD level or higher to be considered valid by most Universities the United States. In other words, instructors teaching at the Masters level or higher are expected to hold their PhD. Anything less is generally substandard.

Additionally, some graduate degree programs do not require that students first hold a Bachelors degree. This is also regarded as substandard practice. It is commonly associated with for profit institutions that are not regulating the quality of their students or graduates.

In the forensic world, a Masters Degree program must be first be evaluated based on the quality of its instructors. In other words, they should be case-working professionals with experience writing forensic reports and giving expert testimony. Second, it must be evaluated based on whether the program has the ability to provide the student with relevant internships. If it can't, then the program has limited value.

Doctorate of Philosophy

The Doctorate of Philosophy, abbreviated as PhD, is the highest level of academic achievement. At the minimum, it requires the completion of an original research based dissertation using data collected by the candidate. This takes 3 or more years to complete; has many stages, including defense of the dissertation before a board; and requires passage of peer review by a dissertation committee. The PhD is then published

in some form, as new knowledge to be shared with the scientific community as both relevant and scientifically valid.

Only those with a PhD can sit on a dissertation committee, and assist in conferring graduate degrees.

All PhDs are referred to as Doctorates in Philosophy, from the Department within the school where they were conferred (e.g., a PhD from the Dept. of Criminology); the speciality would most accurately be described by listing the topic of the dissertation.

Professional Degrees

Professional Degrees are those graduate degree intended to prepare students for specific career paths in licensed professions. For example, a Medical Doctor receives and MD; a dentist will receive either a DDS or a DMD (Doctor of Dental Surgery or Doctor of Medicine in Dentistry); and Veterinarian will receive a DVM (Doctor of Veterinary Medicine); an attorney received a Juris Doctor (JD); and business professionals will generally seek out an MBA (Master of Business Arts). Each has very different technical requirements - some more and some quite a bit less.

Conclusion

Students seeking to work in the criminal justice system need to study under qualified professionals and in association with accredited programs. At the very least, they should study under those who are doing, or who have done, the work that they are seeking to do themselves. The community of criminal justice and forensic science educators is awash with those who do not understand the basics. Prospective students must investigate degree programs thoroughly, and ask a lot of questions about who is teaching, whether they are competent, and whether they will be able to get an internship or a job, before they spend their money.

REFERENCES

Chisum, W.J. and Turvey, B. (2012) *Crime Reconstruction, 2nd Ed.* Elsevier Science, San Diego.

Edwards, H., and Gotsonis, C. (2009) *Strengthening Forensic Science in the United States: A Path Forward.* National Academies Press, Washington, DC.

Houck, M. and Seigal, J. (2010) *Fundamentals of Forensic Science, second ed.*, Elsevier Science, San Diego.

James, S. and Nordby, J. (2003) *Forensic Science: An Introduction to Scientific and Investigative Techniques*, CRC Press, Boca Raton, FL.

Kirk, P. (1953) *Crime Investigation*, Interscience, New York, NY.

Reckless, W. (1955) *The Crime Problem, 2nd Ed.* Appleton-Century-Crofts, Inc., New York.

Saferstein, R. (2010) *Criminalistics: An Introduction to Forensic Science, 10th Ed.* Prentice Hall, Upper Saddle River, NJ.

Savino, J. and Turvey, B. (2012) *Rape Investigation Handbook, 2nd Ed.* Elsevier Science, San Diego.

Seigel, J., Saukko, P., and Knupfer, G. (2000) *The Encyclopedia of Forensic Science*, Vols. 1–3. Academic Press, London.

Thornton, J. (1994) "Courts of Law v. Courts of Science: A Forensic Scientist's Reaction to Daubert," *Shepard's Scientific and Evidence Quarterly*, Vol. 1 (3); pp.475–485.

Thornton, J. and Peterson, J. (2007) "The General Assumptions and Rationale of Forensic Identification," In: Faigman, D., Kaye, D., Saks, M., Sanders, J. (Eds.) *Modern Scientific Evidence: The Law and Science of Expert Testimony. Vol. 1*, West Publishing Group, St. Paul, MN.

Turvey, B. (2011) *Criminal Profiling: An Introduction to Behavioral Evidence Analysis, 4th Ed.* Elsevier Science, San Diego.

Turvey, B. (2013) *Forensic Fraud*, Elsevier Science, San Diego.

Turvey, B. and Petherick, W. (2010) "An Introduction to Forensic Criminology" In: Turvey, B., Petherick, W., Ferguson, C. (Eds.) *Forensic Criminology*, Elsevier Science, San Diego.