



B143 Tales of a “Non-Forensic Scientist” in a Forensic Science Undergraduate Classroom

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After attending this presentation, attendees will have experienced a new teaching perspective from a “non-forensic scientist” in the field of forensic chemistry.

This presentation will impact the forensic community and/or humanity by providing insight on how to effectively teach forensic science courses having never experienced collecting or analyzing evidence from a crime scene. The content will be especially beneficial to fledgling professors and high school teachers.

In the real world, a forensic scientist may wear several hats, depending on the type of lab he or she works for. In general, forensic science involves methods of collecting and analyzing evidence, which allows the criminal justice system to apply the results to prove or disprove an alleged criminal's innocence. To accomplish this, forensic scientists need to have a firm understanding of the scientific principles behind the methods and analytical instrumentation used. They also need to be able to think critically and communicate effectively to a lay audience. Thus, forensic science is a somewhat complex field, which has fortunately grown in popularity over the past decade. Consequently, undergraduate and graduate level forensic science programs are sprouting up nationwide. Additionally, forensic science courses have become almost commonplace at the high school level. Who is going to teach all of the future forensic scientists? Often, it is not former practicing forensic scientists, since most practicing forensic scientists do not have doctoral degrees, and are therefore not eligible for full-time tenure track faculty positions at most institutions. Consequently, it comes the “non-forensic scientist” into the forensic science classroom. The question becomes, can someone effectively teach forensic science courses at the college or high school level, having never collected evidence from a crime scene, analyzed evidence in a crime lab or testified as an expert witness in court? The answer is yes.

At the heart of forensic science lie the principles of the natural sciences. Both the natural and forensic sciences invoke the scientific method to pose a question, develop hypotheses, design experiments, gather data, and ultimately solve a scientific problem. While casework stories certainly make for an interesting lecture, they are not necessary to teach the principles of science. A great place to incorporate the scientific method and critical thinking exercises is in either a lab or research experience. This also introduces the other side of forensic science. The availability of cutting edge technologies that simply did not exist in the past, has certainly facilitated the advancement and capabilities of the forensic science field. Consequently, the following relationship can be derived.

research < > training/teaching < > practice

At the research level, there are forensic chemists/biologists developing analytical methods and techniques practiced by forensic scientists in crime labs. What about the middle person (the teacher)? Is she a researcher or is she a practicing forensic scientist? They are both scientists, and they are both keenly aware of issues involving the qualitative and quantitative analysis of crime scene evidence. It is important for forensic science students to realize that there are many opportunities to explore in the field. By teaching them how to solve scientific problems, their options are limitless.

Education, Forensic Science, New Teachers