D21 The Forensic Science Program at Baylor University: A Successful Experiment

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After attending this presentation, attendees will have knowledge of an undergraduate forensic science major and what it entails.

This presentation describes the opportunities afforded to me as a Baylor student majoring in forensic science. The Baylor forensic science major became a reality in October of 1999. The program was originally designed to give premed students hands-on experience in a multidisciplinary approach. The day the program began 35 biology and chemistry majors declared forensic science as their major.

The university hesitated to establish this program and gave it four years to graduate fifteen majors. One immediate question from the administration was "Is this a fad?" attributed to the emergence of many forensic-related television programs showing at the time. As the president of the Forensic Society, I have found that 80% of our students do not watch these shows. Although many initial majors applied to medical school, there are now a significant number of students solely interested in a career in forensic science as a result of exposure to this program. There are currently 350 majors, and we have graduated over 200. Yes, the program is a success! To manage the growing number of forensic science majors, Baylor has created the classification of 'Pre-Forensic Science.' A student must complete 30 hours with a grade point average of 2.75 in order to declare forensic science as a major. Then, the student may start enrolling in the core forensic science classes, such as Crime Scene Investigation, Human Osteology, and Forensic Anthropology.

The Baylor Forensic Science program provides experience beyond the usual classroom lecture and encourages students to get into the field for forensic experience. After taking classes such as Human Osteology and Forensic Anthropology, a Baylor forensic science student may become a part of the Baylor Forensic Team (B.F.T). When law enforcement agencies call upon Dr. Susan Wallace, the program director, for assistance, the Baylor Forensic Team often accompanies her.

We consider ourselves as highly trained individuals able to distinguish human and nonhuman skeletal material. Since 1999, team members have spent many hours searching for human remains in tall grass fields, canyons, 30 feet deep wells, and steep hillsides. We see these team activities not only as opportunities to fulfill a commitment to service but also to gain forensic experience should we choose not to attend medical school but continue on specialized subdisciplines in forensic science. In addition, majors must complete twelve hours of internships. The internships are extremely varied and tailored to each individual's special interest.

Since enrolling in Baylor in the fall of 2000, I have had numerous opportunities for specialized internship training through the Baylor Forensic Science Society. I have taken an introductory Hostage Negotiation class taught by retired Detective Dominick J. Misino from the New York City Police Department. Through this class, I had the opportunity to listen to actual negotiation tapes, as well as practice roleplaying negotiation with modern equipment. I also participated in a Blood Spatter Interpretation seminar, taught by Rex Plant of the Washington, D.C. Police Department. In this weeklong seminar, I used human blood for experiments. I learned about spatter patterns, such as cast off, droplets, and impressions and how different angles and heights of attack affected blood droplet patterns. I enrolled in a Blunt Force Trauma workshop given by Dr. Steve Symes from Mercy Hurst College in Pennsylvania in which I viewed examples of trauma to human bones and skulls. Actually getting to see real examples of trauma helped bring forensic cases and pictures into reality. The last internship I completed was a Forensic DNA Analysis class taught by Dr. Lori Baker at Baylor University. I learned the basics of forensic DNA analysis including how to extract and amplify mtDNA from buccal swabs, run electrophoresis gels, purify gel and complete a yield gel to quantify the actual amount of DNA. I received instruction for performing an ETOH precipitation, which prepared the DNA for analysis using a base sequencer. I learned how to read a sequencing sheet of the coded DNA base pairs. Through this class and my other internships, I have been exposed to different subdisciplines of forensic science and have gained invaluable knowledge to apply in future endeavors. In addition to these internships, Psychological Profiling, Forensic Photography, Medicolegal Death Investigation, and Forensic Entomology are also offered to forensic science majors at Baylor.

Some of the most memorable and valuable experiences I have received as a student in the Baylor Forensic Science program centered on the forensic cases in which I have been actively involved. I have learned different techniques for the searching for human remains in different physical settings. My first case concentrated on the recovery of human remains located in large mounds of dirt and gravel. I have descended into wells to search for human remains, walked areas of landfills in 110º heat searching for a missing woman, and walked miles along an interstate highway searching for a human cranium. My peers before me recovered a serial killer's first victim. The case that has meant the most to me is the recent search for one of our Baylor University basketball players who was the victim of a possible homicide. Although this event saddened me I felt I was helping to bring

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closure to a grieving family.

Choosing forensic science as a major has provided me special skills and knowledge that I could not have received in my regular premedical classes. As an undergraduate I have been able to apply classroom knowledge at actual field situations. From what I have learned and observed as a direct result from my participation in this program I believe I have gained a level of maturity and experience that will serve me well as a future professional. I recommend this program for anyone planning a medical career or a graduate program in forensic science.

Forensic Science, Forensic Science Undergraduate Major, Forensic Science Education

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