



B32 Developing New Forensic Science Programs to Meet Current and Future Challenges: The Pace University and Cedar Crest College Perspectives

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This presentation will introduce two new collegiate programs in forensic science and their rationale for curriculum development.

New academic programs in forensic science have recently been introduced at Cedar Crest College in Allentown, PA, and Pace University in New York, NY. Pace University began offering a BS and MS in forensic science in the Fall 2002 and Cedar Crest College currently offers a BS in Chemistry with a concentration in forensic science.

Cedar Crest College is an undergraduate, liberal arts college for women. The liberal arts portion of the curriculum offers the opportunity to develop skills in public speaking and technical writing that can greatly benefit the forensic student. In addition, the liberal arts curriculum is aptly suited for the development of critical thinking skills that are necessary when approaching forensic problems.

Pace is a large urban and suburban university with campuses in New York City, and in White Plains and Pleasantville, NY. Pace is a liberal arts university featuring undergraduate and graduate degrees through the Dyson College of Arts and Sciences, the Lubin School of Business, the School of Education, the Lienhard School of Nursing, the School of Computer Science and Information Systems and its School of Law. The Forensic Science program will be offered through the Dyson College of Arts and Sciences with classes given primarily at the New York City campus.

Both Pace University and Cedar Crest College have designed their curriculums based on the premise that students in Forensic Science need a strong science foundation. The first two years of undergraduate study are essentially the same as those of a Biology or Chemistry majors. Students will then begin learning basic concepts in forensic science using a crime scene focus. The guiding belief in both programs is that more mistakes are made in the recognition and collection of significant evidence at the crime scene than in the laboratory's subsequent analysis, a view held strongly by Paul Kirk years ago. Students will be taught how to use the scientific method to formulate meaningful hypotheses to evaluate physical evidence at crime scenes and how best to prove or disprove them. Specialty areas will not be taught in a vacuum but always with a particular criminal investigation in mind.

In an era when forensic science programs are becoming more specialized, Cedar Crest and Pace are taking a more traditional approach. Both curriculums will attempt to educate the student from a generalist perspective. In most jurisdictions, forensic questions are posed by non-scientists (i.e., prosecuting attorneys, case detectives). Cedar Crest and Pace hope to change this trend by teaching students to formulate their own questions based on their knowing the strengths and limitations of a broad range of analytical techniques.

Given the probable expansion of many forensic laboratory systems, the curriculums were devised so students will be able to meet educational hiring guidelines for most entry-level positions in forensic laboratories regardless of specialty. Graduates of these programs will be able to meet typical civil service requirements for employment as well as educational requirements mandated by such groups as the DNA Advisory Board. Core coursework areas in trace evidence, microscopy, forensic biology, crime scene reconstruction and pattern analysis, chemical and instrumental methods of analysis, and law and ethics are offered in both programs. Students will also be introduced to forensic science literature.

Integrating other applicable college courses not traditionally found in forensic science programs will be offered in both curriculums to meet current and future needs. For instance, given the role that computer interface technology plays in forensic laboratories and the prominent role that computers play in such areas as DNA matching and crime scene documentation and reconstruction, the Cedar Crest curriculum plans to include courses in structured programming and computer-aided design. Furthermore, specialty courses in digital photography, PCR, and DNA sequencing will be offered as electives.

Other non-traditional class formats such as one week intensive courses or 1 credit mini courses are being explored by both programs as a method of increasing student exposure to the field of forensic science.

In response to heightened awareness toward the field of forensic science, Pace will also offer an accelerated five year Masters Degree. This program was designed for students to enter the program directly from high school. The design of the program will be discussed in detail.

Research leading to the development of new laboratory techniques and method validation work is often part of the duties of laboratory scientists. In order to prepare students for these possible assignments in the workplace, both programs offer a research component. Pace University has a masters thesis requirement based on laboratory research and Cedar Crest College offers the opportunity for students to perform forensic research in their junior and senior years cumulating in a manuscript and an oral defense of the research. Both



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programs hope to offer research opportunities for students both on-campus and off-campus. A network of forensic laboratories with research opportunities for students will be solicited.

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