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Kevin Latman '06 (left) and Joe Broucek '07 (right) watch as Francesca Catalano, visiting assistant professor of biology, investigates "evidence."

IWU Students Investigate Forensic Biology with New Class

December 6, 2005

BLOOMINGTON, Ill. - This December at Illinois Wesleyan University, while other students were frantically sharpening their pencils and printing off final copies of papers, the 12 students in IWU's newest biology course, Human Heredity and Forensic Biology, were preparing to identify fingerprints of a suspect. Instead of giving a traditional final examination, Francesca Catalano, visiting assistant professor of biology at IWU, provided students with packets of "evidence" to use to solve a mock crime. The practical final exam used faculty volunteers as "criminals" and "victims."

The 100 level biology class is intended to attract the interest of students who might otherwise not take a college-level science class. "This is a liberal arts university. Students need to have a strong foundation in everything, including science," Catalano said.

With the interests and abilities of non-science majors in mind, Catalano designed a course that would provide a background in molecular biology as well as the basics of legal theory and criminal justice. During the fall semester, Catalano also expanded and adapted the curriculum to include ballistics, arson investigation and hand-writing analysis. "It's great to offer interdisciplinary courses to students at this university," said Catalano, who earned both a doctorate of jurisprudence from DePaul University and a doctorate in microbiology from Loyola University.

Creativity has been the order of the semester. Unable to find a text appropriate for the class she wanted to teach, Catalano worked with publishers to build her own biology textbook for the class by compiling relevant and level-appropriate chapters from a variety of textbooks into a spiral-bound volume of photocopies.

The class also visited a crime lab in Morton, Ill., where students had the opportunity to observe professional forensic scientists. "It was interesting to see what we learn in biology classes applied to real life," said Kate Houser, a junior biology and chemistry double major who registered for the class because she is considering a career in forensic science. According to Catalano, at the lab, students saw a wide variety of applications of forensic science, "from ballistics to DNA to chemistry techniques."

This is not the first time that IWU has offered a class in the field of forensic science. In 1985, Forrest Frank, former associate professor of chemistry, introduced a popular course titled "Chemistry and Crime." In 1989, a sabbatical took Frank to London, where he applied his knowledge of forensic chemistry to the Serious Crimes Unit at Scotland Yard. The course resumed upon Frank's return to IWU and he continued to teach it even after his retirement in 1999.

So why has the subject matter been re-introduced this year? IWU is not the only university adding courses in forensic science recently. Over the last five years, many large state universities have added forensic science programs or have developed their existing programs. The Bureau of Labor Statistics has projected a 13 percent increase in forensic technicians entering the workforce from 2000 to 2010. The catalyst behind this increased interest among students is likely TV shows such as CBS's hit *CSI: Crime Scene Investigation*, which have put forensic science in the spotlight like never before.

According to Catalano, however, TV shows do not accurately portray the way forensic science is used to solve crimes and are attracting many people to the field who may not have a sufficient background in science. "What I wanted to do with this class was to provide students with a foundation in biology, with molecular and population genetics [the study of how frequently certain genetic variations occur within a given population], and delve into some of the issues that are important and interesting for that kind of work," she said.

"Look at all the hot topics that were issues of the presidential election. They were all issues of science: evolution, stem cell research, even abortion to a certain extent," Catalano explained. "If students understand what we do in this class, then they can use that as a foundation to understand other pressing issues."

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