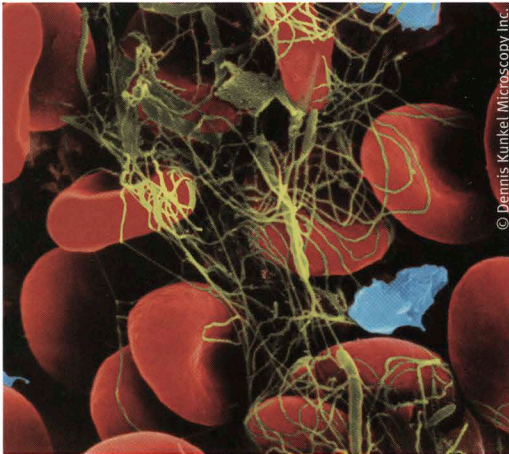
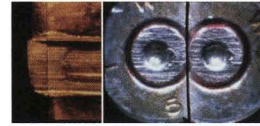
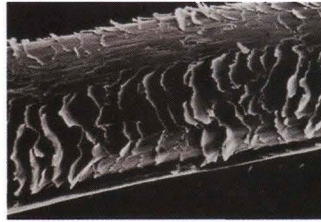


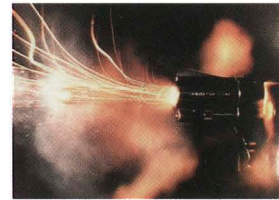
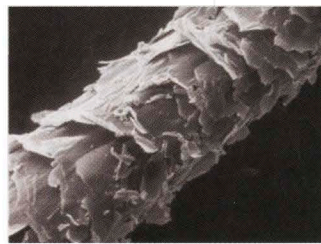
VIEW from the Hill



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Students in Professor James Spencer's Forensic Science course learn about a variety of investigative techniques, involving such evidence as blood (above, red blood cells trapped in a fibrin blood clot), hair samples (center), bullets and casings (right), and fingerprints.



SUPER SLEUTHING

In a Bowne Hall chemistry laboratory, students peer into microscopes. One group studies marks on bullet casings; another examines samples of animal hair. Graduate assistant George Rudd leads a third group through an exercise using a gas chromatograph/mass spectrometer (GCMS), an instrument designed to identify chemical compounds. He shows them how to draw a sample of methanol and add it to a test tube with a dollar bill in it. Rudd then analyzes the liquid mixture with the GCMS. "Money has all kinds of junk on it," Rudd says. "Wherever it's been, it's picked up something and carried it along." That may include traces of cocaine, which, statistics show, are found on about 80 percent of dollar bills in circulation. "It gets caught in the fibers," says chemistry professor James T. Spencer. "We see a whole range of things on bills."

Welcome to Forensic Science, a chemistry course that Spencer designed and introduced last semester to appeal to non-science majors. "We talk about the science behind the techniques and use that science to understand how the techniques are applied in forensics," Spencer says. In part, the course evolved from Spencer's work with SU Project Advance (SUPA), a program that trains high school teachers how to teach college-credit courses to their students. Last summer, with assistance from a teacher who piloted a SUPA forensic science course at Mahopac (New York) High School, Spencer organized a campus workshop on the topic for SUPA science teachers. Like the workshop, the course features guest speakers and covers a range of forensic-related work, from processing a crime scene to

fingerprint identification techniques. "It was interesting to learn about the different aspects of forensics and how they're applied," says Michele Scully '04, a bioengineering major intrigued by the field.

Spencer says the course drew nearly 160 students, and he attributes the interest to the popularity of the *CSI: Crime Scene Investigation* television series and similar programs. "CSI is good entertainment, but it's not really accurate," Spencer says. Wayne Horton '07 was among those lured to the class because of forensics on television. "It's much more chemistry than you'd imagine, and it isn't as easy as it looks on TV," he says. "The class was very informative, and the labs were great, very interactive."

Spencer and three graduate assistants mastermind whodunit crime scenes and pose as suspects who try to stump teams of student investigators. "Bodies [complete with Smiley-face heads] have been killed by computer keyboards, knives, gunshots, even a bugle to the head," Spencer says. "We always plant evidence that requires using the techniques they've learned. For each case, the kids have to figure out who the murderer is. They're really good at grilling us." While Spencer doesn't expect the course to produce a throng of forensic scientists, he does want students to understand the role of forensics. "Advances in scientific methods and principles have had an enormous impact on law enforcement and the entire criminal justice system," Spencer says. "There's also a lot of 'junk science' out there, and I'd like the students to understand what good science is and how to distinguish it from junk science."

—Jay Cox