



Spring 4-11-1997

Innovative Chemistry Course IWU Students Apply Chemistry to Crime Fighting

Kim Field
Illinois Wesleyan University

Follow this and additional works at: <https://digitalcommons.iwu.edu/news>

Recommended Citation

Field, Kim, "Innovative Chemistry Course IWU Students Apply Chemistry to Crime Fighting" (1997). *News and Events*. 6786.
<https://digitalcommons.iwu.edu/news/6786>

This Article is protected by copyright and/or related rights. It has been brought to you by Digital Commons @ IWU with permission from the rights-holder(s). You are free to use this material in any way that is permitted by the copyright and related rights legislation that applies to your use. For other uses you need to obtain permission from the rights-holder(s) directly, unless additional rights are indicated by a Creative Commons license in the record and/ or on the work itself. This material has been accepted for inclusion by faculty at Illinois Wesleyan University. For more information, please contact digitalcommons@iwu.edu.

©Copyright is owned by the author of this document.

April 11, 1997

Contact: Kim Field, 309/556-3181Innovative Chemistry Course

IWU Students Apply Chemistry to Crime Fighting

Chicago
Central
Local

BLOOMINGTON, Ill.--A tiny drop of blood . . . a faint footprint in the mud . . . a bit of skin under a victim's fingernail . . . these clues can lead to unmasking a killer.

With all the new scientific methods available today, it's tough for murderers and other villains to get away with crimes.

DNA, fingerprinting and other high-tech analysis of evidence is playing an increasingly important role in criminal investigations like the recent O.J. Simpson double murder case and the murder of 6-year-old beauty queen JonBenet Ramsey in Colorado.

Illinois Wesleyan University Associate Professor Forrest Frank has been linking chemistry to crime for a dozen years. Frank pioneered a unique course, Forensic Science, which shows how chemistry can be used to discover facts about crimes. The course was started as a way to interest non-majors in chemistry.

"The great thing about teaching Forensic Science is that you can then incorporate all other aspects of life into it such as ethics, and it allows non-science people to use laboratory instruments," said Frank.

Rape, for example, is an emotional topic, but in a class like Forensic Science it is discussed from the clinical and ethical standpoints, according to Frank.

Students taking the course perform experiments simulating what happens in a forensic laboratory. One experiment students perform involves an infrored spectrophotometer used to find out what type of chemicals are in a liquid. This experiment is similar to those used to find out if a liquid could have been used to create a bomb. It also allows students to use instrumentation usually reserved for upper-level science courses.

Some think Frank is fixated on crime. But, what really interests him are the practical uses for chemistry like fingerprinting. While on a sabbatical, a teaching leave, with the police at Scotland Yard, London, Frank worked in

(MORE)

Chemistry and Crime Fighting/2

their crime lab and helped discover a new chemical that is better for making latent fingerprints visible.

As for DNA testing and its reliability in criminal investigations, Frank said, "DNA is one of the greatest things, but for it to work it must be done right, which is hard to do because most of the blood at the scene of a crime is dirty. It is dirty because it has been on the ground and dirt has gotten into it."

Jenny Duke, an IWU student Frank advises, is a DNA intern at the Illinois State Police Laboratory in Morton. She is helping scientists by preparing solutions used to examine evidence. They work with an assortment of cases including homicide, sexual assaults and burglaries. Duke's longtime fascination with crime was prompted by her father's career as a police officer and by law enforcement oriented television programs.

Frank began developing the Forensic Science course in 1985. He will teach it again next month during May Term, when IWU students study in-depth a single course. During last May Term, Frank co-taught the course with David Marvin, assistant professor of business administration, who teaches classes on law. They called the course, Science, Law and the Legal System. Frank said, "Team teaching gave the students a chance to see the course from more of a legal aspect and it was a change of pace from only listening to one professor for four hours a day."

Marvin became interested in team teaching the course when the theme of May Term '96, science and how it relates to other institutions, was announced. When the course was taught during May Term'96, it emphasized science, the law and the legal system. After taking the course Marvin hopes students will think more critically about scientific information in legal cases.

One of the topics the course focused on was the silicone breast implant class action lawsuit involving Dow Corning and the differences between good science and bad science.

(MORE)

Chemistry and Crime Fighting/3

Frank said one of his wishes for the course is to, "get more freshmen in the class because they are so fresh and inquisitive."

While looking around Frank's office one can easily see his fascination with science and crime: the Sherlock Holmes dragon sitting on a stack of books and the stuffed animal that is a mole to depict Digger the Mole, a commonly used reminder of a chemistry formula.

Born in Chicago, Frank received a bachelor of arts degree from Grinnell College in Iowa and a doctorate from Purdue University, Indiana. He worked in the New Jersey paper and pulp industry for two years conducting research for Rayonier Inc, before launching his teaching career.

Frank has taught chemistry at the college level since 1965. He is a member and former president of Illinois Academy of Science, and recently he received a National Science Foundation grant to write a new series of chemistry textbooks with three other IWU professors: Associate Professor of Chemistry Timothy Rettich, Professor of Chemistry and Director of Natural Sciences David Bailey, and Assistant Professor of Chemistry Jeff Frick.

IWU was founded in 1850, enrolls about 1,900 students in a College of Liberal Arts, College of Fine Arts, and a four-year professional School of Nursing. A \$15 million athletics and recreation center opened in the fall of 1994; and a \$25 million science building opened in the fall of 1995. The \$4.6 million Center for the Liberal Arts--a facility housing 60 faculty offices, six classrooms, and other facilities for social science, humanities, business and economics, and interdisciplinary studies' faculty--is slated to open next fall, as well as a new \$6.8 million residence hall. The Carnegie Commission for the Advancement of Teaching promoted Illinois Wesleyan to a "Baccalaureate I" institution in 1994, classification that places it among 161 highly selective National Liberal Arts Colleges in the annual *U.S. News & World Report* rankings. *Barron's Profile of American Colleges*, another respected college guide, rated IWU "highly competitive(+)" in its latest edition.