Applying knowledge and technology from anthropology, biology, and chemistry, forensic science students collect, examine, and evaluate criminal evidence.

THE MAJOR

BS in Forensic Science

Loyola University Chicago offers a Bachelor of Science (BS) degree in Forensic Science. Currently, Loyola is the only school in Illinois or neighboring states to offer an undergraduate major in this increasingly high-profile field.

Forensic science combines natural science and criminal justice. Successful practitioners must have substantial technical expertise and knowledge, critical analytic and thinking abilities, superior communication skills, and an awareness of the scientist’s ethical responsibilities in the legal process. Applying knowledge and technology from anthropology, biology, and chemistry, forensic scientists interact with the criminal justice system to collect, examine, and evaluate criminal evidence. This evidence may include hair, blood, and other bodily fluids; tool and tire marks; residue from gunshots; and textile fibers from clothing and other materials.

CONTINUED
THE MAJOR

Students in this major gain:

• A broad range of knowledge and skills in chemistry and biology

• An understanding of the criminal justice system and rules of evidence

• Strong writing and speaking skills

• Technical expertise and analytic reasoning abilities

Loyola’s strong reputation in the sciences, along with its successful track record in preparing students for the health professions, enables forensic science graduates to begin highly successful careers in this dynamic field.

This major combines coursework from anthropology, biology, chemistry, criminal justice, mathematics, and physics. Students obtain valuable experience in DNA analysis through a new forensic molecular biology course at Loyola’s state-of-the-art Quinlan Life Sciences Education and Research Center. They also receive additional sophisticated lab training in biochemistry and instrumental analysis.

Career Opportunities

Media attention to forensic science in the court and criminal justice system has created a fast-expanding job market, resulting in numerous, well-paying jobs to graduates with bachelor’s degrees in the field. Recent published studies report an ever-increasing demand for forensic scientists, and estimates suggest that 10,000 new forensic scientists will be required in the next five years to sufficiently staff the nation’s forensic laboratories.

Forensic scientists interact closely with criminal justice professionals such as police officers, sheriff’s deputies, prosecutors and defense attorneys, crime scene investigators, and agents from the Federal Bureau of Investigation, the Drug Enforcement Administration, the Office of Homeland Security, and the Central Intelligence Agency. Forensic scientists work in morgues, laboratories, court settings, and police departments. They are employed by local, state, and federal government agencies; public and private universities; medical examiner offices; forensic and medical laboratories; hospitals; law firms; police departments; and a growing number of private companies. They can also be self-employed as consultants to courts, law enforcement agencies, university-based research laboratories, law firms, and medical examiner offices.

A Forensic Science Program Advisory Committee has also been established and includes representatives from local, state, and federal crime laboratories, as well as privately operated labs that serve the criminal justice community. This group of prestigious forensic science practitioners and policy makers guides the growth and evolution of the program to ensure that Loyola meets the increasingly rigorous and changing needs of the field.

Internships

Students benefit from a comprehensive internship component in their senior year at the Illinois State Police Forensic Science Center or other federal or local crime labs in the area, which enables them to apply their knowledge and capabilities.

Minor in Computer Crime and Forensics

Computer crime and forensics, a new interdisciplinary minor, helps familiarize students with the criminal justice system, courts, laws and procedures, computer software, hardware, networks, and investigative and evidence-gathering protocols. The minor, offered by the Criminal Justice and Computer Science Departments, requires six courses and does not require any programming background. Students will learn to use computers to solve criminal or civil cases where the evidence is traceable via a computer network or storage. The minor complements majors in computer science, criminal justice, and forensic sciences, but it is open to all Loyola students.

The computer crime and forensics minor most commonly prepares students for jobs as computer forensic examiners or electronic discovery specialists. Additional job titles include technology litigation support specialist, incident management engineer, computer forensics manager, law enforcement officer, and information security specialist. Students may also choose to pursue legal careers specializing in criminal and civil law related to computers (Internet protocol, internal fraud, misappropriation of trade secrets, etc.). Other career options include computer forensic specialist jobs in pharmaceuticals, accounting, financial services, and law.

Student Activities

Loyola students develop leadership, administrative, and networking skills beyond the classroom through participation in any of Loyola’s more than 175 student organizations.

Forensic science majors are encouraged to join the Forensic Science Student Organization (FSSO), a group that organizes tours and forensic science field trips, hosts guest speakers, and works with the faculty of the Forensic Science Program and the Forensic Science Program Advisory Committee to meet the needs and interests of forensic science majors. In addition, forensic science majors may also participate in the Criminal Justice Organization, which sponsors activities, lectures, and social events of interest to students planning careers related to the field. The Criminal Justice Department and its Center for the Advancement of Research, Training, and Education (CARTE) also offer symposia that attract criminal justice professionals, and students are encouraged to attend. Examples of symposia topics
include reducing the demand for drugs, the privatization of public police, domestic violence, sex offenders, organized crime, and violence in prisons. Research opportunities and internships for undergraduate students are also available.

Forensic science majors may also join Beta Beta Beta (Tri-Beta), an honor and professional biological society, open to undergraduate students who have completed at least four courses in biological science and have a GPA of 3.0.

Facilities

Forensic science majors complete selected science courses at the Quinlan Life Sciences Education and Research Center, which features modern teaching and research labs. Here, students operate the most modern equipment used in scientific experiments and engage in faculty-guided research.

Forensic science majors may also have opportunities to learn more about the field in the city of Chicago’s large, complex Cook County criminal justice system.

The Faculty

Loyola’s faculty members are dedicated to quality undergraduate teaching and a student-centered approach to education. By being engaged in an active research program and service projects, faculty members contribute to the advancement of the field and bring their insights back into the classroom. Students are assigned to a faculty advisor, who helps them plan their curriculum, and offers them valuable assistance in finding a job or gaining admission to graduate school.

Program Director: Garry J. Bombard, PhD, University of Illinois, Chicago

ANTHROPOLOGY
Anne Grauer, PhD, University of Massachusetts
Maria O. Smith, PhD, University of Tennessee

BIOLOGY
Martin B. Berg, PhD, University of Notre Dame
Ian Boussy, PhD, University of California, Davis
Jeffrey L. Doering, PhD, University of Chicago
Terry Grande, PhD, University of Illinois, Chicago
Robert W. Hamilton, PhD, Ohio State University
Warren Jones, PhD, Indiana University
Howard M. Laten, PhD, University of Wisconsin
F. Bryan Pickett, PhD, Indiana University

CHEMISTRY
Miguel Ballicora, PhD, University of Buenos Aires
M. Paul Chiarelli, PhD, University of Nebraska
Alanah Fitch, PhD, University of Illinois
Kenneth W. Olsen, PhD, Duke University
Duarte Mota De Freitas, PhD, University of California, Los Angeles
Martina Schmeling, PhD, University of Dortmund

CRIMINAL JUSTICE AND CRIMINOLOGY
Deborah R. Baskin, PhD, University of Pennsylvania
Jona Goldschmidt, JD, PhD, Arizona State University
Gipsy Escobar, ADB, City University of New York
Robert M. Lombardo, PhD, University of Illinois, Chicago
Arthur J. Lurigio, PhD, Loyola University Chicago
David E. Olson, PhD, University of Illinois, Chicago
Loretta J. Stalans, PhD, University of Illinois, Chicago
Don Stemen, PhD, New York University

Major Requirements

The forensic science major requires 86 credit hours of coursework.

LABORATORY SCIENCE COURSES (Minimum of 64 credit hours)

Anthropology (ANTH) 326
Human Osteology (four credit hours)

Biology (Biol) 101, 102, 111, 112
General Biology I and II with labs (eight credit hours)

Biol 282, 283
Genetics (four credit hours)

Biol 335
Biostatistics (four credit hours)

Biol 366 or Chemistry (CHEM) 361
Biochemistry (three credit hours)

Biol 366L or Chem 362
Biochemistry Lab (one credit hour)

Biol 391
Forensic Molecular Biology with Lab (five credit hours)

Chem 101, 111, 102, 112
General Chemistry I and II with Labs (eight credit hours)

Chem 212/214
Quantitative Analysis (four credit hours)

Chem 223, 225, 224, 226
Organic Chemistry (eight credit hours)

Chem 305
Physical Biochemistry for the Biological Sciences (three credit hours)

Chem 310, 311
Instrumental Analysis (four credit hours)

Physics (Phys) 111, 131, 112, 132
College Physics I and II with Labs (eight credit hours)

CRIMINAL JUSTICE (CRMJ) COURSES (Three credit hours)

CRMJ 101
The Criminal Justice System (three credit hours)
(fulfills Core requirement)
Major Requirements [continued]

FORENSIC SCIENCE (FRSC) COURSES (10 credit hours)
FRSC 380 Introduction to Forensic Science (three credit hours)
FRSC 381/CRMJ 381 Ethics and Professional Practice (three credit hours)
FRSC 382/FRSC 382L Introduction to Pattern Evidence and Laboratory (four credit hours)

ANCILLARY COURSES (9 credit hours)
Students in this program are required to include the following classes in their curriculum:
Communication (CMUN) 101 Public Speaking (three credit hours)
Mathematics (MATH) 131, 132 Calculus (six credit hours)

ELECTIVES (10 credit hours)
Students in this program are encouraged to select elective courses from the following list:
ANTH 324 Human Evolution (three credit hours)
ANTH/BIOL 359 Paleopathology (three credit hours)
BIOL 342 Introduction to Human Anatomy (four credit hours)
BIOL 364 Medical and Veterinary Entomology (four credit hours)
CHEM 395 Introduction to Forensic Toxicology (three credit hours)
CHEM 395 Introduction to Forensic Drug Chemistry and Laboratory (four credit hours)
CRMJ 390 Field Practicum (four credit hours) and is an approved Engaged Learning Course

In addition to fulfilling major requirements to earn an undergraduate degree, students are required to complete Loyola’s Core Curriculum, which teaches them important skills and values. Students also develop their own interests by taking general electives.

Core Curriculum

Loyola’s Core Curriculum consists of 16 courses (48 credit hours) across ten Knowledge Areas, which include college writing seminar, artistic knowledge and experience, historical knowledge, literary knowledge, quantitative analysis, scientific literacy, societal and cultural knowledge, philosophical knowledge, theological and religious studies, and ethics. The dynamic curriculum emphasizes crucial skills and prepares students for success after college. These skills include communications, critical thinking, ethical awareness, information literacy, quantitative and qualitative analysis, research methods, and technological literacy. Forensic Science majors are granted credit for the Scientific Literacy and Quantitative Analysis Knowledge Areas. In six of the Knowledge Areas, students take two foundational, or Tier I, courses, that provide an introduction to the main concepts and modes of thought common to that Knowledge Area. Students then choose from a wider array of Tier II courses that allow students to pursue their academic interests and deepen their understanding in each area. In addition to courses in the content areas, students will also take one course that satisfies Loyola’s commitment to Engaged Learning. In total, the Core curriculum makes up roughly one-third of a student’s coursework, is complemented by a major and electives, and may be completed at any time during the Loyola academic experience.

For more information, please visit LUC.edu/core.

CONTACT US

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P 800.262.2373 E admission@luc.edu W LUC.edu/undergrad

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Information in this brochure is correct as of July 2012.
For the most up-to-date information, visit LUC.edu/undergrad/academics
Loyola is an equal opportunity educator/employer.

Preparing people to lead extraordinary lives