

# Undergraduate Bulletin

## Forensic Science

### 2013-2014

## Forensic Science

### Bachelor of Science

The major in Forensic Science is designed to provide academic and professional training for students seeking to work in forensic science laboratories, or who are planning to pursue careers as research scientists, teachers or medical professionals. The major draws primarily from chemistry (organic, analytical and physical) with courses in biology, physics and law. Students may specialize in one of three tracks: Criminalistics, Molecular Biology, or Toxicology.

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**Credits required.** 73 or more, depending upon the completion of prerequisites (if needed).

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**Science Internship Directors.** Peter Diaczuk for forensic science laboratory internships (212.484.1176, pdiaczuk@jjay.cuny.edu), Professor Ronald Pilette for research internships (212.237.8989, rpilette@jjay.cuny.edu).

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**Mathematics requirement.** Two semesters of calculus (MAT 241 and MAT 242) are required as well as one semester of probability and statistics (MAT 301). It is recommended that the MAT 241-242 sequence is completed as soon as possible since MAT 241 is a prerequisite for PHY 203 and MAT 242 is a prerequisite for PHY 204. Physics is placed in the sophomore year of the three-year common core for all Forensic Science majors. MAT 241 and MAT 242 fulfill the Required Core: Mathematics and Quantitative Reasoning area of the College's general education requirements.

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**Coordinator.** Professor Larry Kobilinsky, Department of Sciences (212.237.8884, lkobilinsky@jjay.cuny.edu). Referrals will be made to faculty in each of the tracks within the major.

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**Additional information.** An internship is required for the forensic science degree. This can be fulfilled by either FOS 401 or FOS 402 (see course descriptions in Chapter 2 of this bulletin). The internship requirement is to be completed after the junior year in the Forensic Science major progression. Certain courses are offered only in the fall semesters while others are offered only in the spring semesters. Consult the course descriptions in this bulletin or the designated coordinator for proper program planning. Please note that certain courses have specific prerequisites that must be taken for timely progression through the major. The chemistry or biology taken in the freshman year of the Forensic Science major fulfills the science component of the general education requirements.

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Students who enrolled for the first time at the College or changed to this major in September 2009 or thereafter must complete the major in the form presented here. Students who enrolled prior to that date may choose either the form shown here or the earlier version of the major. A copy of the earlier version may be obtained at the Office of Undergraduate Studies or at the Lloyd George Sealy Library.

**Prerequisite information.** To be placed into BIO 103, students must have an SAT Verbal score of 520 or higher; or completion of the New York State Biology Regents with a score of at least 80%. Students who have not taken the New York State Biology Regents will need departmental permission. Students not meeting these criteria must complete the BIO 101–102 sequence (or equivalent) in lieu of BIO 103.

To be placed into CHE 103, students must be eligible to take MAT 141 or higher; or be taking MAT 104 or MAT 105 and have earned a score of 80% or higher on the New York State Chemistry Regents. Placement will be determined by the CUNY Assessment Test in Mathematics. Students who did not take the New York State Chemistry Regents will need departmental permission. Students not meeting these criteria must complete the CHE 101-102 sequence (or equivalent) instead of CHE 103. For physics prerequisites, see mathematics requirement noted above.

**Academic Standards/GPA Requirement.** Students must maintain a GPA of 2.0 or better in the science and mathematics courses of the major to qualify for progression to the sophomore- and junior-level courses in the major. Students not maintaining the necessary GPA will be dropped from the major. Students may request a waiver of this requirement by appealing to the department chairperson.

**Please note:** The majority of courses required for the degree in Forensic Science are not available in the evening.

## COURSES

### Science Requirements: First Three Years

#### FRESHMAN YEAR

CREDITS: 18

##### Required

BIO 103–104 Modern Biology I and II, **or** BIO 101–102 Paced Modern Biology I–A and I–B

BIO 104 Modern Biology II

CHE 103–104 General Chemistry I and II, **or** CHE 101–102 General Chemistry I–A and I–B

CHE 104 General Chemistry II

#### SOPHOMORE YEAR

CREDITS: 23

##### Required

CHE 201–202 Organic Chemistry I and II

CHE 220 Quantitative Analysis

LAW 202 Law and Evidence

PHY 203–204 General Physics I and II

#### JUNIOR YEAR

CREDITS: 18

CHE 302 Physical Chemistry II

CHE 315 Biochemistry

CHE 320–321 Instrumental Analysis I and II

MAT 301 Probability and Mathematical Statistics I

#### CRIMINALISTICS TRACK

CREDITS: 14

##### Junior year

FOS 313 An Introduction to Criminalistics for Forensic Science Majors

##### Senior year

FOS 401 Forensic Science Laboratory Internship **or** FOS 402 Undergraduate Research Internship

FOS 415–416 Forensic Science Laboratory I and II

#### TOXICOLOGY TRACK

CREDITS: 14

##### Junior year

TOX 313 Toxicology of Environmental and Industrial Agents

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**Senior year**

FOS 401 Forensic Science Laboratory Internship **or** FOS 402 Undergraduate Research Internship

TOX 415 Forensic Pharmacology

TOX 416 Analytical Toxicology

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**MOLECULAR BIOLOGY TRACK**

**CREDITS: 14**

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**Junior year**

BIO 315 Genetics

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**Senior year**

BIO 412-413 Molecular Biology I and II

FOS 401 Forensic Science Laboratory Internship **or** FOS 402 Undergraduate Research Internship

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**CREDITS REQUIRED FOR THE MAJOR: 73**