FORENSIC SCIENCE (FRSC)

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FRSC 340  Introduction to Forensic Science  (3 Credit Hours)
**Pre-requisites:** CJC 101; Forensic Science Majors Only
This course provides an overview of the basic principles and uses of forensic science within the field of criminal justice. The course is designed for forensic science majors emphasizing the scientific aspects in the forensic sciences. Outcome: Students will be able to identify the uses and limitations of the existing forensic science techniques used within the field of criminal justice.

**Interdisciplinary Option:** Forensic Science

FRSC 341  Forensic Ethics and Professional Practice  (3 Credit Hours)
**Pre-requisites:** FRSC 340; Forensic Science Majors only
This course develops a basic scientific literacy, understanding of the scientific method of inquiry, understanding ethical thought and application of ethics to the field and professional practice of forensic science.

Outcome: Students will demonstrate an understanding and application of ethics in the forensic sciences. Students will be able to articulate the role and challenges of ethical issues facing forensic science today, the applicability of ethics in the profession and their individual careers.

**Interdisciplinary Option:** Forensic Science

FRSC 342  Expert Witness Testimony and Court Room Demeanor (3 Credit Hours)
**Pre-requisites:** FRSC 341 Forensic Science Majors Only
Outcomes:
Students should develop courtroom and expert witness testimony literacy, understanding of the dynamics during court and appreciate the impact to the judicial system.
The goal for this course is to give you the information necessary to be an effective and ethical witness. This should help throughout your career and help make testimony not so much something to be feared as something which represents the culmination of your work in a case.

**Interdisciplinary Option:** Forensic Science

FRSC 343  Physical Organic Chemistry for Forensic Science  (3 Credit Hours)
An introduction to the foundational principles of physical and physical organic chemistry. The course focuses on the application of these principles to solving problems in forensic science. The numerous aspects of forensic science require a working knowledge of physical chemistry, the foundational principles, and the interrelation of cause and effect.

Pre-requisite: PHYS 112; MATH 132; CHEM 222 or (CHEM 224 and CHEM 226) or (CHEM 240, CHEM 241, CHEM 260, and CHEM 272); and Forensic Science majors.

**Outcomes:**
Understand the basic concepts of physical and physical organic chemistry; Acquire and interpret data and form conclusions; and Use critical thinking skills in problem solving

FRSC 350  Pattern Evidence I  (3 Credit Hours)
Prequisites - FRSC 341; Forensic Science Majors only
This course introduces the basic principles and methods of forensic pattern evidence: latent fingerprints, firearms and tool marks, and question documents.

Outcome: Students will demonstrate an understanding of the three (3) forensic pattern evidence areas. Students will develop techniques, work on non-probative cases, and written formal reports of findings.

**Interdisciplinary Option:** Forensic Science

**Course equivalencies:** X-CRMJ382/FRSC382

FRSC 350L  Pattern Evidence Lab I  (1 Credit Hour)
This course introduces the basic laboratory methods of forensic pattern evidence: latent prints, firearms and toolmarks, and questioned documents. Pre/Co-requisites - FRSC 350; Forensic Science Majors only.

Students will demonstrate a basic competency through development of various techniques. Students will work non-probative cases, along with written formal reports of their findings.

**Interdisciplinary Option:** Forensic Science

FRSC 360  Forensic Drug Chemistry I  (3 Credit Hours)
This course provides an introduction to the basic principles of forensic drug analysis. The use of microscopic, chemical, and chromatographic techniques to gather data, interpret results and form conclusions are developed. Recognizing the strengths and weaknesses in the techniques used and the correct interpretation of results is stressed.

Pre-Requisite: (CHEM 212, CHEM 214, CHEM 224, and CHEM 226) or (CHEM 241, CHEM 272, and CHEM 280); FRSC 342 and Forensic Science majors.

The students will be able to summarize basic concepts of forensic drug analysis, testing, and formal reporting.

**Interdisciplinary Option:** Forensic Science

**Course equivalencies:** CHEM 316/FRSC 360

**Outcomes:**
The techniques, skills, advances and limitations of the modern forensic laboratory discussed

FRSC 360L  Forensic Drug Chemistry Laboratory I  (2 Credit Hours)
This course provides both basic and advanced foundations to the principles of forensic drug analysis. The use of basic and advanced analytical techniques to gather data, interpret results and form conclusions are developed. Additionally, national forensic laboratory operational standards and requirements are incorporated.

Pre-Requisite: (CHEM 212, CHEM 214, CHEM 224, and CHEM 226) or (CHEM 241, CHEM 272, and CHEM 280); FRSC 342 and Forensic Science majors.

Co-Requisite: FRSC 360 The students will be able to demonstrate basic/advanced concepts of forensic drug analysis, testing, and formal reporting.

**Interdisciplinary Option:** Forensic Science

**Course equivalencies:** CHEM 316L/FRSC 360L

**Outcomes:**
The techniques, skills, advances and limitations of the modern forensic laboratory will be discussed

FRSC 361  Forensic Toxicology I  (3 Credit Hours)
**Pre-requisites:** FRSC 360/360L; Co-requisite FRSC 361L Forensic Science Majors Only

Outcomes:
Students should develop basic scientific literacy, understanding of the scientific method of inquiry, understanding ethical thought and application of ethics to the field of forensic toxicology.

This course stresses the practical and theoretical aspects to forensic toxicology, the study of drugs and their implications in a forensic setting when toxicity sets in. The analysis and description of drugs are introduced. Case studies are reviewed where drug use may become a forensic matter.

**Interdisciplinary Option:** Forensic Science

**Course equivalencies:** CHEM 315/FRSC 361
FRSC 361L Forensic Toxicology Laboratory I (1 Credit Hour)
This course stresses the practical and theoretical aspects to forensic toxicology, the study of drugs and their implications in a forensic setting when toxicity sets in. The analysis and description of drugs are introduced. Case studies are reviewed where drug use may become a forensic matter. Pre-requisites: FRSC 360/360L; Co-requisite FRSC 361 Forensic Science Majors Only The students will be able to summarize basic concepts of forensic drug analysis, testing, and formal reporting.

Interdisciplinary Option: Forensic Science

Outcomes:
The techniques, skills, advances and limitations of the modern forensic laboratory discussed

FRSC 370 Forensic Biology (3 Credit Hours)
Pre-requisites: FRSC 341, Biology 102 and 112; Co-requisite FRSC 370L Forensic Science Majors Only Outcomes: Students should develop basic scientific literacy, understanding of the scientific method of inquiry, understanding ethical thought and application of ethics to the field of forensic biology
This course stresses the practical and theoretical aspects to forensic biology. Forensic biology includes the examination, identification, and characterization of biological materials found on various types of evidence.

Interdisciplinary Option: Forensic Science

FRSC 370L Forensic Biology Laboratory (1 Credit Hour)
Pre-requisites: FRSC 341, Biology 102 and 112; Co-requisite FRSC 370L Forensic Science Majors Only Outcomes: Students should develop basic scientific literacy, understanding of the scientific method of inquiry, understanding ethical thought and application of ethics to the field of forensic biology
This course stresses the practical and theoretical aspects to forensic biology. Forensic biology includes the examination, identification, and characterization of biological materials found on various types of evidence.

Interdisciplinary Option: Forensic Science

FRSC 371 Forensic Molecular Biology Lecture and Laboratory (5 Credit Hours)
Pre-requisites: BIOL 282, BIOL 283, FRSC 342, FRSC 370, FRSC 370L; Forensic Science Majors only - Biology/DNA Option Outcomes: Students will have a strong theoretical understanding of STR marker origin, population biology, and legal uses, and will be able to isolate and process DNA for STR scoring
This course prepares students to work in forensic DNA analysis. The lectures cover the basic aspects of DNA structure and function while the laboratory gives students experience with the techniques and instruments used in forensic DNA analysis.

Interdisciplinary Option: Forensic Science

Course equivalencies: BIOL 391/FRSC 371

FRSC 390 Forensic Science Internship (3-4 Credit Hours)
The purpose of this course is to enhance the student’s development and learning through observational and participatory experience in forensic focused criminal justice agencies. FRSC 342 Forensic Science Majors Only

Interdisciplinary Option: Forensic Science
This course satisfies the Engaged Learning requirement.

Course equivalencies: X-FRSC 390/ANTH 396A

Outcomes:
Students will be able to contribute in a meaningful way to the operation of a specific forensic focused criminal justice agency and be able to identify and describe the link between their field experience and prior courses