

Forensic Sciences (FRSC)

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Forensic Sciences encompasses the methodology and interpretation of data collected in the investigation of deaths, or other events, which could be criminal in nature. In Canada, police forces are regularly involved in forensic investigations, but there are others, (e.g., medical personnel, dentists, biologists, criminologists and anthropologists), who are interested in, or can benefit from, training in forensic sciences.

This program is designed to give the student a strong grounding in the different science disciplines (e.g., biology, chemistry, physics) that form the basis of the techniques used in forensic investigations. This science basis is provided through introductory and specialty courses offered from Departments in the Science Faculty. Students may broaden their knowledge by choosing from a list of complementary courses offered by Departments in the other Faculties (e.g., anthropology, sociology). Experts in forensic techniques will expose students to the application of this knowledge, primarily through the Application of Forensic Techniques course [FRSC 3300].

Admission to the Diploma in Forensic Sciences

Admission to the Diploma in Forensic Sciences is by permission of the Program Coordinator in consultation with members of the Forensic Sciences Executive. There are three streams of students who may apply.

Stream One - Students who are currently pursuing an undergraduate degree at Saint Mary's University or are transferring from a recognized university degree program and intend to pursue the Diploma in Forensic Sciences concurrently with their degree program, have completed thirty (30) credit hours with a minimum GPA of at least 3.0, and have declared a major. Those admitted to this diploma program from this stream are regarded as being in a dual academic program and are required, therefore, to follow the rules and regulations stipulated for this status (Reference Academic Regulation 24).

Stream Two - Students who have completed an undergraduate degree program from a recognized university and intend to pursue only the Diploma in Forensic Sciences may be eligible for admission to the diploma program alone provided they have a minimum GPA of at least 3.0. Students may transfer up to half the required credit hours (30) from their previous degree, provided the courses are equivalent to courses applicable to the diploma (Reference Academic Regulation 20).

Stream Three - Students who are members of the RCMP, police officers, or those having work-related experience in forensic science, who intend to pursue only the Diploma in Forensic Sciences do not need to have an undergraduate degree or previous university courses.

In addition to submitting an application, students should ensure that all official college or university transcripts, as

well as a brief statement describing the reasons for choosing the Diploma in Forensic Sciences program, and any work-related experience or goals accompany their application.

Students in Stream 1 who are currently enrolled at Saint Mary's University should apply directly to the Program Coordinator. However, students who wish to transfer to Saint Mary's University need to apply to Admissions at Saint Mary's University.

Students in Streams 2 and 3 should complete the downloadable application "Form C" located at http://www.smu.ca/web_applications/ and apply to Admissions at Saint Mary's University.

All interested people need to apply by **January 15th**.

Graduation

The requirement of a minimum cumulative grade point average of 3.00 applies to all students in this Diploma program.

Requirements for the Diploma in Forensic Sciences [sixty (60) credit hours]

NOTE: STUDENTS MUST SATISFY ALL PREREQUISITES FOR ENTRY INTO THESE COURSES.

1. Required courses [twenty-seven (27)]

FRSC 2200	Basic Sciences for Forensics I
FRSC 2201	Basic Sciences for Forensics II
FRSC 3300	Application of Forensic Techniques
BIOL 1201	Molecular and Cell Biology
BIOL 1202	Organismal and Ecological Biology
BIOL 2307	Genetics
BIOL 4419	Molecular Biology (pre-reqs are BIOL 2307 and CHEM 2344)
CHEM 1210	General Chemistry and
CHEM 1212	Chemistry for Life Sciences

2. Science-intensive courses [twenty-one (21) to twenty-four (24) credit hours]

ANTH 3373	Fieldwork in Archaeology
ANTH 3374	Archaeology Laboratory
ANTH 3471	Forensic Skeletal Identification
ANTH 3472	Forensic Skeletal Analysis
ANTH 4464	Advanced Fieldwork in Archaeology
ANTH 4465	Advanced Archaeology Laboratory
ANTH 4701	Internship in Forensic Anthropology
BIOL 2004	Cell Physiology and Metabolism
BIOL 2005	Human Organ Systems
BIOL 2006	Animal Ecophysiology
BIOL 2308	Biostatistics or PHYS 2350 Psychological Statistics
BIOL 2321	Cell Biology I
BIOL 2398	Microbiology

BIOL 3001	Principles of Pharmacology and Toxicology
BIOL 3302	Entomology
BIOL 3303	Biological Techniques
BIOL 3426	Animal Tissues
BIOL 4411	Medical and Veterinary Parasitology
CHEM 2332	Introductory Analytical Chemistry: Wet Methods
CHEM 2333	Introductory Analytical Chemistry: Instrumental Methods
CHEM 2344	Organic Chemistry I or 2346 Organic Chemistry for Life Sciences
CHEM 2345	Organic Chemistry II
CHEM 3451	Introductory Biochemistry
PHYS 1000	Physics for Life Sciences I
PHYS 1001	Physics for Life Sciences II

**3. Electives [nine (9) - twelve (12) credit hours].
Diploma students may qualify for up to six (6) credit hours based on prior training.**

ANTH 1271	Introduction to Archaeology
ANTH 1280	Introduction to Biological Anthropology
ANTH 2282	Introduction to Forensic Anthropology
CRIM 2303	Crime and Society, entry to this course may be restricted
CRIM 2304	Canadian Criminal Justice System, entry to this course may be restricted
GEOG 2316	Map and Air Photo Interpretation
GEOG 3386	Concepts in Geographical Information Systems (G.I.S.)
PSYC 1250	Social Behaviour
PSYC 1260	Personality: Normal and Abnormal
PSYC 3320	Psychology and Law
PSYC 3338	Introduction to Forensic Psychology
PSYC 3349	Drugs and Behaviour
PSYC 4438	Advanced Forensic Psychology
PSYC 4443	Advanced Psychology and Law

The following courses are reserved exclusively for students officially accepted in the Diploma in Forensic Sciences Program at Saint Mary's University. Courses in Forensic Science cannot be used to satisfy course requirements for the major or honours in Biology.

All the following courses have 3 hour. classes and 3 hour. lab/tutorial per week.

Course Descriptions

FRSC 2200 Basic Sciences for Forensics I

3 credit hours

Prerequisite: acceptance into Diploma in Forensic Sciences Program.

This course will provide students with an introduction to the biology, physics, anthropology, and psychology that forms the basic scientific background applicable to the study of forensic science.

Note: Please note that this course may not be used by B. Sc. Students to satisfy the requirement of a science elective under regulations 3.e., 6.e., 10.c., and 12.b. for B.Sc. degrees.

FRSC 2201 Basic Sciences for Forensics II

3 credit hours

Prerequisite: acceptance into Diploma in Forensic Sciences Program.

This course is a continuation of Basic Sciences for Forensics I and will cover such topics as principles of biology, chemistry, genetics, psychology, and fire sciences relevant to forensics.

Note: Please note that this course may not be used by B. Sc. Students to satisfy the requirement of a science elective under regulations 3.e., 6.e., 10.c., and 12.b. for B.Sc. degrees.

FRSC 3300 Application of Forensic Techniques

3 credit hours

Prerequisite: FRSC 2200 and 2201.

This course will provide students with an introduction to the procedures for conducting a forensic investigation. Students will learn how to retrieve and document potential evidence and identify victims and suspects. Topics such as fingerprinting, forensic odontology and entomology, bloodstain pattern analysis, DNA collection, toxicology, and non-biological trace evidence collection will be included.