



# Preparation for Forensic Sciences

in the Faculty of Science

• published by the Dean's Office, Faculty of Science •

In Canada, there are approximately 300 forensic scientists, technologists, and administrative personnel working in six regional laboratories (Vancouver, Edmonton, Regina, Winnipeg, Ottawa and Halifax).

The University of Manitoba is developing a Bachelor of Science (Honours) in Forensic Science which will provide students with a strong basic science background and specialization in Forensic Chemistry (Trace Analysis), Forensic Toxicology (including Controlled Substances), Forensic Biology (primarily DNA analysis) or Forensic Physical Evidence (e.g. Firearms, Impressions). Although the majority of courses are delivered by the Faculty of Science, courses from the Faculty of Arts, Faculty of Agricultural and Food Sciences, and the Clayton H. Riddell Faculty of the Environment, Earth and Resources are also part of the program. The proposed admission requirements for entry into the program are a minimum Degree Grade Point Average of 2.5 and the following list of courses. (The list includes the minimum grade permitted in each course.)

| Course | Number       | Title  | Minimum Grade |
|--------|--------------|--|---------------|
| BIOL   | 1020         | Biology 1: Principles and Themes                           | C+            |
| BIOL   | 1030         | Biology 2: Biological Diversity, Function & Interaction    | B             |
| CHEM   | 1300         | University 1 Chemistry: Structure and Modeling             | C+            |
| CHEM   | 1310         | University 1 Chemistry: Introduction to Physical Chemistry | B             |
| MATH   | 1500         | Introduction to Calculus                                   | C+            |
| MATH   | 1700         | Calculus 2   | B             |
| PHYS   | 1020 or 1050 | General Physics 1 or Physics 1: Mechanics                  | C+            |
| PHYS   | 1070         | Physics 2: Waves and Modern Physics                        | B             |
| SOC    | 1200         | Introduction to Sociology                                  | C+            |

The course, *Introductory Forensic Science*, developed for the new program, was introduced in September 2008. The course introduces forensic science via a series of guest lectures provided by experts from within the university and from the community (e.g. Winnipeg Police, RCMP, chief Medical Examiner, etc.). Multidisciplinary topics are covered including how a case is studied, use of scientific techniques in investigations, collection of evidence, the role of the expert witness, and presentation of evidence in court

The following information is from the RCMP and is subject to change. The RCMP Division of Forensic Sciences is currently under review.

### Forensic Specialist Academic Requirements:

| Discipline | Minimum university degree required   | Understudy-in-service training required (months <sup>1</sup> ) |
|------------|--|--|
| Alcohol    | Honours degree or applicable four-year degree in biochemistry (or pharmacy). Some courses in pharmacology are desirable.                               | 9-12   |
| Biology    | Honours degree or applicable four-year degree in biology, biochemistry, microbiology or genetics. Several courses in molecular genetics are essential. | 15-18  |

| Discipline                         | Minimum university degree required  | Understudy-in-service training required (months <sup>1</sup> ) |
|------------------------------------|---|--|
| Central Bureau for Counterfeits    | Bachelor degree <sup>2</sup>  | 20-24  |
| Chemistry                          | Honours degree or applicable four-year degree in chemistry.   | 14-20  |
| Document Examination               | Bachelor degree <sup>2</sup>  | 24-30  |
| Firearms and Tool Mark Examination | Bachelor degree <sup>2</sup>  | 24-30  |
| Toxicology                         | Honours degree or applicable four/five-year degree in biochemistry, pharmacy or pharmacology. Some courses in pharmacology are essential. | 10-15  |

#### Forensic Technologist Academic Requirements:

| Discipline                         | Academic qualifications   | Understudy-in-service Training required (months) |
|------------------------------------|---|--|
| Biology                            | Diploma in medical laboratory technology or biochemical technology from a recognized community college. | 4-6  |
| Chemistry                          | Three-year diploma in chemical technology or equivalent.  | 6  |
| Firearms and Tool Mark Examination | Work-related experience.  | 4-6  |
| Toxicology                         | Three-year diploma in biochemical technology or equivalent.   | 4-6  |

<sup>1</sup> Understudy periods may vary depending on previous experience, availability of trainers, facilities, etc.

<sup>2</sup> Under review.

#### For more RCMP information contact:

www.rcmp-grc.gc.ca  
 OIC Staffing and Personnel Branch  
 250 Tremblay Road  
 Ottawa, ON K1A 0R2  
 Phone: (613) 993-8259  
 Fax: (613) 993-2404

#### Information and Applications for RCMP Forensic

Sciences: may be obtained from the Winnipeg Division office at:

621 Academy Road  
 Winnipeg, MB R3N 0E7  
 (204) 983-4267

#### Other Forensic Science career opportunities in Canada:

- Centre for Forensic Science ([www.csfs.ca](http://www.csfs.ca))
- Laboratoire Judiciaire
- Private Labs

#### US Information:

- International Association for Identification [www.theiai.org](http://www.theiai.org)