

Biotechnology Technologist - Forensics



Program Locations:	Peterborough
Program Code:	BTF
Co-ordinator:	Ashvin Mohindra
Credential:	Ontario College Advanced Diploma
Start Dates:	September 04, 2012 - January 07, 2013
Tuition Fees:	\$2,104.84 per semester. Tuition and fees subject to change.

The Biotechnology Technologist Forensics program prepares students to analyze forensic, DNA and other medical applications data in automated lab environments.

Program Highlights

With a career in forensic biotechnology, you have diverse employment opportunities, from working in medical or health-related fields, to tracking down criminals or identifying victims of crime. Laboratory related occupations are among the fastest growing occupations in the economy. With specialization in Forensics/DNA, this program is unique and graduates are in demand in this emerging field. This advanced diploma program would traditionally take six semesters to complete. However, the program has been designed in an accelerated, compressed format, to provide six semesters of course work over five semesters.

In their final, fifth semester, students can complete their full-time internship from April to August - giving graduates the advantage of getting out into the workforce faster. (Should they so choose, students may defer the summer internship until the fall.) Courses in the program integrate theory and practice opportunities in labs and practice settings. Graduates will be critical thinkers with problem-solving abilities, strong interpersonal, teamwork and communication skills and a solid foundation in forensic/DNA/medical applications.

Why Choose Fleming

This cross-disciplinary program combines elements from the life sciences, applied computing, forensic science, automation, policing and lab methods, and business skills. This gives graduates the benefit of having the multiple, job-ready skills that employers are seeking. The program has been developed in response to identified industry needs and a skills shortage in this field. Today's lab environment requires technicians with skills in information technology, data management and data analysis. The college has programs, courses and faculty who specialize in these areas, as well as state-of-the-art technology to support the use of applied technology in laboratory environments. The college's School of Law, Justice and Community Services is a partner in the development and delivery of the Trent University Honours Bachelor of Forensic Science degree. Students will benefit from Fleming's growing faculty expertise in this field. As well, Fleming College is a founding partner in the Peterborough DNA Cluster. This strategic alliance between local private and public sector partners was created to advance local research of DNA and forensic science and develop economic growth opportunities, new technology businesses and jobs for the Peterborough region.

Work Experience

A 15-week internship will immerse students in the work culture of a lab environment, give them the opportunity to seek experience in an area of specialization, and promote networking and awareness of the industry and job potential.

Is this You?

To succeed in this occupation, you need the following characteristics:

- curiosity and imagination
- persistence and willingness to work long hours
- willingness to do the reading required to keep up to date with new developments and discoveries.

In addition, you should enjoy synthesizing information, finding innovative solutions to problems and working with equipment and instruments at tasks which require precision. You'll likely work in a team environment, so good interpersonal and communications skills are an asset.

Career Opportunities

Program graduates will be qualified to work in a variety of roles, such as DNA analyst, DNA technician/technologist, evidence technician, laboratory technologist, forensic technologist, serologist, and biotechnician/technologist. Employment settings include:

- private sector laboratories
- law enforcement forensic labs
- hospitals and clinical settings
- pharmaceutical, bio-pharmaceutical and biotechnology research and development companies
- government agencies such as the Canadian Centre for Forensic Science, the RCMP and OPP forensic labs
- university laboratories
- municipal waste water and drinking water treatment facilities
- application of pollution prevention, waste minimization, and water recycling
- microbiological testing facilities
- laboratory analysis to test food products
- plant and animal pathogen analysis
- animal science, aquaculture, wildlife management and restoration
- agricultural biotechnology research, breeding and selection
- laboratory services following ISO 17025 standards.

Emerging career fields include microbial forensics and its applications to bio-terrorism and microbial disease.

Program graduates can pursue further specialization and seek accreditation with regulating bodies such as the Ontario Association of Certified Engineering Technicians and Technologists (OACETT).

Minimum Admission Requirements

OSSD with the majority of credits at the College (C) and Open (O) level, including:

- 2 College (C) English courses (Grade 11 or Grade 12)
- 2 College (C) Math courses (Grade 11 or Grade 12)
- 2 College (C) Science courses (Grade 11 or Grade 12)

When (C) is the minimum course level for admission, (U) or (U/C) courses are also accepted.

Mature Students

If you are 19 years of age or older before classes start, and you do not possess an OSSD, you can write the Canadian Adult Achievement Test to assess your eligibility for admission. Additional testing or academic upgrading may be necessary to meet specific course requirements for this program. All applicants will be required to achieve course credit in the mandatory sciences, through Secondary School, Academic Upgrading or College preparatory programs.

Related Programs

If you don't possess the required science courses for admission to this program, or if you want to enhance your likelihood for entry, consider the one-year General Arts and Science- College Health Science Option . Fleming College has reserved space in the Biotechnology Technologist - Forensics program for students who successfully complete one year of study in this program.

Transfer Agreements

We are committed to providing students and graduates with flexible options to get maximum recognition of their college studies. Through joint programs and transfer agreements with the following universities, you can apply the learning you acquire at Fleming College to earn a related degree in less time, and at less cost.

- Laurentian University
- Trent University
- University of Ontario Institute of Technology
- University of Western Sydney

Curriculum for Biotechnology Technologist - Forensics

Semester 1

Code	Course Name	Hours
SCIE 9	Biology I	45
SCIE 131	Chemistry I	45
SCIE 89	Forensic DNA Applications I	60
LAWS 44	Introduction to Canadian Justice System	45
COMP 345	Introductory Computing	45
MATH 114	Laboratory Math	45
COMM 32	Technical Communications	37

Semester 2

Code	Course Name	Hours
SCIE 10	Biology II	45
SCIE 132	Chemistry II	45
COMP 222	Data Management and Analysis	45
SCIE 90	Forensic DNA Applications II (Integration)	60
LAWS 246	Forensic Techniques	45
SCIE 93	Laboratory Physics	45
GENED	General Education Elective	

Semester 3

Code	Course Name	Hours
BUSN 56	Business for Biotechnology	60
SCIE 91	Forensic DNA Applications III (Integration)	60
AUTM 68	Laboratory Automation I	45
SCIE 100	Laboratory Operating Standards and Quality Assurance I	45
SCIE 94	Microbiology	60
SCIE 95	Molecular Biology	60
GENED	General Education Elective	

Semester 4

Code	Course Name	Hours
SCIE 96	Biochemistry	45
SCIE 146	Forensic Chemistry	45
SCIE 92	Forensic DNA Applications IV (Integration)	90
AUTM 69	Laboratory Automation II	45
SOCI 153	Laboratory Ethics	45
SCIE 101	Laboratory Operating Standards and Quality Assurance II	45
SCIE 102	Pharmacology and Toxicology	45

Semester 5

Code	Course Name	Hours
FLPL 97	Internship (BTF)	600

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