

ENVR617 - Environmental Management and Abatement

Designed to give the student an understanding of the roles of the environmental abatement officer and the environmental manager. Roles, responsibilities and methods of conducting an environmental inspection/investigation will be analysed. In addition, the roles and responsibilities of industry in developing environmental compliance programs will be explored. ISO14000, pollution prevention, environmental management systems strategies will be covered.

ENVR618 - Environmental Ethics

Environmental practices require moral obligations for the protection of the biosphere. This course explores the spiritual, moral and ethical responsibilities of individual citizens, governments and the business community roles in protecting and sustaining the earth community.

ENVR619 - Landfill Design

The course examines the components of landfill design, including leachate and gas collection systems, liners, landfill covers and future use of the site. Included will be the study of legislation, regulations, and guidelines that affect landfills. The study of the impact of 3Rs separation programs on landfill design and energy recovery from the landfill is an integral part of this course.

ENVR620 - Industrial Waste Management

This course examines various industrial processes in order to identify the types of wastes generated, waste composition, and the appropriate waste treatment methodologies. Impacts on municipal infrastructure and the environment will be discussed.

ENVR621 - Water Treatment

Provides the student with the basic design concepts and safe operational techniques of industrial and municipal water treatment systems. Several treatment processes for ground and surface supplies will be discussed including optimization and testing methodologies as well as the legal requirements of water taking in Ontario. Analytical calculations pertaining to water treatment will be examined.

LAWS176 - Environmental Law

The course is designed to develop an understanding of environmental legislation. International, Federal, Provincial and Municipal legislation is explored within the framework of environmental protection. Special emphasis is given to waste management issues. Topics to be discussed include; the movement and control of hazardous and non hazardous wastes, spills, due diligence, and the 3R's Regulations.

MANG202 - Contingency Management

This course provides the student with a conceptual framework for designing and developing contingency management plans. Spills or mishaps that could result in health related hazards or environmental pollution incidents are explored. The following is covered; equipment requirements, communications strategies, field command posts, clean-up options, evacuation plans and procedures and post incident reporting strategies.

MTHM600 - Applied Math

This is a preparatory course to review mathematical concepts and skills which are utilized in subsequent Waste Management Program semesters.

SFTY202 - Health and Safety

Topics in this course include; Occupational Health and Safety Act, ergonomics, WHMIS, risk management, personal protective equipment, confined space entry, principles of fire safety, and dangers presented by various types of waste.

SKLS330 - Management Skills

This course introduces students to issues of critical thinking, time management, decision-making, problem-solving, conflict resolution, and customer satisfaction which are necessary to successfully complete college programs and succeed in the workplace. The course covers task management, team building, personality styles, stress management, and customer service.

TRAN201 - Municipal Collection

This course introduces students to pre-collection, collection and transportation strategies employed by municipalities and the industrial, commercial and institutional (IC&I) sectors. Topics include collection system equipment, and costing.

Application Procedure

In order to apply for admission to this program an applicant must complete an "Application for Admission to Ontario Colleges of Applied Arts and Technology" form and submit this form to the:

Ontario College Application Service
P.O. Box 810, Guelph, Ontario, N1H 6M4
1-888-892-2228

Application Forms and Applicant Guidebooks are available at Ontario Secondary Schools, at Ontario Colleges of Applied Arts and Technology and at the Ontario College Application Service office.

Admission to the College

Complete information concerning admission to programs at Fanshawe College may be found in the Central Admission Publication located in Registrar and Student Awards Services, Fanshawe College.

The College reserves the right to make changes in the information in this brochure without prior notice.

The College reserves the right to cancel a program, a program major or option, or a course, and to change the location and term in which programs/courses are offered because of insufficient registrations or for other budgetary reasons.

Fanshawe College

Fanshawe College is one of the largest colleges in Ontario with campuses in London, St. Thomas, Simcoe and Woodstock. Fanshawe prides itself on its modern methods and up-to-date technology that provide students with a solid education.

With over one-third of its full-time post-secondary programs combining on-the-job training with in-college study, Fanshawe is recognized as a leader in the field of co-operative education.

In addition to offering post-secondary programs in Applied Arts and Business, Health Sciences and Human Services and Technology, Fanshawe provides other educational programs such as Adult Training, Apprenticeship, and Continuing Education.

This brochure is available in alternative formats, upon request, for persons with disabilities.

For further information on admission and registration, contact:
Registrar and Student Awards Services, (519) 452-4277

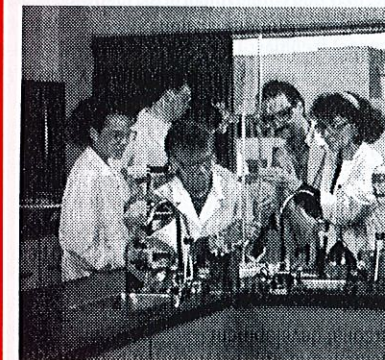
For further specific program information, contact:
Oxford County Campus Division, (519) 452-0144

Fanshawe College
1460 Oxford St. E.
P.O. Box 7005
London, ON, N5Y 5R6 www.fanshawec.on.ca

Fanshawe

COLLEGE

Environmental Technician - Waste Management




**FANSHAWE
COLLEGE**

*Community Driven . . .
Student Focused*

Environmental Technician - Waste Management

A Co-Operative Education Program
 A Two Year Diploma Program
 Program Code: ETW2 Campus Code: WC
 September Admission

The Environmental Technician - Waste Management program is offered in Oxford County at the Woodstock Campus. For further information contact:
 Fanshawe College Woodstock Campus
 369 Finkle Street Woodstock, Ontario N4V 1A3
 Telephone: (519) 421-0144

This two year diploma program will provide persons with the opportunity to further their knowledge and skills in the field of waste management and improve their job performance, career potential and personal development.

Career Opportunities

Students may find employment in the following fields: environmental inspectors; by-law enforcement officers; operators of waste collection and disposal facilities; industrial, commercial and institutional in-house environmental co-ordinators; consulting firms.

ETW21	Level 1	Hrs/Wk
BIOL231	Environmental Biology	4.0
CHEM251	Environmental Chemistry	4.0
CMTR190	Computers	3.0
COMM009	Communications	3.0
ENVR010	Intro to Environmental Concerns	3.0
LAWS176	Environmental Law	4.0
MTHM600	Applied Math	2.0
TRAN201	Municipal Collection	2.0

ETW22	Level 2	Hrs/Wk
CMTR290	Computers	3.0
COMM018	Communications	3.0
ENVR001	Recycling	2.0
ENVR002	Sampling and Monitoring	3.0
ENVR003	Auditing	1.0
ENVR618	Environmental Ethics	2.0
ENVR621	Water Treatment	5.0
SFTY202	Health and Safety	4.0
SKLS330	Management Skills	3.0

ETW23	Level 3	Hrs/Wk
BIOL200	Applied Microbiology	5.0
BUSI301	Small Business Management	3.0
CMTR390	Computers	3.0
COMN390	Communication	2.0
ENVR000	Composting	2.0
ENVR619	Landfill Design	7.0
ENVR620	Industrial Waste Management	5.0

ETW24	Level 4	Hrs/Wk
ENVR004	Waste Management Project	6.0
ENVR615	Landfill Operation	4.0
ENVR616	Municipal Sewage	5.0
ENVR617	Environmental Management and Abatement	4.0
MANG202	Contingency Management	6.0

Program Eligibility Criteria Required Academic Preparation

OSSD with courses at the General Level
 Or
 BTSD-Level 4 Certificate
 Or
 Ontario High School Equivalency Certificate (GED)
 Or
 Mature Applicant with appropriate preparation

Recommended Academic Preparation

- Grade 11 or Grade 12 Chemistry
- Grade 11 or Grade 12 Biology
- Environmental Science

Applicant Selection Criteria

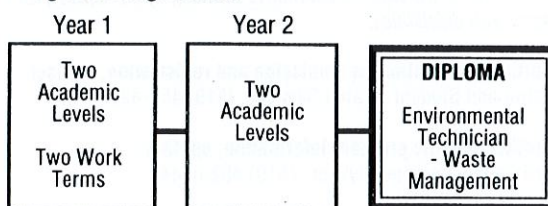
Where the number of eligible applicants exceeds the available spaces in the program, the Applicant Selection Criteria will be:

- Preference for Permanent Residents of Ontario.
- Receipt of Application by February 1st.
- Achievement in the required academic preparation.
- Achievement in the recommended academic preparation.

Approximate Costs (1999/2000)

Fees for:	Levels 1 & 2	Levels 3 & 4
	\$2261.30	\$2261.30
Books and Supplies:	\$1240.00	\$ 705.00

Program Progression



Course Descriptions

BIOL200 - Applied Microbiology

This course provides an introduction to applied microbiology as it is applied to the treatment of airborne, waterborne and soil contaminants. Waste treatment methodologies will be emphasized.

BIOL231 - Environmental Biology

This course reviews the classification of organisms including viruses, bacteria, fungi, the plant kingdom and the animal kingdom. Different environmental influences upon living organisms and an understanding of evolution, natural selection, mutations, ecosystems and communities will be taught.

BUSI301 - Small Business Management

Introduction to setting up a small business. Students will be taught the key components of a business plan. Topics include steps involved in creating a business plan, market analysis, operating requirements, bookkeeping, financial planning and marketing.

CHEM251 - Environmental Chemistry

Examines the sources, reactions, transport, effects and fate of chemical species in the environment. Integral to this course is the study of the basic chemistry of water, the nature and sources of hazardous wastes, and understanding of basic environmental chemical analysis.

CMTR190 - Computers

This course is designed to introduce students to basic computer concepts, the Windows environment, some Internet research, and wordprocessing software for the preparation of professional letters, memos, flyers, and reports.

CMTR290 - Computers

This course is designed to develop an understanding of the use of spreadsheet software for business, record keeping, and data management. A section of the course integrates wordprocessing and spreadsheet documents.

CMTR390 - Computers

This course consists of two modules. The first module is an introduction to database management. The second module is an introduction to presentation software used to create impressive, computer-generated reports and presentations. Students will also pursue further Internet research techniques and integration of programs.

COMM009 - Communications

This course provides students with an opportunity to improve their skills in basic sentence structure, listening, reading, notetaking, and oral and written communication. Study skills, summary writing, basic research, planning, writing and editing will be stressed.

COMM018 - Communications

This course provides students with an opportunity to improve their skills in planning, writing, editing, and speaking; to improve their job search skills; to apply grammar and reading skills; and to host a guest speaker. The course also investigates more extensive research techniques and emphasizes customer service, dealing with the public, and general business etiquette.

COMN390 - Communication

COMN390 provides students with the opportunity to perform primary and secondary research; to create workplace documents (like memos, letters, proposals); to write summaries and abstracts; and to shape, organize, and document a formal report on a program-related topic; to present a persuasive/informative presentation on that report; to describe strategies used in conflict situations when dealing with the media and the public; and to more effectively organize and participate in business meeting.

ENVR000 - Composting

This course will review composting in a cradle to grave approach.

Topics include: Compost sources, composting systems (including wind-row and in-vessel), commercial composting, odor control, regulatory concerns, grades of compost and available markets.

ENVR001 - Recycling

This course is designed to give the student an understanding of fundamental key issues in material recycling. This includes the identification of the materials that are to be diverted from the waste stream, recovery methods, reuse and recycling opportunities and specifications of buyers of recovered materials.

ENVR002 - Sampling and Monitoring

This course exposes the student to the various components and strategies of monitoring programs for air, soil and water including equipment utilized. The different sampling methodologies examined include, source operational and legal requirements, pollution surveys, bio-remediation sites, biosolids, air emissions and others. The practical side of result interpretation will also be explored.

ENVR003 - Auditing

The course provides a general overview of waste auditing methodologies. Emphasis will be given to the waste management sector. The theory and practice of conducting waste audits and developing waste reduction plans for regulated waste management facilities are examined.

ENVR004 - Waste Management Project

As part of the course requirement, students will complete a comprehensive project which will incorporate all of the major aspects of the program.

ENVR010 - Intro to Environmental Concerns

The course introduces the student to the nature and scope of human and natural environmental problems associated with population and economic growth, persistent toxic wastes, climate change, food production. The course examines the needs for controls for water and air pollution and waste management, explains advantages and disadvantages of implementing the 3Rs and defines the impact of human behavior on the environment.

ENVR615 - Landfill Operation

The course provides insight into current environmental legislation, regulations and government policies pertaining to landfilling. It describes the regulatory requirements, policies and procedures for the design, development, operation and management of landfill sites. This course includes discussions of site preparation, waste disposal methods, recommended operational procedures, and the activities that can take place within landfill sites. Requirements and procedures for closure of landfill sites will be discussed.

ENVR616 - Municipal Sewage

This course covers the introductory concepts of sewage and industrial waste treatment. Topics covered encompass the various unit treatment mechanisms currently utilized, such as the biological chemical and physical processes, legislation, different plant configurations, solids handling, and disposal and applicable testing methodologies.