

Fleming College

Aquaculture Foundations

Ontario College Certificate (3 semesters)

START IN SEPTEMBER 2023

Classes begin:	September 05, 2023
Offered at:	Frost Campus
Program code:	AQF
Tuition (Domestic):	\$2,345.58 per semester*
Tuition (International):	\$8,358.49 per semester*

* Tuition and fees subject to change.

PROGRAM COORDINATOR

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This foundational program expands on Fleming's established expertise in Aquaculture education and training. Delivered primarily online, the program provides training in fish biology, aquaculture techniques and fish husbandry, and includes a unique focus on Indigenous studies and practices within the industry. You will put theory into practice with hands-on training in our on-campus fish hatchery or a work placement with an industry employer

Program Highlights

Aquaculture Foundations is a college certificate that focuses on:

- » Fish biology – anatomy and function, stress, disease recognition and control
- » Aquaculture techniques – maintenance of infrastructure, water and oxygen monitoring, basic calculations
- » Fish husbandry – feeding and breeding
- » Safety and environmental considerations

The program includes an Introduction to Indigenous Environmental Studies course. As well, Indigenous practices and approaches to Aquaculture are embedded across the curriculum.

Learn from anywhere! Most of the program will be delivered online with a culminating 90-hour work placement component. Your hands-on training will take place in a compressed format in our hatchery or a workplace of your choice.

Why Choose Fleming

Students taking this program will benefit from Fleming's expertise in the field. In addition to our renowned Aquaculture Co-op Graduate Certificate program, we recently launched a Centre for Innovative Aquaculture Production. We have strong industry and employer connections, expert faculty, and best-in-class on-campus facilities including our hatchery. The accessible delivery format, work placement, and the inclusion of Indigenous practices makes it unique in Ontario.

Experiential Learning

This program provides you with applied learning opportunities to ensure you have the skills to succeed in your

career. You will get hands-on training through a culminating work placement – either in our fish hatchery or a workplace of your choice – which immerses you in a real-world environment.

INDIGENOUS PERSPECTIVES DESIGNATION

The Indigenous Perspectives Designation (IPD) is available to students in the Aquaculture Foundations program. Upon meeting all requirements of the IPD, the student's transcript will indicate the designation. Upon graduation, students with an IPD will have a strong foundational basis in Indigenous Studies, and a designation that is in-demand in the employment sector.

Career Opportunities

Aquaculture is a growing field that is facing labour shortages. Employers include public or private fish hatcheries or commercial farms. Positions within the industry include:

- » Aquaculture Support Worker
- » Fish Farm Helper
- » Fish Tagger
- » Fry Marker
- » Sea Farm Attendant

Main duties would include:

- » Assisting Aquaculture Technicians in the operation of fish hatcheries or other aquatic farms
- » Feeding and vaccinating stocks, performing culling and marking or banding, and monitoring and reporting on stocks
- » Operation and maintenance of aquaculture equipment
- » Grading and weighing aquaculture stocks
- » Preparing aquaculture stocks for market
- » Operation of boats or other equipment needed for aquaculture operations

Average industry salaries = up to \$22 per hour.

Indigenous Perspectives Designation

The Indigenous Perspectives Designation (IPD) is an option available to students studying in the Community and Justice Services program. To qualify for the IPD, students must take and successfully complete GNED49 - Introduction to Indigenous Studies and GNED128 - Indigenous Knowledges, along with a minimum of four approved co-curricular Indigenous events or experiences that will be incorporated into the final portfolio assignment in GNED128. The student's transcript will indicate the IPD designation. Upon graduation, students with an IPD will have a strong foundational basis in Indigenous Studies, and a designation that will be marketable in the employment sector.

Pathways and Related Programs

Upon graduating, eligible students can pursue additional education pathways within the field of study at the diploma or degree level. Graduates may want to pursue further study in a diploma program within our School of Environmental and Natural Resources Sciences. With supplementary education or industry experience, students could also potentially gain credentials to be considered for entry to our Aquaculture Co-op graduate certificate

program.

Minimum Admission Requirements

Students applying to Aquaculture Foundations must meet the following requirements:

- » OSSD (or equivalent mature student status OSSD)

Vocational Learning Outcomes

- » Evaluate biological factors and report on unusual fish behaviour to assist the identification of fish health and welfare concerns.
 - » Identify, test, and inspect aquaculture components and systems to maintain industry standards, such as water quality.
 - » Contribute to the collecting and processing of daily water quality and fish husbandry data to monitor fish health, welfare, and growth.
 - » Perform work responsibilities in accordance to applicable provincial and federal safety and environmental regulations and company policies to ensure health and safety of fish and humans.
 - » Conduct basic math calculations, such as feed conversions, mortality rates, flow rates, growth rates, to assess facility operations, fish health, and fish growth.
 - » Apply common fish handling techniques to optimize fish health and maximize growth of various species approved to be raised in Canada.
 - » Identify and integrate historical and contemporary Indigenous and non-Indigenous views and practices to meet the needs of non-Indigenous and Indigenous participants in aquaculture.
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Courses and Descriptions

SEMESTER 1

Animal Welfare	FIWI 80	Hours: 30
Aquaculture Infrastructure - Land Based	FIWI 78	Hours: 60
Intro to Certifications and Regulations in Aquaculture	FIWI 76	Hours: 30
Introduction to Aquaculture	FIWI 79	Hours: 30
Introduction to Indigenous Environmental Studies	INDG 81	Hours: 30
Math for Aquaculture	FIWI 75	Hours: 45
Water Quality in Aquaculture	FIWI 77	Hours: 45

SEMESTER 2

Aquaculture Infrastructure - Open Net Pen	FIWI 85	Hours: 60
Foundations of Aquaculture Biology	FIWI 84	Hours: 45
Foundations of Aquaculture Safety	FIWI 87	Hours: 45
Foundations of Fish Husbandry	FIWI 83	Hours: 60
Introduction to Aquaculture Operations	FIWI 86	Hours: 60

SEMESTER 3

Applied Aquaculture Skills	FLPL 266	Hours: 90
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