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Science and Technology Programs

Fisheries and Aquaculture Technology

Location Offered:
Nanaimo
Credential:
Diploma
Program Length:
2 Years

The Program

The program is designed to develop well-rounded technologists with a broad background in the practical and academic skills of fish and invertebrate culture, fisheries habitat and fish stock assessment, fisheries regulations, production management, and environmental control and planning.

Both the “why” and “how” are presented through formal lectures and practical experience. The selection of program material is designed to give a broad theoretical background to provide flexibility, as well as foster a professional attitude toward a future career. Students will spend approximately 25 per cent of their time on “hands-on” fisheries and aquaculture projects on- and-off campus.

The first year provides a foundation in such basic conceptual areas as statistics, biology, English, habitats of fish and fish rearing methods. There is a weekly practicum, in which students are sent into the field for a day to work in various aquacultural, fisheries, or environmental consulting capacities (salmonid hatcheries, spawning channels, wild fish projects, oyster farms, invertebrate hatcheries and others), and students also work one half day each week on aquaculture or fisheries field projects on campus or in the field. Many courses also involve significant field experience. Over the two years this practical work experience exposes students to a wide variety of activities, and introduces them to the facilities, organizations and personnel important in their future careers.

As a requirement for the program, students will work in a program relevant summer job in the summer between their first and second year. Assistance in finding jobs is provided by VIU Faculty and staff, and students will receive credit for the summer practicum courses on completion of required written reports and/or oral presentation.

In the second year, students are exposed to more advanced and specialized topics in fisheries and aquaculture. These include engineering courses, shellfish culture, and both health and physiology of aquatic organisms. In addition, there is a field based course on freshwater field techniques in which students work in field conditions at local lake sites. Both the second-year weekly practicum and project courses may be designed by the student to emphasize areas of special interest.

In addition to the many scholarships available to all VIU Students, there are numerous special awards for Fisheries and Aquaculture students. For more information contact the Financial Aid & Awards office.

There is also a one-year, post-degree diploma program for university graduates with

degrees in biology, zoology, or related sciences. In this case, students complete the requirements for the diploma in one year, plus one summer practicum (see below for admission requirements).

Advance Credit

Students may be granted advance credit for courses taken at VIU or elsewhere. Credit is granted in consultation with the Admissions office, course instructor and program Chair and, in some cases, may involve a written or verbal course challenge.

Program Outline

Year 1	Credits
FISH 115 - (Life History and Management of Salmonids)	3
FISH 127 - (Introduction to Salmonid Husbandry)	3
FISH 124 - (Biology of Fishes)	4
FISH 132 - (Aquatic Habitats)	3
FISH 133 - (Aquatic Plant and Algae Ecology and Culture)	3
FISH 161 - (Fisheries and Aquaculture Technician Skills I)	1
FISH 162 - (Fisheries and Aquaculture Technician Skills II)	1
FISH 171 - (Fisheries and Aquaculture Work Experience I)	1
FISH 172 - (Fisheries and Aquaculture Work Experience II)	1
FISH 191 - (Applied Techniques in Aquatic Systems & Fisheries I)	3
FISH 192 - (Applied Techniques in Aquatic Systems & Fisheries II)	3
BIOL 121 - (Introductory Zoology) *or*, FISH 123 - (Concepts in Biology)	4
ENGL 115 - (University Writing and Research)	3
MATH 181 - (Intro to Statistics)	3
Total Credits	**36**

Year 2	Credits
FISH 205 - (Invertebrate Zoology)	3
FISH 222 - (Larval Rearing & Invertebrate Culture)	3
FISH 223 - (Introduction to Fisheries Management)	3
FISH 231 - (Non-salmonid Aquaculture)	3
FISH 241 - (Fish Health)	3
FISH 253 - (Fisheries Engineering I—Hydrology)	3
FISH 254 - (Fisheries Engineering II—Hydraulics II)	3
FISH 255 - (Fish Habitat Assessment and Rehabilitation)	3
FISH 271 - (Fisheries and Aquaculture Work Experience III)	2
FISH 272 - (Fisheries and Aquaculture Work Experience IV)	2
FISH 273 - (Summer Work Experience)	0
FISH 281 - (Freshwater Fisheries Field Techniques)	3
FISH 291 - (Applied Techniques in Aquatic Systems & Fisheries III)	3
FISH 292 - (Applied Techniques in Aquatic Systems & Fisheries IV)	3
Total Credits	**37**

Completion Requirements

Grades for individual courses are awarded as described in the Grading Scale section of

this Calendar. The program has minimum standards as follows:

- Registration in the second, third and fourth semester requires the satisfactory completion, with grades of “C-” or better, of all the courses in the previous semester. In the event that a student achieves less than “C-” in any FISH course, registration in any other FISH course may be denied or, at the discretion of the instructor, a satisfactory opportunity to improve the grade to “C-” may be made available, in order to allow the student to progress. Application of this clause is subject to review by program Chair and affected course instructors.
- Practicum courses (FISH 171, 172, 271, 272) will be automatically assigned an “F” if students miss more than one session at their field station, without prior notification to the station. An “F” in any of these courses will result in suspension from the program. Students must satisfactorily complete all courses in the program. Students may not graduate with more than two “D”s.
- Students who have more than two grades less than "C-" must withdraw from the program. They may reapply in the next year and make up the “D”s or “F”s to a “C-” grade or better.
- For more information regarding the above, students admitted to the program are advised to read the “Student Guide” issued in the first week of classes.

Admission Requirements

- General admission requirements apply.
- A minimum “C” grade in one of Precalculus 11, or Foundations of Mathematics 11, or equivalent.
- Life Sciences 11 with a minimum “C” grade, or equivalent.

Recommended for Admission

- Physics and other science courses are highly recommended.
- Additional English courses that lead to improved writing skills are invaluable.

Notes on Admission

- The program is limited to a maximum of 26 full-time students per year. Students wishing to take the program on a part-time basis, or wishing to attend single courses may contact the department to determine whether that is possible, although if space is limited, which is often the case, preference will be given to full-time students.
- Enrolment in this program is limited. Students who meet or exceed the minimum admission requirements may not necessarily be admitted to the program. Applicants are encouraged to apply early. Seats in the program are offered as follows: first completed applications are given first offers, until all seats are filled.
- Aboriginal students can apply for reserve seats by submitting the Access Initiative for Aboriginal Students form.
- Students may take the program on a part-time basis, but admission to courses will be subject to prerequisites, where applicable, and space in the classroom after full-time students have been served.
- Applicants are strongly urged to talk to Fisheries and Aquaculture staff about the program and application procedures.
- Students will complete Occupational Level I First Aid, in accordance with WorkSafeBC requirements, and Transportation Endorsement courses during the first year of the program.

Career Opportunities

Careers in fisheries and aquaculture typically involve both outdoor work related to the rearing or assessment of aquatic stocks, and indoor activities related directly to field or support activities, including personnel and business management. Aquaculture is usually practiced in relatively remote areas.

It should be noted that the skills required for both the aquaculturist and the field fisheries technician broadly overlap, and that aquaculture plays an increasingly important role in wild stock management through the employment of hatcheries and fish stock enhancement. Students in this program are prepared for both career areas and after graduation frequently work in both.

Other placements include laboratory, sales, research and international opportunities. Many career opportunities are available to graduates willing to work in outdoor conditions, often in remote areas. Such work often includes field work with wild stocks including habitat assessment in both fresh and salt water, estimates of wild stock population, habitat restoration, research assistance, and monitoring of harvests.

Start Date and Application Deadline

The program starts in September and applications are accepted between the first business day in October and March 31.

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