The Faculty of Land and Food Systems

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Introduction

Faculty of Land and Food Systems

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The Faculty of Land and Food Systems is a world leader in integrated research, education and service that addresses critical global issues around sustainable agriculture, food safety and quality, and food, nutrition and health. To that end, the Faculty initiatives foster and support research excellence, innovative active learning environments to educate new generations of professionals, strong community connections, and global and local collaborations.

Admission

Application for admission to the Faculty of Land and Food Systems must be made through Enrolment Services. Procedures, policies, and admission requirements for the University of British Columbia and the Faculty of Land and Food Systems are specified in the Admissions (Calendar page: http://www.calendar.ubc.ca/vancouver/index.cfm?tree=2,27,0,0#151) section of the UBC Academic Calendar.

Admission from Secondary School

Admissibility is determined on the basis of a number of factors including performance in specific high school courses, the overall academic rigor of the program, evidence of relevant learning and achievements both in and out of school, and other indicators of suitability for the Bachelor of Science programs offered through the Faculty of Land and Food Systems at UBC.

Admission as a Post-Secondary Transfer Student or With a Previous Degree

Students applying to the Faculty of Land and Food Systems by transfer from other post-secondary institutions or with a previous degree should note that, as per the University’s policy on Requirements to Receive a Degree or Diploma (Calendar page: http://www.calendar.ubc.ca/vancouver/index.cfm?tree=3,40,0,0#191), they will be required to complete at least 50% of their program’s required course load while registered in their LFS program.
No more than 60 credits of transfer credits will be applied to a student's UBC academic record, and credit will be assigned as follows:

- For post-secondary transfer students, transfer credit from other post-secondary institutions will be assessed by the UBC Undergraduate Admissions Office at the point of admission and in accordance with articulation agreements between UBC and other post-secondary institutions.

Please note, not all transfer credit is necessarily applicable to a students’ degree program. As such, when students present in excess of 60 transfer credits, the Faculty will determine which 60 credits are most applicable to the degree program. Students can learn more at Maximum Allowable Transfer Credit (Calendar page: http://www.calendar.ubc.ca/vancouver/index.cfm?tree=2,25,74,0#141
http://www.calendar.ubc.ca/vancouver/index.cfm?tree=2,25,74,0#141).

Transfer applicants to the Faculty of Land and Food Systems must also present the required program-specific high school academic pre-requisites listed for their curriculum in Admissions (http://www.calendar.ubc.ca/vancouver/proof/edit/index.cfm?tree=2,0,0,0). In some cases, university transferable coursework may satisfy these pre-requisites. These courses are critical to degree progression within the Faculty.

Students admitted to the Faculty of Land and Food Systems by transfer from other post-secondary institutions must have met the Communication Requirement of the Faculty or be eligible to enrol in first-year English at the time of admission. Students who do not meet the Communication Requirement at the time of admission should be aware that their registration may be blocked or restricted and they will not be promoted to higher year levels until this requirement has been met. See the Faculty’s promotion rules here.

Students admitted by transfer will be admitted to the year level that is appropriate according to the Faculty’s Year Promotion Requirement. The Promotion Requirements are based on the number of credits completed, and the degree of completion of required courses of the student’s program.

Students with questions about their eligibility are encouraged to contact LFS Student Services (http://www.landfood.ubc.ca/student-services/).

**UBC Langara Aboriginal Transfer Partnership**

To be eligible to transfer to UBC into the Faculty of Land Food Systems through this partnership (http://transfer.aboriginal.ubc.ca/admissions/), Aboriginal students must meet the general requirements for admission as a post-secondary transfer student (http://you.ubc.ca/applying-ubc/university-college-transfer/) as well as the following specific requirements:

- Successful completion of at least 48 (and no more than 60) credits (within the last four years). Students who present at least 54 credits, and have completed all first-year requirements (with the exception of LFS 100), may be eligible for third-year standing;
- An academic average of at least 2.671 or greater on the most recent 30 credits of transferable courses attempted, including failed and retaken courses;
- Completion of required high school academic pre-requisites. In some cases, university transferable coursework may satisfy these pre-requisites;
- Successful completion of the Transition Plan offered by Langara in collaboration with UBC;
- Consultation with the LFS Academic Advisor, Indigenous Students (http://www.landfood.ubc.ca/student-services/#team) on course selection while at Langara.

Applicants who do not meet these requirements may be considered for admission as a transfer student (http://you.ubc.ca/applying-ubc/university-college-transfer/) and can be considered through UBC's Aboriginal Admissions Policy (http://www.calendar.ubc.ca/vancouver/index.cfm?tree=2,14,0,0#14261)}
For more information about the UBC Langara Aboriginal Transfer Partnership, please visit the website (http://transfer.aboriginal.ubc.ca/admissions/).

1If in a particular year the competitive admission criterion is lower than 2.67, then the applicants in that year will be evaluated against the lower admission criterion.

Langara Diploma in Food, Nutrition, and Health (FNH) Transfer

Eligible graduates from the Langara Diploma in Food, Nutrition, and Health (FNH) Transfer are guaranteed admission to UBC into the non-competitive majors (http://www.calendar.ubc.ca/vancouver/index.cfm?tree=12,194,261,0) in the Bachelor of Science in Food, Nutrition, and Health program in the Faculty of Land Food Systems. They are also eligible to apply to the competitive majors (http://calendar.ubc.ca/vancouver/index.cfm?tree=12,194,261,0), including the 3rd year of the Dietetics major, the Food Science major or the Food and Nutritional Sciences Double major. Admission to these competitive majors is not guaranteed.

To be eligible for this transfer program, students must have completed the Langara Diploma within 4 years and achieved a minimum Cumulative GPA of 3.0.

Students Applying to LFS from Another Program at UBC

Students who are currently enrolled in another program at UBC and wish to transfer in to a program in the Faculty of Land and Food Systems must complete the ‘Change of Degree Program/Campus’ application available through their Student Service Centre (SSC). Students applying for admission from another UBC program are subject to the requirements noted above under “Admission as a Post-Secondary Transfer Student or With a Previous Degree.”

Details can be found here (Calendar page: http://www.calendar.ubc.ca/vancouver/index.cfm?tree=2,303,0,0#19133). Applications must be received by May 15.

Students Applying for Readmission

Students who have previously attended the Faculty of Land and Food Systems, left in good academic standing, have been away from their studies for more than one academic year and wish to return to their previous program of study should consult the Readmission (Calendar page: http://www.calendar.ubc.ca/vancouver/index.cfm?tree=2,273,0,0#13984) section of the UBC Academic Calendar for details.

Students who have previously attended the Faculty of Land and Food Systems, left in good academic standing and have been away for one academic year or less, and wish to return to their previous program of study may do so without re-application. Students should consult the Academic Leave (Calendar page: http://www.calendar.ubc.ca/vancouver/index.cfm?tree=3,289,0,0#16993) section of the UBC Academic Calendar.

Students who have previously attended the Faculty of Land and Food Systems, and were required to discontinue from the Faculty or withdraw from the University and wish to return to their previous program of study should consult the Faculty’s Guidelines for Readmission.

Students with questions about their status should consult with LFS Student Services (http://www.landfood.ubc.ca/student-services/), prior to submitting an application.

Advising Office

The Faculty of Land and Food Systems Academic Advising Office (Student Services) is located in Room 344, HR MacMillan
Building, 2357 Main Mall. The office can be reached by telephone at 604.822.2620 or by email at students@landfood.ubc.ca. For office hours, please visit us online (http://www.landfood.ubc.ca/student-services/).

Email is the preferred means for the Faculty of Land and Food Systems administration and faculty members to communicate important messages to students. It is the responsibility of all LFS students to ensure their current email address is accurately recorded (http://www.students.ubc.ca/enrolment/records/change-personal-information) on the Student Service Centre (SSC) and to read emails sent to that account on a regular basis.

Registration and Program Approval

First-Year Students

Students are not required to select a program major until they register for their second year. Students planning to apply to second-year admission degree programs are still required to follow the course requirements for the program to which they were originally admitted. Students not meeting the minimum academic standing required for compulsory courses in a given program may be required to withdraw from that program.

For information on specific course registration regulations, including credit load, taking courses as Credit/D/Fail, repeating courses and taking courses outside of UBC, please see the Faculty’s Academic Regulations (http://calendar.ubc.ca/vancouver/proof/edit/index.cfm?tree=12,194,795,0).

Academic Regulations

Academic Regulations > Attendance and Examinations

1. Attendance

Regular attendance is expected of students in all their classes. Students who neglect their academic work and assignments may be excluded from the final examination. Students who are unavoidably absent because of illness, disability or unforeseen circumstances should report to their instructors or LFS Student Services as soon as possible. When appropriate, academic concession may be granted in accordance with the University’s policy found here (Calendar page: http://www.calendar.ubc.ca/vancouver/index.cfm?tree=3,329,0,0#26562).

2. Examinations

Students who are absent from examinations should refer to the University’s Academic Concession policy here (Calendar page: http://www.calendar.ubc.ca/vancouver/index.cfm?tree=3,329,0,0#26562) and connect with the LFS Student Services Office if they have any questions.

Formal written examinations are normally required at the end of all courses and also in December for full-year courses. These are scheduled during the official examination periods at the end of term. Enrolment Services schedules these examinations and makes the information available to students through the Student Services Website (http://students.ubc.ca/enrolment/exams/exam-schedule) part way through the term. Students are expected to make travel plans after their last scheduled examination. In some courses passing the final examination is a requirement for passing the course but may not in itself be sufficient to pass. Students may be denied a passing grade for unsatisfactory work during the session or if their essays, reports, or examinations are notably deficient in English. Also, in any course which involves both laboratory work and written examinations, students must complete and pass both parts to pass the course.

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Information in this Calendar is subject to change. Visit www.calendar.ubc.ca/vancouver for current details.
This document was generated on 19 Mar 2020 at 12:46 PM.
Academic Regulations > Year Promotion and Academic Standing

Year Promotion

Students will be promoted according to the following criteria:

- to second year: successful completion of 24 or more credits of prescribed first-year courses.
- to third year: successful completion of 54 or more credits, and all the required first-year courses. Students who do not meet this requirement will not normally be permitted to enrol in third-year or higher-level courses in the Faculty.
- to fourth year: successful completion of a total of 89 or more credits, including completion of all first- and second-year courses.

Program Deficiency

Students are expected to register in the courses required of their degree program. Students who take an excess of courses outside their program of study, when evaluated at the end of the Winter Session, through the “Sessional Evaluation” process, may result in the designation of “Program Deficiency.” Students deemed to be in Program Deficiency may be required to discontinue from the Faculty regardless of their Academic Standing, as described below. Students who are assigned Program Deficiency in two consecutive years will be required to discontinue from the Faculty, regardless of their Academic Standing, as described below.

Academic Standing

There are three categories of Academic Standing: Good Academic Standing, Academic Probation, and Failed Year Standing. The criteria for Academic Standing depends on the number of credits that a student is registered in during the Winter Session (September to April). Academic standing evaluations are called “Sessional Evaluations,” and are completed at the conclusion of each Winter Session.

A. Good Academic Standing

To achieve Good Academic Standing, students must meet one of the following:

- If registered in 15 or more credits: pass a minimum of 60% of credits attempted and have a sessional average of 60% or greater.
- If registered in fewer than 15 credits: pass a minimum of 50% of credits attempted and have a sessional average of 60% or greater.

B. Academic Probation

Students will be placed on Academic Probation when one of the following conditions is met:

- If registered in 15 or more credits: pass a minimum of 60% of credits attempted and have a sessional average between 50% and 59.9% or;
- If registered in 15 or more credits: pass a minimum of 60% of credits attempted and have failed more than 6 credits or;
- If registered in fewer than 15 credits: pass a minimum of 50% of credits attempted and have a sessional average between 50% and 59.9% or;
- If registered in fewer than 15 credits: pass a minimum of 50% of credits attempted and have failed more than 6 credits or;
- If re-admitted to the Faculty after having been required to withdraw.
A student who is assigned two or more years of Academic Probation (consecutive years or over a period of many years) may be required to discontinue from the Faculty for a period of at least one academic year, after which an application for will be considered. See below for “LFS Guidelines for Readmission.”

C. Failed Year

Students will be assigned Failed Year Standing when one of the following conditions is met:

- Their sessional average falls below 50% or;
- If registered in 15 or more credits: have not passed a minimum of 60% of attempted credits or;
- If registered in fewer than 15 credits: have not passed a minimum of 50% of attempted credits or;
- If a student has previously been assigned Academic Probation and meets the conditions of Academic Probation for a second time.

A student who is assigned Failed Year Standing (consecutive years or over a period of many years) may be required to discontinue from the Faculty for a period of at least one academic year, after which an application for readmission (Calendar page: http://www.calendar.ubc.ca/vancouver/index.cfm?tree=2,273,0,0#13984) will be considered. See below for “LFS Guidelines for Readmission.”

If students present two or more years of Failed Year Standing, they may be required to permanently withdraw from the University.

LFS Guidelines for Readmission

Students who have been required to discontinue from the Faculty are permitted to apply for readmission only after successfully completing a minimum of 30 transferable credits in another program offering courses transferable to UBC. This program must be applicable to the student’s degree program. Students should be completing these 30 credits within one Winter Session (September to April).

Readmission is not guaranteed, but students are advised to achieve at least 60% (“C”) on these 30 credits with no failures to be competitive for readmission. Normally, a student with Failed Year Standing will not be eligible for direct admission to another UBC program, and will be required to complete these 30 credits at another post-secondary institution.

Students should also consult the communication they receive from the Faculty of Land and Food Systems for additional requirements, and familiarize themselves with the University’s readmission (Calendar page: http://www.calendar.ubc.ca/vancouver/index.cfm?tree=2,273,0,0#13984) guidelines.

Academic Regulations > Credit Load, Credit/D/Fail, Repeating Courses, and Taking Courses Outside UBC

1. Credit Load

Students interested in taking more than the recommended credits (per term or per session) for their Major should consult with LFS Student Services; this is not normally permitted. First-year students especially should note that taking more than the recommended number of credits per term may make the transition to university studies more difficult than necessary.

2. Taking Courses Outside of UBC
As per Campus-wide Policies and Regulations (Calendar page: http://www.calendar.ubc.ca/vancouver/index.cfm?tree=3,47,0,0#254 students are not permitted to take courses for academic credit at other post-secondary institutions concurrently with their program in the Faculty without receiving prior consent from the Director, LFS Student Services. The Faculty is not obligated to grant transfer credit for students who do not receive permission in advance of attempting courses elsewhere.

Last updated: March 18, 2020

Academic Regulations > Withdrawals and Academic Leave

1. Withdrawal

A student who decides to withdraw from a course should refer to Change of Registration (Calendar page: http://www.calendar.ubc.ca/vancouver/index.cfm?tree=3,45,98,0#240).

A student who decides to withdraw from the University should refer to Withdrawal (Calendar page: http://www.calendar.ubc.ca/vancouver/index.cfm?tree=3,46,102,0#251).

2. Academic Leave

Students in good academic standing after a Winter Session (September - April) are normally eligible to register in the following Summer and Winter Sessions but may choose instead to take an Academic Leave (Calendar page: http://www.calendar.ubc.ca/vancouver/index.cfm?tree=3,289,0,0#16993) of up to one academic year. In this case, students will retain eligibility to register in the next Winter Session. If away for more than one academic year, however, students must apply for readmission through Enrolment Services. Published deadlines (Calendar page: http://www.calendar.ubc.ca/vancouver/index.cfm?tree=2,295,0,0#18955) will apply. Academic Leave is not an opportunity to take courses toward the students’ UBC degree at another institution. A student who wishes to study at another institution must consult with LFS Student Services in advance to determine whether or not they are eligible for a Letter of Permission (see "Taking Courses Outside of UBC" above for more). Students with student loans or scholarships are advised to consult with an Enrolment Services Advisor (http://www.students.ubc.ca/about-student-services/enrolment-services-advisors) before taking a leave, as there may be financial implications.

Last updated: March 18, 2020

Academic Regulations > Requirements to Graduate

Requirements to Graduate from the Faculty of Land and Food Systems

In addition to the Campus-Wide Policies and Regulations for Requirements to Receive a Degree or Diploma (Calendar page: http://www.calendar.ubc.ca/vancouver/index.cfm?tree=3,40,0,0#191) from UBC, LFS students must present a minimum of 45 upper-level (300- and/or 400-level) credits to meet graduation requirements. Most students will fulfill this requirement through the completion of their prescribed degree requirements, but it is the students’ responsibility to ensure this minimum upper-level credit requirement is met.

Students are expected to apply for graduation once their program requirements have been met, and may only attempt a maximum of 180 credits, including transfer credits, towards the completion of their degree.

Students who are unable to meet their degree requirements within 180 attempted credits will be required to withdraw from the Faculty.
Academic Regulations > Communication Requirement

Graduates from the Faculty of Land and Food Systems are expected to collaborate and communicate effectively and professionally as members of diverse stakeholder teams. To develop this competency, students in the Faculty must complete LFS 150, ENGL 112, SCIE 113, WRDS 150, ENGL 100, APSC 176, Science One, Arts One or Coordinated Arts can also be used to satisfy this requirement. These credits may not be earned through Credit/D/Fail standing. All students admitted to the Faculty of Land and Food Systems must take immediate steps to satisfy the Communication Requirement.

Students admitted to the Faculty of Land and Food Systems on transfer from another post-secondary institution and receiving 3 or 6 credits of first-year English at UBC, may be permitted to meet the Communication Requirement if a minimum grade of 70% is achieved. Students who complete the International Baccalaureate program or Advanced Placement courses and are awarded 6 credits of first-year English by UBC Undergraduate Admissions have met the Communication Requirement. Students with questions about the completion of this requirement are encouraged to contact LFS Student Services.

Students who have not completed the Communication Requirement by the time they have completed 54 credits will normally have access to registration for the following academic session blocked, and may be prevented from taking additional courses in their program until the Communication Requirement has been met.

Opportunities to engage in, and improve reading, writing and oral communication exist in all courses.

Student performance on written work in all courses within the Faculty of Land and Food Systems may be evaluated in part on grammar and syntax.

Academic Regulations > Dean's Honour List

Students with a standing of 80% or better in the previous Winter Session will receive the notation "Dean's Honour List" on their records. A program of at least 24 approved percentage-graded credits must have been completed during the session to receive this designation. Courses taken during the Summer Session are not included in this assessment.

Academic Regulations > Honours Standing

Upon graduation, Honours Standing will be granted to those students who have 80% or higher in the top 45 credits of percentage-graded upper-level (300-/400-level) courses required of their program (degree requirements and restricted electives only).

B.Sc. in Applied Biology (APBI)

B.Sc. in Applied Biology (APBI) > Introduction

Students in the Applied Biology program explore the real-world application of the life sciences to the management of soil, plants, animals and food production. The program emphasizes critical thinking, practical involvement, and a systems approach that
integrates technical knowledge with sustainability and ethics. The program equips graduates with the skills and knowledge to become leaders in animal biology and welfare, sustainable food production, and the responsible use of natural resources.

¹The Bachelor of Science in Applied Biology (offered by the Faculty of Land and Food Systems) is distinct from both the Bachelor of Applied Science and the Bachelor of Science degrees.

B.Sc. in Applied Biology (APBI) > Advising Office

See the Academic Advising Office.

B.Sc. in Applied Biology (APBI) > Admission

Students may gain admission directly from secondary school or transfer from a recognized university or college with a minimum of 24 credits, or as mature students. For admission to the Bachelor of Science in Applied Biology, students should consult the Faculty’s Admission section (http://www.calendar.ubc.ca/vancouver/index.cfm?tree=12,194,793,0).

B.Sc. in Applied Biology (APBI) > Academic Regulations


B.Sc. in Applied Biology (APBI) > Applied Animal Biology Major

Applied Animal Biology Major

Applied Animal Biology is intended for students who want to study and/or work with animals. It provides students with fundamentals of animal behaviour, animal physiology and related fields as applied to farm, companion and other animals. It also exposes students to the role of animals in human society and the ethical, environmental and other issues that arise. It offers training in research skills needed for graduate work, and (with appropriate selection of courses) prepares students for admission to veterinary and human medicine. Students have various options to gain practical experience on farms and in laboratories, animal shelters and wildlife rehabilitation centres.

Degree Requirements

<table>
<thead>
<tr>
<th>First Year</th>
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<tbody>
<tr>
<td>LFS 100</td>
<td>1</td>
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<tr>
<td>LFS 150 or ENGL 112</td>
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<tr>
<td>BIOL 112 &amp;121</td>
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<tr>
<td>BIOL 140</td>
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<tr>
<td>CHEM 121 (or 111)¹</td>
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</table>
CHEM 123 (or 113)  
MATH 102 or equivalent2  
PHYS 101, 107, or 1173

Restricted electives  
3

Third Year  
LFS 200  
BIOL 112 & 121  
CHEM 123 or 111  
CHEM 121 or 1111  
LFS 252 (or FRST 231 or BIOL 300)  
MATH 112 or equivalent2  
Restricted electives2  
Unrestricted elective  
Total Credits  31

Fourth Year  
LFS 450  
Restricted electives2  
Unrestricted electives  
Total Credits  30

Overall four-year total:  
32

1. CHEM 111 is not for students with Chemistry 12.  
2. Students who have not completed Calculus 12 must make MATH 180 or 184 to fulfill their first year MATH requirement.  
3. To be selected in consultation with a program advisor. Typically includes courses in APBI, BIOL, and ENGL. For suggested courses see Restricted Electives list.  
4. A minimum of 45 credits of the 123 credits required for the Major must be from courses numbered 300 or higher.

Last updated: March 18, 2020

B.Sc. in Applied Biology (APBI) > Food and Environment Major

The Food and Environment Major has been renamed the Sustainable Agriculture and Environment Major and will no longer be accepting new students under this name. Students who started the major prior to 2018 Winter Session may complete their degrees using the requirements listed below. Students who would like to switch to the new major requirements should consult their program advisor. Food and Environment focuses on the application of agroecological concepts and principles to the design and management of food production systems. It brings together agriculture, human ecology, and environmental thought to provide the background to make informed decisions on agricultural practices, economic systems, and policy. Students learn about sustainable production systems to support economic, social, and environmental goals. Students explore ways to enhance local food systems and communities through increased use of local food production, direct marketing, conservation, agroecological production management, water quality and sustainable energy. Students can gain hands-on experience at the Food for Sustainable Future Osler Farm Degree Requirements.

First Year  
LFS 100  
LFS 105 or ENGL 112  
BIXL 112 & 121  
CHEM 123 or 1111  
LFS 250  
LFS 252 or (FRST 231 or BIXL 300)  
APBI 200  
BIXL 210 or APBI 210  
Restricted electives2  
Total Credits  30

Second Year  
ECN 101 or 102  
LFS 250  
LFS 252 or (FRST 231 or BIXL 300)  
APBI 300  
BIXL 210 or APBI 210  
Restricted electives2  
Unrestricted elective  
Total Credits  31

Third Year  
LFS 360  
Restricted electives2  
Unrestricted electives  
Total Credits  30

Fourth Year  
LFS 450  
Restricted electives2  
Unrestricted electives  
Total Credits  30

Overall four-year total:  
123

1.CHEM 111 is not for students with Chemistry 12.  
2.Students who have not completed Calculus 12 must make MATH 180 or 184 to fulfill their first year MATH requirement.  
3. To be selected in consultation with a program advisor. Typically includes courses in APBI, BIXL, and ENGL. For suggested courses see Restricted Electives list.  
4. A minimum of 45 credits of the 123 credits required for the Major must be from courses numbered 300 or higher.

Last updated: March 18, 2020
<table>
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<tr>
<th>Total Credits</th>
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### Second Year

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<td>ECON 101 or 102</td>
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<td>APBI 200</td>
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<td>APBI 260</td>
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<tr>
<td><strong>Total Credits</strong></td>
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### Third Year

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<tr>
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<tr>
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### Fourth Year

<table>
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<td>APBI 400</td>
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</tr>
<tr>
<td>Unrestricted electives</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td><strong>30</strong></td>
</tr>
</tbody>
</table>

| Overall four-year total | 122 |

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1. Students who have not completed Calculus 12 must take MATH 180 or 184 to fulfill their first year MATH requirement.
2. Some students may be advised to take first year Chemistry and/or Physics courses depending on their academic plans and interests. They should consult with an FENV advisor.
3. To be selected in consultation with a program advisor. Typically includes courses in APBI, BIOL and FNH. For suggested courses see the Faculty ([http://www.landfood.ubc.ca/undergraduate/restricted-electives/](http://www.landfood.ubc.ca/undergraduate/restricted-electives/))
4. A minimum of 45 credits of the 123 credits required for the Major must be from courses numbered 300 or higher.

---

**B.Sc. in Applied Biology (APBI) > Sustainable Agriculture and Environment Major**

The Sustainable Agriculture and Environment major focuses on the application of soil, plant and agro-ecological sciences to enhance the sustainable production of food, and other agricultural products, while simultaneously conserving land and enhancing ecological services. Students can tailor their learning experiences to specific interests in agricultural production, integrated agroecosystem management, plant science, or soil science. A core resource of the program is the Centre for Sustainable Food Systems on the UBC Farm where students gain hands-on experience within a diverse managed landscape.

**Degree Requirements**

<table>
<thead>
<tr>
<th>First Year</th>
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<tbody>
<tr>
<td>LFS 100</td>
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</table>
B.Sc. in Food, Nutrition, and Health (FNH) > Introduction
Food security and its impact on health is the focus of the academic area of Food, Nutrition, and Health. New knowledge and advances in science and technology are integrated with socio-economic, cultural, ethical, and legal considerations in the provision of safe, nutritious, and sustainable foods.

As a program, students will develop a broad understanding of the topics central to the field of food, nutrition, and health. Students will develop an understanding of the interconnected nature of health and nutrition, and how these are connected to a sustainable food supply. Our programs are designed to provide students with a broad education in food science and human nutrition that can be applied to a wide range of professional careers.

---

B.Sc. in Food, Nutrition, and Health (FNH) > Admission

Application procedures:

- **Non-UBC students must apply online through Enrolment Services to enter the B.Sc. (FNH) program in UBC’s Faculty of Land and Food Systems (LFS).**
- **External applicants are encouraged to contact LFS Student Services in advance of applying to ensure they have met all the requirements.**

**Prerequisite Requirements**

- **Students must complete the equivalent of 3 credits in 100 and 200 level BIOL (excluding BIOL 100, 101, 102), CHEM 121, 123, and 205.**
- **Students are required to have a minimum 3.0 GPA in courses that include or are equivalent to:**
  - BIOL 300
  - EPSE 482
  - FRST 203

---

B.Sc. in Food, Nutrition, and Health (FNH) > Academic Requirements

Graduates of the option will have:

1. An academic standing of at least 70%
2. A minimum of 40 credits (including 30 credits of courses at the 300 level or above)
3. A minimum of 30 credits in major courses
4. A minimum of 3-4 credits in approved restricted electives
5. At least 12 credits in 400 level courses, which must include BIOL 499 (6 credits)

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B.Sc. in Food, Nutrition, and Health (FNH) > Dietetics Major

The Dietetics Major is a professional program planned to meet the accreditation standards for the dietetics profession in Canada. Graduates are eligible to write a national exam to qualify to register with a provincial dietetic regulatory body in order to use the designation Registered Dietitian (RD). Graduates will have completed the academic requirements for the Dietetics Major and have the ability to meet the requirements of the Canadian Dietetic Association and the Canadian Dietetic Association of British Columbia to become a registered dietitian.

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B.Sc. in Food, Nutrition, and Health (FNH) > B.Sc. in Food, Nutrition, and Health (FNH) > Dietetics Major

---

Non-academic Application Components (cover letter, resume, and references)

These application components are used to assess an applicant’s commitment to and suitability for the profession of dietetics. For more details, refer to the current Application Information Package: [http://dietetics.landfood.ubc.ca/prospective-students/how-to-apply](http://dietetics.landfood.ubc.ca/prospective-students/how-to-apply)

---

Admission

Admission is based on a minimum academic standing of 70%, calculated as a cumulative average of grades from all prerequisite (years one and two) and any program courses (years three and four) taken. Entrance exams are not included in this calculation. (NOTE: all prerequisite courses require a grade of C+ or above in any 300 and 400 level FNH course taken prior to admission that is included in the course requirements for the Dietetics Major.)

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2. Interview (short-listed applicants only) Short-listed candidates will be invited to participate in a brief (15 minute) personal interview at UBC with two registered dietitians. Interviews are scheduled on a designated interview day in late April or early May. Applicants who reside outside of BC will be interviewed online using video technology to illustrate their interview. The purpose of the interview is to assess the candidate’s interest in the profession and to evaluate the candidate’s communication skills as essential for dietetic practice. The interview will also be used to establish the cover letter, resume, and references. To assess an applicant’s commitment to and suitability for the profession as a career option. The interview guide varies each year. Questions are, but not limited to, the following:

- **Academic Performance**
  - Academic Performance
    - Cover letter/resume: 25%
    - Reference: 5%
    - Interview: 30%

---

Each assessment component includes minimum acceptable criteria which must be met for the candidate to be considered (regardless of score obtained in other components). Preparing to Apply: Dietetics is a professional program and is essential that all prospective students understand the requirements. Each assessment component includes minimum acceptable criteria which must be met for the candidate to be considered. Preparing to Apply: Dietetics is a professional program and is essential that all prospective students understand the requirements.

---

Application procedure:

- **Non-UBC students must apply online through Enrolment Services to enter the B.Sc. (FNH) program in UBC’s Faculty of Land and Food Systems (LFS).**

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A Dietetics Major application package, to be submitted to the Faculty.
Dietetics Major

- All applicants must submit a Dietetics Major application package to the Faculty prepared using forms and guidelines available online (http://dietetics.landfood.ubc.ca/prospective-students/how-to-apply/). Each application package must include:
  - Completed application form
  - Reference (as required)
  - Cover letter
  - Resume
  - Two completed reference forms
  - The Integrated Dietetics Program Application Fee (as listed here) (Calendar page: http://www.calendar.ubc.ca/vancouver/index.cfm?tree=14,297.2.0#R008)

Short-listed candidates are identified for the interview component based on a preliminary applicant score which considers both academic and non-academic application components. Final applicant scores are computed once interviews are complete and final marks for the term are available. Admissions decisions are made by May. Applicants are typically informed about their admission status by the end of May. Applicants are advised to check their Webmail for any applicant correspondence.

Students must meet the following academic advancement requirements before progressing to the next year of study:

- Achieve a minimum level of academic performance (68%) in each 300- and 400-level FNH course. The program reserves the right to require a student to change majors if they are not meeting these criteria.
- Meet all practical education program requirements mandated by UBC and/or placement agencies, including student accident insurance, immunizations, Food Safe certificates, and respiratory mask fitting (further details are provided on the program website http://dietetics.landfood.ubc.ca/program/advanced-placement-agencies/).
- Satisfactorily complete an additional Criminal Record Check Review Act procedures.

All admission offers are considered conditional pending receipt of a satisfactory criminal record check conducted according to Criminal Record Check Review Act procedures. Final applicant scores are computed once interviews are complete and final marks for the term are available.

Due to extra administrative costs associated with an integrated practice education program, an annual supplemental fee (as listed here) is applied to students in each year (years three, four, and five) of the program. Students in the program must also fulfill and bear any costs associated with any practical education program requirements mandated by UBC and/or placement agencies, including student accident insurance, immunizations, Food Safe certificates, and respiratory mask fitting. Further details are provided on the program website (http://dietetics.landfood.ubc.ca/current-students/additional-program-requirements/).

All students accepted to the program are admitted to third year. Students must also meet the following program-specific advancement requirements: they must pass all courses, maintain an academic average at or above the minimum for entry into the program (70%) and achieve an academic performance (68%) in each 300- and 400-level FNH course. The program reserves the right to require a student to change majors if they are not meeting these criteria.

The Food Market Analysis Major is no longer accepting new students. Students who are interested in combining their interest in food and nutritional sciences, economics and business should consider applying for the B.Sc. in Food and Resource Economics program (http://dietetics.landfood.ubc.ca/current-students/food-market-analysis-major/).

### Bachelor of Science (B.Sc.) in Food, Nutrition, and Health (FNH) > Food Market Analysis Major

This major is no longer accepting new students. Students who are interested in combining their interest in food and nutritional sciences, economics and business should consider applying for the B.Sc. in Food and Resource Economics program (http://dietetics.landfood.ubc.ca/current-students/food-market-analysis-major/).

#### 1st Year

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Information in this Calendar is subject to change. Visit [www.calendar.ubc.ca/vancouver](http://www.calendar.ubc.ca/vancouver) for current details. This document was generated on 19 Mar 2020 at 12:46 PM.
required courses in each year, to remain in the program. Admission after third year or a subsequent year will be considered on a case-by-case basis. Meeting the minimum ... does not guarantee admission. Students admitted to the Major will be required to maintain an average of at least 70% in Sciences Double Major is based on two components:

1. **Core Courses**: All students will complete a core set of courses that provide a solid foundation in the principles of food science with respect to the manufacture, preservation, and quality of food products and the role of food in human health. Graduates of the Double Major are uniquely positioned to contribute to the development of healthy foods for healthy living.

2. **Concentration Electives**: Students will choose elective courses that align with their professional interests. These courses allow students to develop a better understanding of the principles and applications of food science and technology, as well as the ability to integrate knowledge from related disciplines.

**B.Sc. in Food, Nutrition, and Health (FNH)**

Admission to the Food and Nutritional Sciences Double Major is based on a combination of academic performance and a letter of intent. The specific requirements are as follows:

- **Academic Performance**: Admission is based on a minimum academic standing of 70%, calculated based on the best 21 credits per year of post-secondary courses required in this program. The academic performance must be maintained throughout the program.

- **Letter of Intent**: The student must submit a 500-word (maximum) Letter of Intent which addresses the following: a) why the student wishes to enroll in the Food and Nutritional Science Major; b) the student's career aspirations; c) any personal, volunteer, or work experiences that demonstrate the student's interest in food and nutrition; and d) for students who have taken less than 24 credits per year, a brief explanation of why.

**Course Details**

The following table outlines the course requirements and distribution for each year of the Food and Nutritional Sciences Double Major program.

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<td>PHYS 101 or equivalent</td>
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<td>BEXL 200 or 115</td>
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<td>BEX 234</td>
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</table>
**B.Sc. in Food, Nutrition, and Health (FNH) > Food Science Major**

Food Science is a discipline encompassing food chemistry, food microbiology, physical, sensory, and nutritional properties of food, and food process science with respect to the manufacture, preservation, quality, assurance, and development of food products. Students wishing to specialize in or concentrate on certain areas should consult the program advisor.

Admission after third year or a subsequent year will be considered on a case-by-case basis. Meeting the minimum requirements for application to the major does not guarantee admission. Students admitted to the Major will be required to maintain an average of at least 70% in required courses in each year, to remain in the program. Students who are not accepted into the major or who do not maintain the required average would be eligible to complete the FNH general major, or select another program if appropriate.

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<td>FNH 425 or FNH 407 or FNH 499</td>
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Overall five-year total credits: 140

1. Equivalent courses include BIOL 153, CAPS 301
2. CHEM 111 is not for students with Chemistry 12
3. Students who have not completed Calculus 12 should take MATH 180 or 184, plus either MATH 103 or 105 to fulfill their first-year mathematics requirement.
4. Equivalent courses include PHYS 107 or 117. Students without credit for Physics 12 must take PHYS 100 before taking other 100-level PHYS courses.
5. Equivalent courses include BIOL 201, BIOC 202, BIOC 203

To be selected in consultation with a program advisor. For suggested courses see the list ([http://www.landfood.ubc.ca/academics/undergraduate/restricted-electives/](http://www.landfood.ubc.ca/academics/undergraduate/restricted-electives/)) posted to the Faculty website.
The International Nutrition Major admissions

Students must submit a written application package, following the guidelines specified by the International Nutrition Major admission requirements. A minimum academic standing of 70% is required for eligibility to the Major. Achieving this minimum, however, does not guarantee admission. To be eligible for the Major, students must have completed Calculus 12 or Chemistry 12.

Equivalent courses include BIOL 153, CAPS 301
1 Equivalent courses include BIOC 101, 202, 203
2 Students who have not completed Calculus 12 should take MATH 180 or 184, plus either MATH 103 or 105 to fulfill their first year Math requirement.
3 Equivalent courses include PHYS 107 or 117. Students without credit for Physics 12 must take PHYS 100 before taking other 100-level PHYS courses.
4 Equivalent courses include FNH 351.
5 Non-science electives
6 To be selected in consultation with a program advisor. For suggested courses see the list (<http://www.landfood.ubc.ca/undergraduate/restricted-elective/>) posted to the Faculty website.

B.Sc. in Food, Nutrition, and Health (FNH) > Food, Nutrition, and Health Major

The Food, Nutrition, and Health (FNH) Major offers students the flexibility to tailor the program to reflect specific interests in food, nutrition, and health without the specialization depth offered by the other majors. With suitable course selections, students may be prepared to enter the Home Economics Teacher Education Program at UBC or complete a program that prepares graduates for employment opportunities in secondary schools as Home Economics teachers. Food, Nutrition, and Health Major

Equivalent courses include LFS 100 (1), LFS 150 (3) or ENGL 112 (3), BIOL 112 & 121 (6), BIOL 140 (2), CHEM 111/113 are not for students with Chemistry 12.
1 Equivalent courses include BIOL 153, CAPS 301
2 Equivalent courses include BIOL 300, EPSE 482, FRST 231, STAT 200.
3 Equivalent courses include PHYS 107 or 117. Students without credit for Physics 12 must take PHYS 100 before taking other 100-level PHYS courses.
4 Equivalent courses include BIOL 201, BIOC 202, BIOC 203
5 Non-science electives
6 To be selected in consultation with a program advisor. For suggested courses see the list (<http://www.landfood.ubc.ca/undergraduate/restricted-elective/>) posted to the Faculty website.

Unrestricted electives

Restricted electives

Total Credits

Overall four-year total credits

B.Sc. in Food, Nutrition, and Health (FNH) > International Nutrition Major

The International Nutrition Major is focused on human nutrition, with an emphasis on application in interdepartmental settings. Core and Specialized Food, Nutrition and Health courses are complemented by a unique international field study course, which allows students to integrate theory and practice. Students also benefit from an interdisciplinary education by completing elective coursework in health and human services, political science, economics, anthropology, sociology, geography or other approved disciplines. This major prepares students for employment in a range of fields, including development, health, education, agriculture, policy, and program evaluation.

To be eligible for the Major, students must have completed at least 60 credits by April 30 of the year in which they are applying. This must include the following pre-requisites or equivalent: LFS 100 (3), LFS 150 (3) or ENGL 112 (3), BIOL 112 & 121 (6), MATH 102/103 or equivalent (6), MATH 103 or 105 (3), CHEM 111 or 113 (6), BIOE 101 (3), FNH 200 (3), FNH 250 (3), CHEM 233 (3), CHEM 235 (3), FNH 350 (3), BIOL 112 & 113 or equivalent (3), as well as completion of the following courses: LFS 250 (6), LFS 252 or equivalent (3). Students wishing to take FRE courses should select one of ECON 101 or LFS 101, and ECON 102 as their non-science and unrestricted electives. Students considering a transfer to another FNH major should take the required electives for that major.

Equivalent courses include BIOL 153, CAPS 301
2 Equivalent courses include BIOL 300, EPSE 482, FRST 231, STAT 200.
3 Equivalent courses include PHYS 107 or 117. Students without credit for Physics 12 must take PHYS 100 before taking other 100-level PHYS courses.
4 Equivalent courses include BIOL 201, BIOC 202, BIOC 203
5 Non-science electives
6 To be selected in consultation with a program advisor. For suggested courses see the list (<http://www.landfood.ubc.ca/undergraduate/restricted-elective/>) posted to the Faculty website.

A minimum of 45 credits of the 124 credits required for the Major must be for courses numbered 300 or higher.
Nutritional Sciences Major

Nutritional Sciences graduates pursue advanced degrees or work in research related to health sciences, nutrition, and in public and private organizations related to health promotion.

B.Sc. in Food, Nutrition, and Health (FNH)

Program Information

Application Procedures

Non-UBC students must apply online by January 31 through Enrolment Services to enter the B.Sc. (FNH) Program in UBC’s Faculty of Land and Food Systems (LFS). External applicants are encouraged to contact LFS Student Services (http://www.landfood.ubc.ca/undergraduate/info) in advance of applying to ensure they have met prerequisite course requirements.

Current UBC students who are not already enrolled in the B.Sc. (FNH) Program must apply online through Enrolment Services to enter the Program. In the event of an unsuccessful application, students in good standing have the ability to remain in their original program/faculty.

All applicants must submit the International Nutrition Major application package to the Faculty (forms and guidelines available online (http://inmajor.landfood.ubc.ca/admissions/)). Each application package must include:

1. Completed application form, resumes, and personal statement
2. Transcripts (as required)
3. Application fee (http://inmajor.landfood.ubc.ca/admissions/)

Short-listed candidates are identified for interview based on initial screening, which considers both academic and non-academic application components.

Final decisions about applications are made once interviews are complete and final marks for the term are available. Applicants are informed about their admission status by early June.

Program Requirements

| Third Year | LFS 305 | 3 |
| LASS 302 | 3 |
| FNH 351 | 3 |
| FNH 355 | 3 |
| FNH 370 | 3 |
| FNH 398 | 3 |
| CAPS 301 | 6 |
| Restricted electives | 3 |
| Total Credits | 30 |

| Fourth Year | FNH 455 | 3 |
| FNH 473 | 3 |
| FNH 462 | 3 |
| FNH elective | 6 |
| Restricted electives | 6 |
| Unrestricted electives | 6 |
| Total Credits | 30 |

Overall 4 years total credit 120

1 A list of restricted electives is available on the Faculty website (http://www.landfood.ubc.ca/undergraduate/restricted-electives). Students may consult the Program Coordinator for International Nutrition to propose other restricted electives.

2 FNH 462 involves a minimum 12-week international nutrition field studies placement. Placements are selected in consultation with the Program Coordinator for the International Nutrition Major.

3 FNH electives (6 credits from FNH 301, 302, 303, 313, 471, 402, 451, 454, 477, 490, 497, 499).

B.Sc. in Food, Nutrition, and Health (FNH) > Nutritional Sciences Major

The Nutritional Sciences Major provides a strong foundation in human nutrition. All students take the same core, but students may use their elective courses to focus on an area of interest such as basic nutritional sciences, population and public health nutrition, and international nutrition. Graduates of the Nutritional Sciences Major can pursue advanced degrees or work in research related to health sciences, nutrition, and in public and private organizations related to health promotion.

Nutritional Sciences Major

| First Year | LFS 106 | 1 |
| LFS 150 or ENGL 112 | 3 |
| BIDL 112 | 3 |
| BIDL 121 | 3 |
| BIDL 155 | 6 |
| CHEM 121 (or 111) | 4 |
| CHEM 123 (or 113) | 4 |
| MATH 102 or equivalent | 3 |
| MATH 103 | 3 |
| PHYS 101 | 3 |
| Total Credits | 33 |

| Second Year | LFS 256 | 6 |
| LFS 252 | 3 |
| FNH 200 | 3 |
| FNH 250 | 3 |
| CHEM 233 | 3 |
B.Sc. in Food, Nutrition, and Health (FNH) > Dual Degree Program in Food, Nutrition and Health and Education

The Dual Degree Program in Food, Nutrition and Health and Education offers qualified students the opportunity to earn a B.Sc. (Food, Nutrition and Health) and a B.Ed. (Secondary) in five Winter Sessions with some academic requirements in Term 1 of the Summer Sessions. After completing all the requirements, students are normally eligible for a British Columbia Professional Teaching Certificate.

Admission

Admission to the Dual Degree Program requires application to the Land and Food Systems Student Services Office by January 31 of second year with approval by April in order to undertake a teaching practicum at the end of second year.

Application for admission to the program is made through the Land and Food Systems website [http://landfood.ubc.ca](http://landfood.ubc.ca) by January 31 of second year and must receive approval from the Faculty of Land and Food Systems and Education. All students will initially be accepted on a provisional basis. Admission will be confirmed only after successful completion of year two and successful completion of the in-school practicum in May following second year. A criminal records check is required of all teacher candidates admitted to the B.Ed. program.

Admission at any time is conditional; maintenance of good academic standing and an average of at least 65% in each session are required throughout. Students who do not maintain a 65% average will be required to withdraw from Education, but may continue with the Food, Nutrition and Health major if their average is 50.0% or higher. In addition, students must participate in volunteer or work experience with youth aged 13-18 to meet the requirements of the Bachelor of Education program. Students must satisfy all of the degree and specialization requirements for both the Food, Nutrition and Health major in the B.Sc. Food, Nutrition and Health and the B.Ed. Secondary program. Some individual courses may be considered to satisfy requirements for both degrees.

Students must communicate with an advisor in the Food, Nutrition and Health Program and the Teacher Education Office annually after admission to the program to discuss their progress.

The Dual Degree Program is not open to students with a previous degree.

First Year (Winter)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>LFS 100</td>
<td>1</td>
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<tr>
<td>ENGL 112</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 112 &amp; 121</td>
<td>6</td>
</tr>
<tr>
<td>BIOL 155</td>
<td>6</td>
</tr>
<tr>
<td>CHEM 121 (or 111)</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 123 (or 113)</td>
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<tr>
<td>MATH 123</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 100 or SOCI 100</td>
<td>6</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td><strong>33</strong></td>
</tr>
</tbody>
</table>

Second Year (Winter)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>LFS 250</td>
<td>6</td>
</tr>
<tr>
<td>LFS 252 or equivalent</td>
<td>3</td>
</tr>
<tr>
<td>FNH 200</td>
<td>3</td>
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<tr>
<td>CHEM 233</td>
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</tr>
<tr>
<td>CHEM 235</td>
<td>1</td>
</tr>
<tr>
<td>BIOL 200</td>
<td>3</td>
</tr>
<tr>
<td>SOCI 206 or SOCI 240</td>
<td>3</td>
</tr>
</tbody>
</table>

Third Year

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>LFS 350</td>
<td>3</td>
</tr>
<tr>
<td>BIOC 302</td>
<td>3</td>
</tr>
<tr>
<td>FNH 350</td>
<td>3</td>
</tr>
<tr>
<td>FNH 351</td>
<td>3</td>
</tr>
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<td>FNH 370</td>
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<tr>
<td>FNH 371</td>
<td>3</td>
</tr>
<tr>
<td>FNH 398</td>
<td>3</td>
</tr>
<tr>
<td>MICB 202</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td><strong>30</strong></td>
</tr>
</tbody>
</table>

Fourth Year

<table>
<thead>
<tr>
<th>Course</th>
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</thead>
<tbody>
<tr>
<td>FNH 451</td>
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</tr>
<tr>
<td>FNH 477</td>
<td>3</td>
</tr>
<tr>
<td>ECON 310 or LFS 101</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td><strong>30</strong></td>
</tr>
</tbody>
</table>

**Overall four-year total credits**: 124

1 Equivalent courses include BIOL 153, CAPS 201
2 CHEM 111 is not for students with Chemistry 12.
3 Students who have not completed Calculus 12 should take MATH 180 or 184 to fulfill their first-year MATH requirement.
4 Equivalent courses include PHYS 107 or 117. Students without credit for Physics 12 must take PHYS 100 before taking other 100-level PHYS courses.
5 Equivalent courses include BIOL 250, BIOC 202, BIOC 203
6 Equivalent courses include BIOL 153, DANS 152, FRST 231
7 For suggested course see the list [posted on the Faculty website](http://www.landfood.ubc.ca/academics/undergraduate/restricted-electives/)
8 A minimum of 45 credits required for the Major must be for courses numbered 300 or higher.
ENGL 110, 120 or 121  
BIDL 201  
Total Credits  
3  
3  
31  

Second Year (Summer)  
EDUC 319  
Total Credits  
1  

Third Year (Winter)  
LFS 380  
FNH 340  
FNH 341  
FNH 342  
EDST 411  
LLEO 300  
EPSE 317  
Restricted electives  
9  
Total credits  
30  

Third Year (Summer)  
EDUC 399  
Total Credits  
1  

Fourth Year (Winter)  
EDCP 491  
EPSE 308  
FNH 313  
FNH 320  
FNH 351  
FNH 403  
Health electives  
6  
Restricted electives  
9  
Total Credits  
33  

Fourth Year (Summer)  
EDST 463  
EDST 464  
EDUC 440  
LLEO 301  
Unrestricted Electives  
3  
Total Credits  
11  

Fifth Year (Winter)  
EDUC 315  
EDUC 421  
EDUC 430  
EDUC 450  
EDUC 451  
EPSE 310  
EPSE 311  
EDCP 391  
EDCP 492, 493, 494 or 498  
Total Credits  
31  

Fifth Year (Summer)  
EDUC 452  
Total Credits  
3  

Minimum Credits for Dual Degree  
174  

Equivalent courses include BIDL 153, CAPS 301  
2 CHEM 111 is not for students with Chemistry 12.  
3 Students who have not completed Calculus 12 should take MATH 180 or 184.  
4 Equivalent courses include BIDL 303, EPSE 482, FIRST 231, STAT 200.  
5 Equivalent courses include BIDL 201, BIOC 202, BIOC 203  
6 To be selected in consultation with a program advisor. Must include 18 credits of approved family studies and/or clothing and textiles courses at the 300 or 400 level.  
7 To be selected in consultation with a program advisor. For suggested courses see the list (http://www.landfood.ubc.ca/academics/undergraduate/restricted-electives/) posted on the Faculty website  

B.Sc. in Food and Resource Economics (FRE)  

B.Sc. in Food and Resource Economics (FRE) > Introduction  
The B.Sc. in Food and Resource Economics (FRE) allows students to critically analyze a wide range of economic issues in food supply chains, including the resource and environmental impacts of food production. The program consists of interdisciplinary courses in land and food systems, math and empirical methods courses, restricted elective courses, primarily in economics and business, and unrestricted electives. Students with an interest in agri-business and resource management can choose the Food and Resource Management stream, or apply for the Master of Management Dual Degree Program Option. Students who complete the B.Sc. (FRE) program are well suited to pursue graduate studies within the Masters of Food and Resource Economics (UBC), the School of Public Policy and Global Affairs (UBC) and various applied economics M.Sc. programs outside of UBC.  

Students can select their courses from one topic area, or mix-and-match across topic areas:  
- Food Markets and Trade  
- Land, Resources and Environment  
- Food and Resource Management  

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This document was generated on 19 Mar 2020 at 12:46 PM.
B.Sc. in Food and Resource Economics (FRE) > Admission

Students can apply to the Food and Resource Economics program after completing a minimum of 24 credits of post-secondary level courses, including: LFS 150, WIDS 150 or ENGL 100-level; MATH 104, ECON 101 and either MATH 105 or ECON 102. To be considered, students are required to have a minimum academic standing of at least 70% (or 2.80 on a 4-point scale). Achievement of this minimum, however, does not guarantee admission. Due to receipt of many more qualified applicants than there are spaces available in most programs, a higher average is often required.

To help assess suitability students must submit with their application a 500 word (maximum) Letter of Intent which addresses the following: a) why the student wishes to enroll in the Food and Resource Economics program; b) the student’s professional aspirations; and c) any relevant personal, volunteer, or work experience.

While not required, students interested in applying to the Bachelor of Science in Food and Resource Economics are strongly encouraged to follow the first-year requirements of the Food and Resource Economics Degree as outlined here.

B.Sc. in Food and Resource Economics (FRE) > Degree Requirements and Program Options

Degree Requirements

| Year   | Total Credits | Restricted Electives | Supporting Topic Courses | FRE Topic Courses | LFS 250 or ENGL 100-level
|--------|---------------|----------------------|--------------------------|------------------|-----------------------------
| First  | 30            | 3                    | 3                        | 3                | 12                          |
| Second | 30            | 3                    | 3                        | 3                | 12                          |
| Third  | 30            | 3                    | 3                        | 3                | 12                          |
| Fourth | 30            | 3                    | 3                        | 3                | 12                          |

B.Sc. in Food and Resource Economics (FRE) > Introduction

The Bachelor of Science in Global Resource Systems program recognizes that resource problems are complex and require solutions that are both systematic and interdisciplinary. To effectively address these problems, students will be challenged to work in teams, develop strong communication skills, and be prepared to follow their work into new research areas.

Students are eligible to apply to the Bachelor of Science in Global Resource Systems undergraduate program after completing first-year. They can begin the program at the beginning of second year or third year. In third and fourth years, students pursue a double major, a resource specialization, and a regional specialization.
For the resource specialization, students focus on one discipline or choose courses from different disciplines that relate to a resource theme. Options include, but are not limited to: environment, food and resource economics, First Nations resource systems, food security, global health, and nutrition, horticulture, human ecology, international development, and sustainable agriculture.

For the regional specialization, students choose Africa, Asia Pacific, Europe, or the Americas. Within the regional specialization, the program requires a relevant language other than English, a relevant international experience, and relevant coursework. The international experience requirement is met through a period of learning in the region via academic exchange, field study, or work-based learning (internships).

B.Sc. in Global Resource Systems (GRS) > Advising Office

See the Academic Advising Office.

B.Sc. in Global Resource Systems (GRS) > Admission

Students can apply to the GRS program after completing 24 credits of first-year university-level courses. To be considered, students are required to have a minimum academic standing of at least 70% (or 2.80 on a 4-point scale). Achievement of this minimum, however, does not guarantee admission. Admission is limited by the Faculty’s capability to accommodate students in this global program. When applying to GRS, students must submit a letter of intent (300 words or less) conforming to guidelines specified by GRS (http://www.landfood.ubc.ca/programs/grs_ug.htm). The letter of intent is to be submitted to Enrolment Services at the time of application.

Students are advised to complete first-year requirements listed in Degree Requirements.

Transfer from the Environmental Studies Diploma, Langara College

Students who successfully complete the Environmental Studies Diploma program at Langara College, and gain admission to the Faculty of Land and Food Systems and the Global Resource Systems (GRS) undergraduate program, will receive transfer credit for 60 credits into the GRS program if they have:

1. satisfied first-year requirements of the GRS program in Biology, Chemistry, Economics, English, and Mathematics;
2. completed UBC course AGSC 250 or equivalent; and
3. completed 6 credits of language relevant to the regional specialization.

They will be able to finish the GRS program with the further 62 credits required.

B.Sc. in Global Resource Systems (GRS) > Academic Regulations

Please see Academic Regulations(http://www.calendar.ubc.ca/vancouver/index.cfm?tree=12,194,795,0).

B.Sc. in Global Resource Systems (GRS) > Degree Requirements and Program Options

Bachelor of Science in Global Resource Systems

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<thead>
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</thead>
<tbody>
<tr>
<td>LFS 100</td>
<td>1</td>
</tr>
<tr>
<td>BIOL 111/112 or 121</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 121 (111)</td>
<td>4</td>
</tr>
<tr>
<td>ECON 101 or LFS 101</td>
<td>3</td>
</tr>
<tr>
<td>LFS 150 or ENGL 100-level</td>
<td>3</td>
</tr>
<tr>
<td>Language</td>
<td>6</td>
</tr>
<tr>
<td>MATH 100, 102, 104, 110, 180, or 184</td>
<td>3-4</td>
</tr>
<tr>
<td>Program Electives</td>
<td>9/8</td>
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<tr>
<td><strong>Total Credits</strong></td>
<td><strong>32</strong></td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Second Year</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>LFS 250</td>
<td>4</td>
</tr>
<tr>
<td>LFS 252</td>
<td>3</td>
</tr>
<tr>
<td>GRS 290</td>
<td>1/2</td>
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<tr>
<td>Language</td>
<td>6</td>
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<tr>
<td>Program Electives</td>
<td>11/10</td>
</tr>
<tr>
<td>Unrestricted Electives</td>
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</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td><strong>30</strong></td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Third and Fourth Years</th>
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</thead>
<tbody>
<tr>
<td>LFS 350</td>
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<tr>
<td>LFS 450</td>
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<td>Field Experience</td>
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<tr>
<td>GRS 297</td>
<td>1/2</td>
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<tr>
<td>GRS 400</td>
<td>2</td>
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<tr>
<td>Resource Specialization Electives</td>
<td>21</td>
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<tr>
<td>Anthropology and Culture</td>
<td>3</td>
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<tr>
<td>Economics and Commerce</td>
<td>3</td>
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<tr>
<td>Geography, History, and Political Science</td>
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<tr>
<td>Regional Specialization Electives</td>
<td>3</td>
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<tr>
<td>Program Electives</td>
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<tr>
<td>Unrestricted Electives</td>
<td>6</td>
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<tr>
<td><strong>Total Credits</strong></td>
<td><strong>60</strong></td>
</tr>
</tbody>
</table>

| Overall four-year total | **122** |

1 CHEM 111 is not for students with Chemistry 12.
2 EnGL 112 is recommended.
3 Students who pass an oral proficiency test for a language relevant to their regional specialization are exempt, and must choose 6 credits of program electives approved by a program advisor.
4 Students who have not completed Calculus 12 should take MATH 180 or 184 to fulfill their first-year Math requirement.
5 Courses that provide a foundation for the resource specialization. Science-based resource specializations require BIOL 121 and 140 and CHEM 113 or 123. Economics-based resource specializations require ECON 102. Must be approved by a program advisor.
Upon successful completion the notation “Minor in Commerce” will be placed on the student’s transcript. The Minor will consist of COMR 329 (3), COMR 457 (3), COMR 465 (3), COMR 473 (3), COMR 493 (3), and one of COMR 398 (3) or COMR 458 (3) for a total of 18 credits.

Due to the significant overlap in coursework, students in the Food Market Analysis Major and the Food and Resource Economics program are not normally permitted to complete a Commerce Minor.

Students wanting a foundation in business management are encouraged to consider the Minor in Commerce. Enrolment in this is limited.

2. Minor in Commerce

Upon successful completion, the notation “Minor in [subject-specific]” will be denoted on the student’s transcript. Students wanting a subject-specific minor may also undertake a minor in a specific Arts discipline’s minor program, which must be approved by an Academic Advisor in LFS Student Services.

An acceptable Arts Minor must comprise courses in the Faculty of Arts that are for credit toward a Bachelor of Arts degree and must consist of 18 upper-level credits in a single subject or field of specialization, of which at least 18 credits must be numbered 300 or higher. Upon successful completion the notation “Minor in Arts” will be added to the student’s transcript.

Minor Options

Global Resource Systems students are eligible to apply for a Minor in Arts, Minor in Commerce or a Minor in Science.

B.Sc. in Global Resource Systems (GRS) > Credit/D/Fail

Students in the Bachelor of Global Resource Systems program are permitted to take electives to satisfy degree requirements in compliance with the University’s Credit/D/Fail policy. Courses selected for Credit/D/Fail cannot be used to satisfy Regional or Resource specialization requirements. See Credit/D/Fail Calendar page (http://www.calendar.ubc.ca/vancouver/index.cfm?tree=0,42,910,294750) for current details.

Dual Degree and Minor Options

Dual Degree Options

1. Master of Management Dual Degree Program Option

This dual degree program option offers qualified students the opportunity to earn, in one course of study, an undergraduate degree from the Faculty of Land and Food Systems and a Master of Management degree from the Faculty of Commerce and Business Administration (also known as Sauder School of Business). This dual degree program option can be completed in four to five years through intensive study and scheduling that includes an summer following fourth year. The Business Career Centre in the Sauder School of Business will also provide extensive professional development and career preparation throughout the dual degree program option of study.

Due to the fixed scheduling requirements of the Dietetics Major, it is typically not possible for students in this major to do the Master of Management through the dual degree route.

Students admitted into this program can use COMR 135 (3) or COM 230 (3) towards their unrestricted elective requirement and COMR 320 (1.5), COM 321 (1.5), COMR 420 (1.5), and COMR 421 (1.5) towards their restricted elective requirement.

Students who are in the Food Market Analysis Major or the Food and Resource Economics program as part of the Dual Degree Program Option cannot take COM 320, COM 368, COM 457, COM 458, COMR 493, COMR 495 or COMR 497, due to significant content overlap with the Masters of Management required courses.

Additional specialized fees (Calendar page http://www.calendar.ubc.ca/vancouver/index.cfm/tree=14,246,687,42254) for the Master of Management will be paid by all students admitted into the dual degree program option. For further information on this dual degree program option see the Faculty of Commerce and Business Administration section of the Academic Calendar.

2. Dual Degree in Food, Nutrition and Health Education

See Dual Degree in Food, Nutrition and Health Education (http://calendar.ubc.ca/vancouver/profilefs/index.cfm?tree=12,194,26,1.1503)) for current details.

Minor Options

The Faculty of Land and Food Systems offers several minor options for students. Some minors are restricted to specific programs. For details please refer to the minor-specific content below. Enrolment in a Minor is limited to students eligible for third-year standing with an average of at least 60% in each of the previous two years. Meeting the stated minimum requirements does not guarantee admission into the Minor.

An acceptable Minor must consist of a minimum of 18 upper-level credits. Students should design a coherent and academically sound course of studies for their Minor, which must be submitted at the time of application. For guidelines on appropriate course selection, please refer to the minor-specific content below. Students with questions should consult with an Academic Advisor in LFS Student Services.

Of the 18 credits required for the minor, a maximum of 6 credits can be double-counted towards the elective and/or degree requirements of the major. Therefore, students should be prepared to complete 12 credits in addition to those required of their major.

Application forms for minors may be obtained from the Land and Food Systems website. Completed applications must be submitted no later than March 31st of the students’ second year.

Continuation in a Minor requires that the student maintains Good Academic Standing. In addition, space in many courses is limited. Admission to a Minor does not guarantee access to courses agreed upon for the Minor. Where space in courses required for a Minor is limited, a sessional average substantially higher than the minimum for Good Academic Standing may be required to enroll in registration in such courses. Students who wish to pursue a Minor should be aware of the prerequisites of many of the upper-level courses.

Students might encounter difficulty fitting the courses for the Minor into their program timetable; careful planning is essential, and completion of the Minor will usually require an additional period of study beyond four years.

1. Minor in Arts

An acceptable Arts Minor must comprise courses in the Faculty of Arts that are for credit toward a Bachelor of Arts degree and must consist of at least 18 upper-level credits in a single subject or field of specialization.

All courses must be acceptable for a B.A. major in the proposed subject area or field, although the student is not bound by other requirements of the Faculty of Arts. Space in many courses is limited. Admission to an Arts Minor does not provide priority access to courses agreed upon for the Minor.

Upon successful completion of the Minor, the notation “Minor in Arts” will be added to the student’s transcript.

Students wanting a subject-specific minor may also undertake a minor in a specific Arts discipline’s minor program, which requires the completion of at least 30 credits in a single subject field of specialization, of which at least 18 credits must be numbered 300 or higher. Upon successful completion, the notation “Minor in [subject-specific]” will be noted on the student’s transcript.

Space in many Arts courses is limited. Admission to an Arts Minor does not provide priority access to courses agreed upon for the Minor.

2. Minor in Commerce

Students wanting a foundation in business management are encouraged to consider the Minor in Commerce. Enrolment in this is limited.

Meeting the stated minimum requirements does not guarantee admission into the Minor.

Due to the fixed scheduling requirements of the Dietetics Major, it is typically not possible for students in this major to do a Commerce Minor.

Due to the significant overlap in coursework, students in the Food Market Analysis Major and the Food and Resource Economics program are not normally permitted to complete a Commerce Minor.

Applicants must have successfully completed one of MATH 100, 102, 104, 110, 120, 182, or 184 and one of ECON 101, LIFE 101, ECON 310, and one of ECON 102, ECON 311. In addition, a statement of intent is required as part of the application.

The Minor will consist of COM 320 (3), COM 457 (3), COM 465 (3), COMR 473 (3), COMR 493 (3) and one of COMR 398 (3) or COMR 458 (3) for a total of 18 credits.

Upon successful completion the notation “Minor in Commerce” will be placed on the student’s transcript.

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Co-operative Education (Co-op) is a process of education which integrates academic study with relevant, supervised and paid work experience in co-operating employer organizations.

Co-operative Education Program

Additional information about the Land One cohort option and the application process are available on the Land One website (http://landone.ubc.ca) section for details on applying to the Faculty of Land and Food Systems at UBC. As Land One integrates five courses, in addition to the Faculty's admission requirements, students must meet the pre-requisites of these courses as listed below (or the equivalent in the students' home curriculum):

1. FRST/LFS 110: No pre-requisites
2. MATH 102: High-school calculus and one of (a) a grade of 80% or higher in BC Principles of Mathematics 12 or Pre-calculus 12, or (b) a satisfactory score in the UBC Mathematics Basic Skills Test.
3. BIOL 121: Biology 11 or 12, or BIOL 111
4. MATH 100: High-school calculus and one of (a) a grade of 80% or higher in BC Principles of Mathematics 12 or Pre-calculus 12, or (b) a satisfactory score in the UBC Mathematics Basic Skills Test.
5. FRST/LFS 101: No pre-requisites
6. FRST/LFS 150: Enrolment limited to UFS students with first-year status and a minimum Language Proficiency Index (LPI) of 4 or equivalent. Because writing will be a significant part of the Land One option, proficiency in English is strongly recommended.
7. FRST/LFS 110: No pre-requisites

Students must submit a separate application for the Land One program, via an online application by May 31. Students are required to submit a Letter of Intent (500 word maximum) addressing why they would like to join Land One.

Additional information about the Land One cohort option and the application processes are available on the Land One website (http://landone.ubc.ca)

6. Minor in Forestry

Only students enrolled in the Bachelor of Science in Food, Nutrition, and Health degree may undertake a Minor in Forestry. Enrolment in this minor is limited.

Due to the fixed scheduling requirements of the Bachelor Major, a typical major is not possible for students in this major to do a Forestry Minor.

Students who wish to pursue a Minor in Forestry should consult the Forestry Minor listings for exceptions.

Upon successful completion of the Minor, the notation “Minor in Forestry” will be denoted on the student's transcript.

5. Minor in Science

The Minor in Science emphasizes an interdisciplinary perspective and experiential learning.

The Sustainable Food Systems Minor consists of LFS 300, 12 credits from 300- or 400-level courses from an approved list of courses available on the Faculty website (http://landfood.ubc.ca/undergraduate/restricted-elective/), and 3 credits selected from APBI 442, LFS 450, or LFS 494 for a total of 18 credits. Students must have their course of studies approved by an LFS advisor.

Upon successful completion of the minor program, the notation “Minor in Sustainable Food Systems” will be added to the student's transcript.

First Year Options

The Faculty of Land and Food Systems offers two options for enrolment in the first year:

1. The standard program in which students admitted to the Faculty design their own program according to Degree Requirements, selecting both the courses and the sections they wish to attend.
2. The Land One cohort option. Land One cohort option is jointly offered by the Faculty of Land and Food Systems and the Faculty of Forestry. In this limited-enrollment option, students admitted to their respective Faculty and degree programs enroll in a standard timetable of 15 core credits as a cohort. The standard timetable includes BIOL 121, MATH 102, LFS/FRST 101, LFS/FRST 110, and LFS/FRST 150. Additionally, students register for the remaining first-year credits according to their Degree Requirements.

Land One Option for the Faculty of Land and Food Systems

Land One is a unique way for first-year Land and Food Systems students in the Bachelor of Science in Applied Biology or Bachelor of Science in Food, Nutrition and Health programs to begin their degrees. Students with a passion for learning in an integrated format will benefit from the program's cohort model, where complex issues related to food security, climate change, land use, and sustainability are explored through a coordinated curriculum offered in a small learning community.

Jointly offered by the Faculty of Land and Food Systems (LFS) and the Faculty of Forestry, the option integrates required first-year subjects (BIOL 121, MATH 102, LFS 101, LFS 150 and LFS 110) within the context of real-world cases from both First Nations and Western perspectives. It facilitates students' transition to university and enhances the connections to their home Faculty by creating a learning community centred on collaborative engagement and learning with their peers and instructors.

Students register in a 15-credit standard timetable (STT) that consists of designated sections of BIOL 121, MATH 102, LFS 101 (all taught in the first term), LFS 150 (taught in the second term) and LFS 110 (taught over both terms).

Land One instructors teach the same course content as the standard program using examples, approaches, and case studies that relate to current issues in Land and Food Systems and Forestry. Lectures, tutorials, and peer-to-peer engagement. All Land One students attend their lectures together and have access to a designated study space, creating a smaller social and learning community.

LFS 110 is an integrative seminar that discusses the connections between courses in Land One and current issues. Each week, students meet for a one-hour lecture and a one-hour tutorial session throughout both terms 1 and 2. Students work in groups to explore disciplinary and integrative approaches to cases involving both First Nations and Western perspectives. Students also participate in field trips (e.g. to UBC farm, Malcolm Knapp Research Forest, and Museum of Anthropology) and engage in various hands-on activities.

All major programs in LFS allow for the Land One standard timetable to meet first-year degree requirements; however, students are responsible for meeting all remaining degree requirements in their respective program. The 15-credit standard timetable leaves space for students to take other courses in their first year and build their own program path within LFS, and across campus.

Application Process

The Land One program is limited to direct-entry students in their first-year of study in either the Bachelor of Science in Applied Biology or the Bachelor of Science in Food, Nutrition and Health. Students must be admitted to UFS in order to be eligible for the Land One cohort option.

Students should consult the Admissions (http://calendar.ubc.ca/vancouver/index.cfm?tree=12,202,320,157) section for details on applying to the Faculty of Land and Food Systems at UBC. As Land One integrates five courses, in addition to the Faculty's admission requirements, students must meet the pre-requisites of these courses as listed below (or the equivalent in the students' home curriculum):

- BIOL 121: Biology 11 or 12, or BIOL 111
- MATH 100: High-school calculus and one of (a) a grade of 80% or higher in BC Principles of Mathematics 12 or Pre-calculus 12, or (b) a satisfactory score in the UBC Mathematics Basic Skills Test.
- FRST/LFS 101: No pre-requisites
- FRST/LFS 150: Enrolment limited to UFS students with first-year status and a minimum Language Proficiency Index (LPI) of 4 or equivalent. Because writing will be a significant part of the Land One option, proficiency in English is strongly recommended.
- FRST/LFS 110: No pre-requisites

Students must submit a separate application for the Land One program, via an online application by May 31. Students are required to submit a Letter of Intent (500 word maximum) addressing why they would like to join Land One.

Additional information about the Land One cohort option and the application processes are available on the Land One website (http://landone.ubc.ca)
A graduate who plans to practise as an agrologist in the province of British Columbia is expected to register as a member of the BCIA. Applications should be forwarded to the Registrar, BCIA. A graduate of the Faculty holding a Bachelor of Science in Agroecology, Bachelor of Science in Applied Biology, Bachelor of Science in Global Resource Systems, or a Bachelor of Science in Global Resource Systems meets the educational requirements for membership in the BCIA.

Agrology is the profession of applying science and scientific principles to the business and art of agriculture. In British Columbia, agrology is recognized by the provincial statute of 1948, the Agrologists Act, under which the BC Institute of Agrologists (BCIA) (http://www.bcia.com) is incorporated.

A graduate of the Faculty holding a Bachelor of Science in Agriculture, Bachelor of Science in Applied Biology, Bachelor of Science in Food, Nutrition, and Health, or a Bachelor of Science in Global Resource Systems meets the educational requirements for membership in the BCIA.

Dr. and Mrs. S. Dekaban Foundation

A foundation was established by Dr. and Mrs. A. S. Dekaban primarily to permit graduate students from the Polish agricultural universities to study in the Faculty of Land and Food Systems. Polish students may spend up to six months in the Faculty, undertaking research related to their studies. The students are selected by the Polish agricultural universities. The foundation also supports occasional short-term visits by members of the Faculty of Land and Food Systems to Poland. The Polish students and the Polish agricultural universities are invited to submit requests for this purpose.

Graduate Certificate in Aquaculture

Program Overview

The Graduate Certificate in Aquaculture is a 4-month, 16 credit specialized program that will prepare students with the necessary skills and knowledge for careers in the aquaculture and related industries.

Admission Requirements

Applicants to the Graduate Certificate in Aquaculture must meet the minimum requirements of the Faculty of Graduate Studies for a Master's degree as follows:

- Completion of a recognized Bachelor of Science or an accredited academic institution. Applicants who also have completed a Bachelor of Applied Science will be considered on a case-by-case basis.
- Academic standing of a minimum 76% (B+) average in 300- and 400-level academic courses.
- A minimum of 12 credits of 300- and 400-level in the field of study presented.
- Submission of an application form (from the website), official transcripts from all academic institutions attended, and a personal written statement explaining why the applicant is seeking enrolment in the Aquaculture Certificate Program.
- English language proficiency: Applicants from a university outside Canada for whom English is not the primary language of instruction must present evidence of competency in written and oral English language prior to being considered for admission. Acceptable English language proficiency tests for applicants are listed at www.calendar.ubc.ca/vancouver/index.cfm?tree=3,18094,18142,0,0#18094. Students are required to take the Online English Proficiency Test (OEPT) issued by the Co-op Program.
- Recommended: completion of at least one course in each of Biology, Organic Chemistry, and Calculus.

Program Requirements

Courses will be delivered on campus during the Winter Term 1 (September – December). Students will complete the certificate on a full-time basis over a period of 4 months, completing 7 required courses:

- AQUA 501 (3)
- AQUA 502 (2)
- AQUA 503 (2)
- AQUA 504 (2)
- AQUA 506 (3)
- AQUA 507 (2)

Definitions of Satisfactory Progress

The minimum passing grade in any course taken by a student enrolled in the certificate is 60%. However, only 3 credits of courses with grades in the C to C+ range (60-67%) may be counted towards the certificate. For all other courses, a minimum of 60% must be obtained.

When a failing grade is obtained in a course, on the recommendation of the Faculty’s Associate Dean of Graduate Studies, the student may repeat a course for higher standing. If the Associate Dean does not make such a recommendation, the student will be required to withdraw. A student who obtains a grade of less than 60% in more than 3 credits will normally be required to withdraw for inadequate academic progress. The student will be informed of unsatisfactory academic progress in writing before any action regarding withdrawal is taken.

When repeating a failed course, a minimum mark of 74% must be obtained.
Academic Staff

Academic Staff > Applied Biology

Professors
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