

# Faculty of Agriculture, Forestry, and Home Economics

30	The Faculty of Agriculture, Forestry, and Home Economics	76
31	The Professors	77
31.1	Teaching and Scholarship	77
31.2	Members of the Faculty	77
32	General Information	78
32.1	General Information	78
32.2	Faculty Objectives	78
33	Faculty Regulations	78
33.1	Admission and Transfer	78
33.2	Undergraduate Program Bloodborne Pathogens Policy	78
33.3	Practicum Placements, Professional Practice and the Public Interest	79
33.4	Academic Standing and Graduation	79
33.5	Interruption of Studies	80
33.6	Time Limit to Complete Program	80
33.7	Petitions and Appeals	80
33.8	Student Advisory Services	80
34	Programs of Study	80
34.1	Degrees Offered	80
34.2	Internship and Cooperative Education Programs	81
34.3	BSc in Agricultural/Food Business Management	81
34.4	BSc in Agriculture	82
34.5	BSc in Environmental and Conservation Sciences	83
34.6	BSc in Environmental and Conservation Sciences/BA in Native Studies Combined Degrees—Human Dimensions of Environmental Management Major	85
34.7	BSc in Forest Business Management	85
34.8	BSc in Forestry—Forest Management Major	86
34.9	BSc in Human Ecology	86
34.10	BSc in Human Ecology/BEd (Secondary) Combined Degrees	87
34.11	BSc in Nutrition and Food Sciences	88
34.12	BSc After Approved Degrees	89
34.13	Graduate Studies	89
35	Courses	89

## 30 The Faculty of Agriculture, Forestry, and Home Economics

### More Than You Expect

We offer nine distinct Bachelor of Science degrees, including two jointly with the Faculty of Business, one with the School of Native Studies, and one with the Faculty of Education. Our strength comes from our diversity and depth in both the natural and social sciences.

Our degrees provide technical and practical skills in addition to sound biophysical and social science background. Five years after their 1995 graduation, none of this Faculty's respondents to the 2000 University of Alberta Employment Survey were unemployed. Only the Faculties of Medicine and Dentistry, Law, and Pharmacy and Pharmaceutical Sciences could say the same.

### Scholarships, Awards, and Bursaries

More than 130 scholarships, awards, and bursaries worth \$300,000 are offered to undergraduate students in the Faculty, making our students among the highest award recipients on campus. This does not include other general scholarships offered by the University (available to all students) or scholarships outside the University from private businesses as well as government.

### Professional Accreditation

Our graduates are eligible for Professional Accreditation in a number of organizations depending on their field of study.

- Alberta Human Ecology and Home Economics Association
- Alberta Institute of Agrologists
- Alberta Registered Professional Foresters Association
- Canadian Institute of Food Science and Technology
- College of Dietitians of Alberta
- Dietitians of Canada

### Internship Program

The Faculty of Agriculture, Forestry, and Home Economics offers an Internship Program (IP) for students in all programs. Through the IP, students have an opportunity to take their studies beyond the classroom and participate in a 8 to 16 month, full-time, competitively paid work placement.



## 32 General Information

### 32.1 General Information

The Faculty of Agriculture, Forestry, and Home Economics administers undergraduate programs that lead to the following BSc degrees.

#### BSc in Agricultural/Food Business Management

Majors:

- Agricultural Business Management
- Food Processing Business Management
- Food Service Business Management

#### BSc in Agriculture

Majors:

- Agricultural and Resource Economics
- Animal Science
- Crop and Horticultural Science
- Range and Pasture Management
- Sustainable Agricultural Systems

#### BSc in Environmental and Conservation Sciences

Majors:

- Conservation Biology
- Environmental Economics and Policy
- Human Dimensions of Environmental Management
- Land Reclamation

#### BSc in Environmental and Conservation Sciences/BA in Native Studies Combined Degrees

Major in Human Dimensions of Environmental Management

#### BSc in Forest Business Management

##### BSc in Forestry

Major in Forest Management

##### BSc in Human Ecology

Majors:

- Community Studies
- Family and Consumer Studies
- Textiles and Clothing

#### BSc in Human Ecology/BEEd Combined Degrees

#### BSc in Nutrition and Food Sciences

Majors:

- Food Science and Technology
- Nutritional Science

#### Pre Professional Program

Pre-Veterinary Medicine

For further information, visit Student Services at 2-10 Agriculture/Forestry Centre, or call us at (780) 492-4933 or 1-800-804-6417 (Western Canada), or e-mail questions@afhe.ualberta.ca. Our homepage is at www.afhe.ualberta.ca.

### 32.2 Faculty Objectives

Our undergraduate mission is to promote the development of graduates who are scientifically competent; sensitive to environmental, global, and other social issues; creative; and capable of leadership in addressing challenges faced by individuals, families, and the agriculture, forestry, food, and other natural resources sectors. The Faculty strives to develop the following skills and traits in its students:

- (1) Critical and creative thinking skills: the ability to analyze, integrate, and extrapolate information;
- (2) Good judgment in problem solving and decision making;
- (3) Good communication skills: literacy, speaking, and listening;
- (4) An appreciation of knowledge and education, and a commitment to continuous learning; and
- (5) An appreciation and understanding of international and cross-cultural considerations.

The Baccalaureate degrees in the Faculty provide students with a broad education and comprehensive preparation in their specialities. Programs provide students with

- (1) a solid foundation in applicable social, physical, and biological sciences, and in the humanities. Programs stress more than simple proficiency in

these disciplines; they offer courses that feature an integrated, multidisciplinary treatment of subjects;

- (2) awareness of current issues in the various disciplines and the ability to solve problems in their chosen occupations.

## 33 Faculty Regulations

### 33.1 Admission and Transfer

General University admission requirements are detailed in §§13 and 14. Detailed admission requirements for the Faculty of Agriculture, Forestry, and Home Economics are specified in §15.1.

The Faculty of Agriculture, Forestry, and Home Economics functions under enrolment management. As such, the Faculty's total student enrolment is limited. All applications with the minimum Admission Grade Point Average (AGPA) are evaluated and ranked as part of an applicant pool. Spaces in programs are allocated to the top applications in the applicant pool downward until the spaces in the programs are filled. Therefore, in any given year, the AGPA cutoff to a degree program may be higher than the minimum AGPA required for consideration.

Applicants should indicate their choice of a degree and major on their application. Those who have not selected a major by the end of their first year in the program shall be required to declare one before registering for the next academic year.

- (1) **Residence Requirement:** A maximum of two years of transfer credit completed outside the University of Alberta will be granted toward an undergraduate degree in the Faculty of Agriculture, Forestry, and Home Economics. This consists of ★60 or its equivalent (10 full-courses or 20 half-courses). A minimum of ★60 must be completed at the University of Alberta, of which a minimum of ★30 must be completed while registered in this Faculty. However, the amount of transfer credit granted and the amount of credit completed while registered in this Faculty will vary depending on the requirements of the particular degree. Students are advised to discuss their course and program requirements with Student Services or the Associate Dean (Academic), 2-10 Agriculture/Forestry Centre.
- (2) **Letter of Permission:** Following initial admission, students are expected to complete all requirements at the University of Alberta. Students may apply for permission to take courses at another institution for application to their program here if
  - a. they are degree students in the Faculty of Agriculture, Forestry, and Home Economics;
  - b. they present Satisfactory academic standing (i.e., Fall/Winter Grade Point Average of 2.0 or greater).
 Approval is not granted when the student has already received the maximum allowable transfer credit. There is no obligation to grant transfer credit unless prior permission has been obtained from Student Services. Qualified students should contact Student Services, 2-10 Agriculture/Forestry Centre to obtain the necessary forms before enrolling at another institution.
- (3) **Exchange Programs:** For students already admitted to a program in the Faculty of Agriculture, Forestry, and Home Economics who are participating in approved international exchange programs, credit is considered on a course-by-course basis. The residence requirement defined in (1) above applies to students participating in such exchanges.

### 33.2 Undergraduate Program Bloodborne Pathogens Policy

The University of Alberta recognizes its duty to minimize the risk of transmission of bloodborne pathogens to/by individuals studying or working at this University.

The Bloodborne Pathogens policy limits the possibility of transmission of bloodborne pathogens within the educational setting. The University recognizes, however, that it is not possible to completely eliminate the risk of infection (see §108.12 *General Faculties Council Policy Manual*).

The Faculty of Agriculture, Forestry, and Home Economics in accordance with the University of Alberta policies and other available guidelines, has developed the following policies concerning bloodborne pathogens. These

policies are to be reviewed and adapted, as further information on bloodborne pathogens becomes available.

For students in the BSc Nutrition and Food Sciences program who are accepted into the Coordinated Dietetics Program, immunization against Hepatitis B is strongly recommended, though not mandatory at this time. However, for project assistants in the biological sciences areas, Hepatitis B surface antigen testing will be performed by the University Health Centre. For those students who test negative for the Hepatitis B surface antigen (HbsAg), Hepatitis B vaccination will be required. See §109 of the *General Faculties Council Policy Manual* or contact Student Services (2-10 Agriculture/Forestry Centre) for details about testing and immunization.

Program restrictions will be applied when necessary to minimize the risk of transmission of bloodborne pathogens from students to other students, experimental subjects and service clients. Program restrictions, in keeping with reasonable accommodation guidelines, can be expected in cases where students test positive for any bloodborne pathogen, or refuse to complete the screening questionnaire, or refuse a questionnaire-based requirement for Hepatitis B and Hepatitis C testing. Program restrictions may include prohibition from participating in certain activities and procedures performed as part of research, service testing or teaching function.

Since the risk of HIV transmission from students to other students, service clients and experimental subjects is very low for the procedures followed in these settings, HIV risk assessment and testing will not be made a requirement at this time. However, all students accepted into the Faculty of Agriculture, Forestry, and Home Economics are encouraged to undergo HIV testing whenever concerns about infection arise.

**Note:** For updates on changes to medical testing and immunization refer to [www.registrar.ualberta.ca/calendar](http://www.registrar.ualberta.ca/calendar).

### 33.3 Practicum Placements, Professional Practice and the Public Interest

The Dean, or a designate acting on behalf of the Dean, may immediately deny assignments of a student, withdraw a student from, or vary terms, conditions or site of a work experience placement or practicum (Internship, Co-operative Education, Co-ordinated Dietetics and the Human Ecology Practicum), if the Dean or designate has reasonable grounds to believe that this is necessary in order to protect the Public Interest. Refer to §23.8.2 *Practicum Placements, Professional Practice and the Public Interest* and §87, *General Faculties Council Policy Manual*.

### 33.4 Academic Standing and Graduation

#### (1) Academic Performance

Academic standing will be assessed on the basis of a grade point average (GPA). Students are expected to maintain a GPA of at least 2.0. See §§23.4.6 and 23.9.2 for information on calculation of GPAs and the academic record.

A review of academic performance is conducted for each student at the end of each Fall/Winter.

The assignment and reassignment of academic standing are based on a student's performance in a minimum of ★9. If, at the time of review, the student has attempted fewer than ★9 since the last assignment of academic standing, the review will be deferred and the academic standing assigned at the last review will remain in effect until the next review.

#### (2) Application of Academic Standing

a. **Satisfactory Standing** (GPA 2.0 or higher). Students who maintain a satisfactory standing are permitted to continue their studies in the Faculty subject to meeting the specific requirements of their degree and the general requirements of the University of Alberta.

b. **Marginal Standing** (GPA 1.7 to 1.9, inclusive). Students receiving their first marginal standing are permitted to continue their studies in the Faculty under academic warning. At the next assignment of academic standing, such students must present a Fall/Winter GPA of at least 2.0 on a minimum of ★9 to clear academic warning and continue their studies with Satisfactory Standing.

Students with Marginal Standing twice during their program in the Faculty will be required to withdraw (see d. Required to Withdraw).

c. **Unsatisfactory Standing** (GPA of 1.6 or lower). Students with unsatisfactory standing are required to withdraw (see d. Required to Withdraw).

Students who are required to withdraw from the Faculty at the end of Fall/Winter may not register for the following Summer Term. Students who register for Summer Term courses prior to the

requirement to withdraw will have their registration cancelled without penalty.

#### d. Requirement to Withdraw

Students with Unsatisfactory Standing or who are placed on Marginal Standing twice during their program will normally be required to remain out of the Faculty.

1) Students who have completed less than ★60 and who have achieved a GPA of between 1.3 and 1.6 may be permitted to continue at the University of Alberta in the Fresh Start program providing they have not previously been required to withdraw from any postsecondary program.

The Faculty will determine whether to recommend a student for participation in the program and will notify the student of that option. Successful completion of ★18 with a GPA of at least 2.7 or ★24 with a GPA of at least 2.0 (2.7 for the Business Management programs) will be required for readmission. Further detailed information can be found in §§14.5, 23.6.2(3)a. and 190.5.

If successful in the Fresh Start program and all conditions specified by Open Studies and the Faculty have been fulfilled, students may apply for readmission to the Faculty as transfer students as described in §15.1.7; or

2) Students who complete ★18 transferable to the University of Alberta with an AGPA of 2.7 or ★24 transferable to the University of Alberta with an AGPA of 2.0 (2.7 for the Business Management programs) at another postsecondary institution may reapply for admission to the Faculty, unless they have been required to withdraw more than once from any postsecondary programs [see §15.1.7 (1)(4)].

See §23.6.2(3)a.

Students who have been required to withdraw and who, after being readmitted, again fall below a Fall/Winter GPA of 2.0 will be required to withdraw and will not be readmitted to the Faculty.

Students may petition their Required to Withdraw status and if successful will proceed on probation. At the next assignment of academic standing, such students must raise their Fall/Winter GPA to at least 2.0. Should their Fall/Winter GPA fall below 2.0 at any time during the rest of their program they will be required to withdraw and will not be readmitted to the Faculty.

**Note:** Students with marginal standing or who are on probation are only permitted to interrupt their programs with the prior, written approval of the Associate Dean (Academic). Should students in either of these categories interrupt their programs for more than twelve months without prior approval, readmission will not be granted unless the student meets the current readmission criteria.

(3) **First-Class Standing:** For the purposes of scholarships and awards, First-Class Standing in a given year is awarded to any undergraduate student who obtains a GPA of not less than 3.5, the GPA to be computed on a minimum of ★24 taken during that year, the year to consist of the Fall/Winter Terms. Students who attend for only one term of Fall/Winter are eligible if they complete at least ★12 with a minimum GPA of 3.5.

(4) **Dean's List:** This designation is given to students who achieve a GPA of at least 3.7 on a minimum of ★18 in the Fall/Winter Terms. Students who attend for only one term of Fall/Winter are eligible if they complete at least ★9 with a minimum GPA of 3.7.

(5) a. **Application for Graduation:** Students must apply for their degree at the Faculty Student Services Office by February 1 for Spring Convocation or by September 1 for Fall Convocation.

b. **Convocation:** All requirements for graduation at Spring Convocation must be met by the end of the Fall/Winter Terms. Those completing degree requirements during the Fall Term of Fall/Winter will graduate at Spring Convocation; those completing degree requirements during Spring/Summer Terms will graduate at Fall Convocation.

#### (6) Curriculum and Graduation

The programs for the BSc degrees in Agricultural/Food Business Management, Agriculture, Environmental and Conservation Sciences, BSc (Environmental and Conservation Sciences)/BA (Native Studies) Combined Degrees, Forest Business Management, Forestry, Human Ecology, Human Ecology/BE Combined Degrees, and Nutrition and Food Sciences, must conform to the descriptions in §§34.3 to 34.11, respectively. BSc in Environmental and Conservation Sciences/BA in Native Studies Combined students should also see §34.6.2. Although students are advised to discuss their programs with an Academic Advisor, students are ultimately responsible for the completeness and accuracy of their registrations.

Students registered in the BSc in Forestry and BSc in Forest Business Management programs are required to complete Forestry Field Schools (FOR 101, 302, 303, and 304). Students registered in the BSc in Environmental and Conservation Sciences and the BSc in Environmental and Conservation Sciences/BA in Native Studies programs are required to complete ENCS Field School (ENCS 308).

Students registered in the BSc in Agriculture, Agricultural/Food Business Management, Environmental and Conservation Sciences, Human Ecology, and Nutrition and Food Sciences degree programs require ★120 to graduate. Students registered in the BSc in Forestry and Forest Business Management degree programs require ★123 to graduate. Students registered in the BSc in Human Ecology/BEed and the BSc in Environmental and Conservation Sciences/BA in Native Studies Combined Degrees require ★150 to graduate.

(7) **Courses Extra to the Degree**

Courses successfully completed while registered in a program which are not being used for degree credit are known as courses extra to the degree. Such courses are, however, included in the assessment of academic standing. Students who register for more than a minimum number of courses for graduation should designate the additional courses as extra. In order to exclude courses in excess of the minimum requirement from the contract for graduation, students must designate such courses as “extras” at the time of registration for their final year.

(8) **Graduation Grade Point Average**

In order to be eligible for graduation from any of the programs offered by the Faculty of Agriculture, Forestry, and Home Economics, students must present Satisfactory Academic Standing [see (9) below] and obtain a GPA of at least 2.0 on their last ★60 normally completed during the third and fourth years.

Where more than ★60 were completed in the last two years, the grades from all courses completed in the last year will be used in this calculation. Additional credits from the previous term(s) (whether necessary at this university or at another institution) will be used as necessary to make the ★60 requirement.

Where fewer than ★60 were completed in the last two years, the grades from all courses completed in the last two years will be used in this calculation. Additional credits from the previous term(s) (whether completed at this university or at another institution) will be used as necessary to make the ★60 requirement. The grade points for additional courses needed to make ★60 will be calculated by multiplying the GPA of all courses completed in that term by the number of credits required to make ★60.

Where students have designated successfully complete courses extra to the degree, the designated courses will not be included in the calculation of the graduation GPA.

(9) **Extension to the Graduating Year**

Students who have successfully completed at least ★120, ★123 or ★150 [for programs as indicated in (6)] who do not meet program requirements for graduation, and who are otherwise eligible to continue in their program of study, may continue to register to the end of the next Fall/Winter of study in order to meet graduation requirements.

Students who have been given their first assignment of “Marginal Standing” (i.e. Academic Warning) in their graduating year, may continue to register to the end of the next Fall/Winter of study. Students must complete at least ★9 in order to meet the “Satisfactory Standing” requirement for graduation [see (8) above].

Students who are in Unsatisfactory Standing, (i.e., Required to Withdraw), may petition/appeal to be allowed to complete one further Fall/Winter of study in order to meet graduation requirements. If graduation requirements are not met within the Fall/Winter period, such students will be required to withdraw and will not normally be readmitted.

(10) **Graduation with Distinction**

This designation is awarded to a student achieving a grade point average of 3.5 or greater on the last ★60. The same calculation as detailed in Graduation Grade Point Average in (8) above applies.

(11) **Reexamination Policy**

See §23.5.5 for University Regulations.

(12) **Nonstandard course load**

Students wishing to take more than ★15 in a term must have satisfactory standing and approval of an Academic Advisor and Student Services, 2-10 Agriculture/Forestry Centre.

## 33.5 Interruption of Studies

Students who wish to take a break from studies for more than 12 months follow the new program requirements when they return to the Faculty. Permission to follow their current requirements can be requested by writing the Associate Dean (Academic) at least 14 days prior to the beginning of the term the student wishes to miss.

## 33.6 Time Limit to Complete Program

Although there is no time limit for degree completion, program requirements change with time. Eight years from the year of original admission, students who have not yet completed their degree and wish to do so must follow the program requirements in the current *Calendar*. Exception requests must be submitted to the Associate Dean (Academic).

## 33.7 Petitions and Appeals

The Faculty of Agriculture, Forestry, and Home Economics has petition and appeal procedures so that students who encounter special problems relating to academic standing, grade or course concerns, and program requirements have them reviewed in an equitable manner. A copy of these Faculty regulations regarding petitions and appeals may be obtained from Student Services, 2-10 Agriculture/Forestry Centre.

**Note:** Deadlines exist for submission of petitions and appeals. Contact the Faculty for details.

Under certain conditions, an unsuccessful appeal within the Faculty may be carried to the General Faculties Council Academic Appeals Committee. See §23.8.

## 33.8 Student Advisory Services

Undergraduate students seeking advice on academic matters should do the following:

- (1) For answers to general questions about careers, course content, fields of specialization, and preparation for graduate study, students should consult an Academic Advisor. A list of Academic Advisors is available from Student Services, 2-10 Agriculture/Forestry Centre.
- (2) For information regarding Faculty regulations on admission, readmission, program requirements, transfer credit, course registration, withdrawal, and graduation requirements, students should consult Student Services, 2-10 Agriculture/Forestry Centre.
- (3) Students who are encountering special difficulties related to their programs or to Faculty decisions, and students with problems of an individual nature, should contact the Associate Dean (Academic), 2-10 Agriculture/Forestry Centre.

# 34 Programs of Study

## 34.1 Degrees Offered

The Faculty offers programs leading to nine BSc degrees. General information and specific course requirements for each degree and major are outlined in §§34.3 to 34.11.

The BSc in Agriculture; Environmental and Conservation Sciences; Forestry; Human Ecology; and the Nutrition and Food Sciences programs have a common structure although the number of required credits in each program core varies. These programs consist of the following five elements:

(1) **Common Core**

- a. AFHE 304, ECON 101 and 102
- b. ★3 from AREC 323, ORG A 301, 311, or 321
- c. ★12 Free electives

(2) **Program Core:** ★39 to ★99 provides basic competencies defining the degree.

(3) **Requirements of the Major:** ★33 to ★57 focuses specialization within each degree.

- (4) **Approved Program Electives (APEs)** build on the requirements of the major and allow some customization of the learning experience. Only ★6 of APEs are allowed at the 100- and 200-level.
- (5) **Capstone courses** synthesize information learned throughout the four years of the program.

The Faculty also jointly offers two BSc degree programs with the Faculty of Business in Agricultural/Food Business Management and Forest Business Management. The Faculty offers two combined degrees, a BSc Human Ecology/BEd and a BSc Environmental and Conservation Sciences/BA Native Studies. In the combined degrees programs students can complete two degrees in five years.

## 34.2 Internship and Cooperative Education Programs

Students in the Faculty of Agriculture, Forestry, and Home Economics have the opportunity to complete a paid work experience component as part of their program. Two options, detailed in §§34.2.1 and 34.2.2 are available.

### 34.2.1 Internship Program Option

The Internship Program is coordinated by the Faculty of Agriculture, Forestry, and Home Economics and is open to students registered in one of the Faculty programs.

The Internship Program provides optional experiential learning to augment academic study with an 8-, 12- or 16-month period of paid, discipline-related work experience with a cooperating employer. The work experience period is usually between the third and fourth years of academic study. Upon completing the internship work period students return for at least one academic term. To accommodate the work experience period, students normally require between four and five years to complete the full degree requirements.

Students can apply for acceptance into the Internship Program following their second year of study if they are in good academic standing, are Canadian citizens or hold permanent resident status, and are registered in one of the academic programs offered by the Faculty of Agriculture, Forestry, and Home Economics. Application forms are available at Student Services (2-10 Agriculture/Forestry Centre).

The normal sequencing for the IP is as follows: students apply by November 30; they compete for posted jobs December through March; students begin their internships starting May or September.

Students registered in the IP receive assistance in finding suitable work placements. The Internship Coordinator and Faculty mentors are responsible for working with IP students to help them conduct an active job search. The ultimate responsibility for securing work, however, rests with the student and there is no guarantee that all qualified students will be placed.

While engaged in work experience, IP students are enrolled in WKEXP courses, pay part-time tuition and are considered full-time students at the University of Alberta. To successfully complete the IP, students must complete at least two of the following WKEXP courses: WKEXP 981, 982, 983. All WKEXP courses are ★0 and are graded on a pass/fail basis. Grades are determined by the student's job performance, as evaluated by the employer, and by the student's final report, as evaluated by the Internship Coordinator and Faculty mentor.

Further information about the IP can be obtained by contacting the Internship Coordinator in the Faculty of Agriculture, Forestry, and Home Economics.

Students should be aware that under Alberta's Protection for Persons in Care Act, they may be required to satisfy a criminal records check before being allowed to serve a period of internship/coop work. See §23.8.3 for further details.

### 34.2.2 Cooperative Education Program Option

- (1) **General Information:** The Cooperative Education Program is coordinated by the Faculty of Business and is open to students registered in Agricultural/Food Business Management or Forest Business Management programs. Details are described in §54.5 BCom (Cooperative Education Program).

All students who are Canadian citizens or permanent residents are eligible to compete for places in the coop program following successful completion of the second year of studies in Agricultural/Food Business Management or Forest Business Management. Students are admitted to the program based on a combination of grades, letter of intent, letters of reference, and a personal interview. The application deadline is June 30.

- (2) **Course Sequence:** The required courses for Cooperative Education students are the same as provided in the BSc Agricultural/Food Business Management Program or BSc Forest Business Management Program. In addition, Year 3 includes Introduction to Cooperative Education (non-credit seminar) and WKEXP 911. Year 4 (and 5) include WKEXP 912 and WKEXP 913. It should be noted that the final term in the Cooperative Education Option must be a school term.

## 34.3 BSc in Agricultural/Food Business Management

### 34.3.1 General Information

Agricultural/Food Business Management graduates develop a strong understanding of business concepts and principles applied to the agricultural or food industries and have a basic knowledge of the technical processes involved.

The program provides the background for a career in an agricultural or food business setting. Graduates may choose careers in management, sales or finance in the agricultural or food industry, but they also have the ability to interact comfortably with technical specialists and have a good understanding of the products and processes with which they are involved. Graduates may become scientists and technical specialists with a deeper understanding of business management. Graduates are prepared to enter the work force directly or proceed to graduate study. In either case, they are able professionals who enhance the competitive strength of the Albertan, Canadian and global economies. Graduates would qualify to apply to be Articling Agrolgists which can lead to status as Professional Agrolgists.

The program is offered jointly by the Faculty of Agriculture, Forestry, and Home Economics and the Faculty of Business. Although it is administered in the Faculty of Agriculture, Forestry, and Home Economics, the program is managed by an interdisciplinary committee with representation from both Faculties.

Students choose one of three majors: Agricultural Business Management, Food Processing Business Management, and Food Service Business Management. See §15.1.1 for admission information and recommended courses in the first year of studies.

Students are provided with the analytical, scientific and educational foundation on which to build the business and technical components of their field. Those choosing Agricultural Business Management are challenged with technical courses in agricultural science, including animal, plant or soil sciences. Students interested in Food Business Management may pursue one of two majors: Food Processing Business Management or Food Service Business Management. Students whose interests lie in food processing complete technical courses in food processing, manufacturing, microbiology, and food engineering. Students interested in food service management complete technical courses in food microbiology and chemistry, food quality, food service systems management, and food service facility planning and design. Students in all majors take courses in business including accounting, finance, marketing, and human resources. Each student in the program is expected, through a Capstone course, to integrate knowledge from the agricultural or food sciences with the business management disciplines.

Students should complete all junior requirements before taking senior courses. Students must consider prerequisites for advanced courses when planning their program.

- (1) **BSc in Agricultural/Food Business Management Required Courses (★93)**
- ACCTG 311 and 322
  - AFHE 304
  - AREC 214 or MATH 120
  - AREC 313
  - BIOL 107 or 108
  - Capstone course is CAPS 423
  - ECON 101, 102, 281, and 282
  - ★6 ENGL (ENGL 101 recommended)
  - FIN 301
  - ★12 Free electives
  - MARK 301
  - MATH 113 or 114
  - ORG A 301, 311, or 312
  - STAT 151
  - ★27 Approved Program Electives (See Note)
- Note:** Approved Program Electives (APEs) include AFHE electives offered by the Faculty of Agriculture, Forestry, and Home Economics, and BUS electives offered by the Faculty of Business. Students need to

consult the list of Approved Program Electives in choosing courses for their major. Lists are available from Academic Advisors and Student Services, 2-10 Agriculture/Forestry Centre. Only ★6 are allowed at the 100- and 200-level.

### 34.3.2 Agricultural Business Management Major (★27)

- (1) ★6 Approved Program Electives
- (2) AREC 200
- (3) AN SC 200
- (4) ★9 from AN SC, PL SC, or SOILS (300-level or higher)
- (5) PL SC 221
- (6) SOILS 210

### 34.3.3 Food Processing Business Management Major (★27)

- (1) ★3 Approved Program Electives
  - (2) CHEM 161 and 163
  - (3) NU FS 100, 283, 353, 363, 373, and 454 (See Note)
- Note:** Students who take NU FS 373 in the first year of the program should select an Approved Program Elective in place of NU FS 100.

### 34.3.4 Food Service Business Management Major (★27)

- (1) CHEM 161 and 163
  - (2) NU FS 100, 323, 363, 373, 374, 461, and 463 (See Note)
- Note:** Students who take NU FS 373 or 374 in the first year of the program should select an Approved Program Elective in place of NU FS 100.

### 34.3.5 Cooperative Education Option

See §34.2.2.

## 34.4 BSc in Agriculture

### 34.4.1 General Information

- (1) The Faculty offers courses leading to the degree of Bachelor of Science in Agriculture. The program provides students with an understanding of the scientific principles underlying the many facets of agriculture together with their application in agricultural systems and related industries. Through a broadly based educational experience, students develop student capacities for critical and independent thought and clear expression of ideas. Throughout the program, emphasis is placed on integrating several areas in the physical, biological, and social sciences relevant to modern agricultural practices.

Graduates will have a background in basic social, natural, and agricultural sciences, with an emphasis on sustainable production, renewable agricultural resource management, and economic analysis. Graduates qualify to apply to be Articling Agrologists which can lead to status as Professional Agrologists.

- (2) During their first year, or before they register for their second year, students should consult an Academic Advisor. Course choices may affect scheduling for majors.
- (3) Students in the BSc Agriculture program must choose one major: Agricultural and Resource Economics, Animal Science, Crop and Horticultural Science, Range and Pasture Management or Sustainable Agricultural Systems (see §33.1).
- (4) Each student must complete at least ★3 in a Capstone course, usually taken during the final year. These courses provide cross-disciplinary integration of subject matter. Each course normally has two or three instructors from different disciplines and has course prerequisites.
- (5) Students in the Pre-Veterinary Medicine program (§34.4.7) are able to continue in the BSc in Agriculture degree and will normally receive credit for courses already completed successfully.

### (6) Requirements of the Common Core and the BSc Agriculture Program Core

#### Common Core (★24)

- a. AFHE 304
- b. ★3 from AREC 323, ORG A 301, 311, 321
- c. ECON 101 and 102
- d. ★12 Free electives

#### Program Core (★36)

- a. AREC 200
- b. AREC 214 or MATH 120
- c. AN SC 200
- d. ★6 from BIOL 107, 108, 207, 208, (BIOCH 203 or 220 or PL SC 331), (BIOCH 205 or AN SC 391), EAS 101, 102 (See Note 4)
- e. Capstone course is CAPS 400
- f. ★6 ENGL (ENGL 101 recommended) or ★3 ENGL and ★3 Social Sciences/Humanities (See Note 5)
- g. MATH 113 or 114
- h. PL SC 221
- i. SOILS 210
- j. STAT 151

#### Notes

- (1) Students should complete all junior requirements before taking senior courses.
- (2) Students must consider prerequisites for advanced courses when planning their program; e.g., AN SC 391 requires PL SC 331 or ★3 in biochemistry as a prerequisite.
- (3) Students should consult the list of Approved Program Electives (APEs) in choosing courses for their major. Lists are available from Academic Advisors and Student Services, 2-10 Agriculture/Forestry Centre.
- (4) BIOL 108 required for Sustainable Agricultural Systems Major.
- (5) Social Sciences/Humanities courses are from the offerings of the Faculty of Arts and the School of Native Studies.

### 34.4.2 Agricultural and Resource Economics Major

- (1) **General Information:** This major provides students with an understanding of the basic principles of economics and of technical agricultural sciences related to production, processing, marketing, and financing farm and agrifood industries. Students have access to economic and management theory about farming and off-farm agriculture firms, and analytical techniques that permit them to understand and assess influences on farms and related industries. The program develops knowledge of economics and agricultural sciences that permits graduates to understand agriculture systems and to develop an ability to integrate ideas and concepts about agriculture industries.

Graduates with this major can work and serve in management, planning, and advisory positions in a wide range of agricultural industries, government agencies, or private consulting firms. In addition, students who complete this major are well prepared for entry into a graduate study program.

### (2) Requirements of the Major (★60)

- a. ACCTG 300
- b. ★6 from 400-level AREC courses
- c. ★6 from AREC; R SOC or SOC
- d. ★6 from AREC 333, 373, 384, INT D 303
- e. AREC 313
- f. ECON 281 and 282
- g. INT D 365 or 369
- h. ★27 Approved Program Electives (only ★6 are allowed at the 100- and 200-level)

### 34.4.3 Animal Science Major

- (1) **General Information:** The Animal Science Major encompasses studies of livestock and poultry production.

This major enables students to gain an understanding of the scientific disciplines of animal science including physiology, genetics, biochemistry, nutrition, and behavior. Students will also learn how to integrate and apply these concepts to solve problems in animal production systems.

Graduates with this major find opportunities in a wide range of agribusiness industries, government agencies, primary agriculture, and graduate study programs.

### (2) Requirements of the Major (★60)

- a. AN SC 310 and 311
- b. AN SC 385 or 484
- c. ★6 chosen from AN SC 471, 472, 474, 475 and 476
- d. ★6 chosen from BIOL 107, 108, 207, 208, (BIOCH 203 or 220 or PL SC 331), (BIOCH 205 or AN SC 391), EAS 101, 102 (not taken in core)
- e. ★3 NUTR
- f. NUTR 365
- g. ★6 of Organic Chemistry, Inorganic Chemistry or Physics
- h. ★27 Approved Program Electives (only ★6 are allowed at the 100- and 200-level)

### 34.4.4 Crop and Horticultural Science Major

- (1) **General Information:** This major focuses on the agronomy and science of agricultural and horticultural crop production.

The Crop and Horticultural Science Major gives students an in-depth understanding of the scientific disciplines involved in plant growth, soil characteristics, and plant responses to a range of environmental factors. Students will also learn about biotechnological, breeding, and production and management techniques used to develop, grow, and market well-adapted high-quality and high-yielding crop cultivars, in a way that responds to economic situations, market demands, and societal expectations. Students may choose to emphasize either Crop or Horticultural Science or combine courses from both areas.

Graduates with this major are able to work and serve in technical and management positions in agricultural industries, or in advisory, regulatory, sales and management positions in government agencies. Students who complete this major are well prepared for entry into a graduate study program.

- (2) **Requirements of the Major (★60)**
- ★6 chosen from BIOL 107, 108, 207, 208, (BIOCH 203 or 220 or PL SC 331), (BIOCH 205 or AN SC 391), EAS 101, 102 (not taken in core)
  - BOT 240
  - ★6 of Organic Chemistry, Inorganic Chemistry or Physics
  - ★6 chosen from PL SC 324, 465, SOILS 460
  - ★6 chosen from ENT 207, PL SC 352, 380
  - ★6 chosen from ENCS 356, PL SC 354, 355, 357
  - ★27 Approved Program Electives (only ★6 are allowed at the 100- and 200-level)

### 34.4.5 Range and Pasture Management Major

- (1) **General Information:** In this cross disciplinary major students are introduced to the theory and practice of managing soil-plant-animal relationships within the context of cultivated and native grasslands used by wildlife and domestic herbivores. Key areas of study include the structure, function, and ecology of native and cultivated plant communities, plant and animal physiology, plant-animal interactions under grazing, response of plant communities to grazing, the complementary and conflicting requirements of domestic herbivores and wildlife, and intensive versus extensive-based production systems.

Graduates are prepared for careers as land and livestock managers with government agencies or businesses involved in the management of private and public (e.g., multiple-use) grazing land.

- (2) **Requirements of the Major (★60)**
- ★3 chosen from AN SC 472, 474 or 475
  - ★6 chosen from BIOL 107, 108, 207, 208, (BIOCH 203 or 220 or PL SC 331), (BIOCH 205 or AN SC 391), EAS 101, 102 (not taken in core)
  - ★3 chosen from AN SC 310, AN SC 311, BOT 240, REN R 321, NUTR 260
  - ENCS 356 and 406
  - ★6 of Organic Chemistry, Inorganic Chemistry or Physics
  - ★3 chosen from BOT 384, ENCS 407, 471, PL SC 352
  - PL SC 354
  - SOILS 420 or 460
  - ★27 Approved Program Electives (only ★6 are allowed at the 100- and 200-level)

### 34.4.6 Sustainable Agricultural Systems Major

- (1) **General Information:** Knowledge about individual components of agricultural systems (including people, plants, animals and soil, water and other resources) has expanded rapidly, but less is known about how these systems work as a whole. There is a need to integrate knowledge from a number of disciplines in order to maintain and enhance the performance of agricultural systems so that resource use is efficient and sustainable. Agricultural systems can be viewed from a local, national or international perspective. A systems approach to sustainable agriculture considers the linkages between human activity and institutions with agricultural production systems. Key areas of study include agricultural production systems, natural resource management and the interrelationships of these with social and economic systems.

Graduates are prepared for careers in agriculture and systems analysis within government or the agriculture and food industry.

- (2) **Requirements of the Major (★60)**
- ★3 from AREC 333, 384, 473
  - ★3 from AN SC 471, 472, 474, 475, 476, ENCS 356, PL SC 354, 355, 357, 440
  - ★6 from AN SC 391, BIOCH 220, BIOL 107, 207, EAS 101, 102, Organic Chemistry, Inorganic Chemistry, PHYS (not taken in core)
  - BIOL 208
  - ★3 from EAS 221, FOREN 201, REN R 410
  - ENCS 203
  - ENCS 461
  - INT D 365
  - REN R 450
  - R SOC 355
  - SOILS 420
  - ★24 Approved Program Electives (only ★6 are allowed at the 100- and 200-level)

### 34.4.7 Pre-Veterinary Medicine Program

- (1) **General Information:** The Veterinary Medicine program consists of two years of Pre-Veterinary Medicine at the University of Alberta and four years of Veterinary Medicine at the Western College of Veterinary Medicine, University of Saskatchewan, Saskatoon. A quota exists on Alberta students entering Veterinary Medicine at the University of Saskatchewan, and students with the highest standing in the work of the two pre-veterinary years will receive preference. Because the Western College of Veterinary Medicine is a regional institution, it admits almost exclusively students from western Canada with quotas for each province. For detailed information on residence policy and admissions procedures, contact the Admissions Office, Western College of Veterinary Medicine for a copy of the Admissions Brochure.

Students planning to enter Pre-Veterinary Medicine should note the entrance requirements in §15.1.6. Inquiries about the program should be addressed to Student Services, 2-10 Agriculture/Forestry Centre, Faculty of Agriculture, Forestry, and Home Economics, University of Alberta.

- (2) **Required Courses:** Two full years of university training are required for admission to the Western College of Veterinary Medicine, during which credit must be secured for the number of courses customarily considered a standard load in the curriculum in which they are obtained. The program of study must include the following: Biochemistry (★6), Biology (★6), Chemistry (★6), English (★6), Electives (★15), Genetics (★3), Introductory Microbiology (★3), Mathematics or Statistics (★6), Organic Chemistry (★3), Physics (★6)
- (3) **Courses taken in BSc Agriculture Pre-Veterinary Medicine**
- AFHE 304
  - (BIOCH 203 and 205) or (PL SC 331 and AN SC 391)
  - BIOL 107 and 108
  - BIOL 207 and 208
  - CHEM 101 and 102
  - CHEM 161 and 163
  - ECON 101 and 102
  - ENGL 101 (★6)
  - ★3 Free Elective
  - MATH 113 (or 114)
  - PHYS 124 and 126
  - ★3 STAT
- (4) **Transfer to Programs in the Faculty:** Students successfully completing the two years of pre-veterinary medicine may continue in the Faculty and earn the BSc in Agriculture or one of the other degrees that the Faculty offers. Two additional years of credit, or more depending on the program selected, may be required to complete the degree.

## 34.5 BSc in Environmental and Conservation Sciences

### 34.5.1 General Information

- (1) The BSc in Environmental and Conservation Sciences program is for students interested in environmental and conservation issues. Graduates have a strong background in basic and applied sciences. They are able to evaluate effects of human land use on plant, soil, water, animal, and human resources and to assess and facilitate conservation, reclamation,



and remediation measures for natural and damaged ecosystems. They are not only reactive but also agents for positive, responsible stewardship and change.

Graduates understand the role that social, economic, and political forces play in natural resource management. They integrate knowledge from various disciplines and are cognizant of the various philosophies about the role of humans in the environment. They are able to employ balanced judgment based on a foundation of environmental ethics and philosophy, and suggest appropriate use of natural resources.

The BSc in Environmental and Conservation Sciences emphasizes integrating natural science, management, and social science as related to environmental issues. It offers a program of study emphasizing applied problem solving and environmental management.

Employment opportunities include career paths with government or non-government agencies (such as private corporations and private consulting) concerned with forestry, parks, nature reserves, nature centres, environmental education, recreational areas, wildlife management, environmental policy analysis, rangeland management, land reclamation, environmental sociology, ecotourism, environmental planning, and environmental management.

Graduates would qualify to apply to be Articling Agrologists which can lead to status as Professional Agrologists.

- (2) The BSc in Environmental and Conservation Sciences program requires coursework in resource assessment, environmental philosophy, environmental policy, and natural resource/environmental economics. Students must choose a major by their second year of study. Students may wish to consult with an academic advisor about selection of approved program electives.

(3) **Requirements of the Common Core and the Environmental and Conservation Sciences Program Core**  
**Common Core (★24)**

- a. AFHE 304
- b. AREC 323
- c. ECON 101 and 102
- d. ★12 Free electives

**Program Core (★60)**

- a. AREC 214
- b. BIOL 107 and 108
- c. BIOL 208
- d. ★3 Organic Chemistry and ★3 chosen from CHEM, PHYS 124, 126
- e. ENCS 201, 203, 204, 260, 307, and 473
- f. ENCS 308 (field school) (See Note 6)
- g. ★6 ENGL (ENGL 101 recommended) or ★3 ENGL and ★3 Social Sciences/Humanities (See Note 5)
- h. INT D 365
- i. MATH 113 or 114
- j. R SOC 355
- k. SOILS 210
- l. STAT 151

**Notes**

- (1) Students should complete the common core and program core prior to completing major requirements.
- (2) Students should complete all junior requirements before taking senior courses.
- (3) Students must follow prerequisites for advanced courses when planning their program.
- (4) Students should consult the list of Approved Program Electives (APEs) in choosing courses for their major. Lists are available from Academic Advisors and Student Services, 2-10 Agriculture/Forestry Centre.
- (5) Social Sciences/Humanities courses are from the offering of the Faculty of Arts and the School of Native Studies.
- (6) ENCS 308 is normally taken in the summer between third and fourth year.

### 34.5.2 Conservation Biology Major

This major builds the foundation in ecological sciences and natural resource management required to understand conservation priorities for both protected areas and lands managed for multiple values. Students are exposed to the competing demands on natural environments and the challenges in developing integrative approaches towards wildlife and habitat conservation. The program places an emphasis on understanding, planning, and managing the complex ecological relationships of natural environments and strategies aimed at securing their biological integrity and sustainability. Graduates are prepared for careers with government and non-government agencies concerned with land management and wildlife and fisheries issues on managed lands or protected areas, as well as advanced degrees in the fields of wildlife ecology and conservation. Employment opportunities also exist with industry and consulting firms.

- (1) **Requirements of the Major (★36)**
- a. ★9 chosen from BOT 332, ENCS 356, 376, 406, 476, FOR 322, ZOO 332
  - b. ENCS 364
  - c. ENCS 462
  - d. Capstone course is ENCS 464
  - e. ★18 Approved Program Electives (only ★6 are allowed at the 100- and 200-level)

### 34.5.3 Environmental Economics and Policy Major

Graduates choosing this major develop skills in the economic analysis of environmental problems and the policy process associated with environmental issues. The interaction among economic, social, political, and legal elements of environmental problems are also addressed. The Environmental Economics and Policy major builds on the Environmental and Conservation Sciences Core with a block of courses intended to provide the background for economic, social, and legal approaches to environmental problems and to build quantitative and analytical skills. Extensions into advanced economic theory, political theory, social theory, and other policy sciences are selected from groups of approved program electives.

Graduates are prepared for careers in government and private industry in environmental economic analysis, policy analysis, and other related areas.

- (1) **Requirements of the Major (★36)**
- a. ECON 281 and 282
  - b. ENCS 352
  - c. INT D 365 and 465
  - d. Capstone course is ENCS 410
  - e. ★18 Approved Program Electives (only ★6 are allowed at the 100- and 200-level)

### 34.5.4 Human Dimensions of Environmental Management Major

Students in this major will learn about the role of collective action, institutions, policy, and management approaches to address environmental and natural resource issues. A firm foundation in the natural sciences allows students to understand the complexities of environmental change and then focus on the social context and organization through which environmental problems are addressed. Students will take a variety of courses that will prepare them to work in the areas of natural resource management, parks planning, management and interpretation, public outreach for environmental and parks policies and programs, and in other settings as liaisons between members of the public and resource management agencies. Also see §34.6 for information on the BSc in Environmental and Conservation Sciences/BA in Native Studies combined degrees with the Human Dimensions of Environmental Management major.

- (1) **Requirements of the Major (★36)**
- a. ENCS 352 and 462
  - b. HECOL 301
  - c. SOC 315
  - d. R SOC 355
  - e. Capstone course is R SOC 450
  - f. ★18 Approved Program Electives (only ★6 are allowed at the 100- and 200-level)

### 34.5.5 Land Reclamation Major

This major combines the natural and applied sciences to understand and minimize the impacts of anthropogenic activities on natural resources, with emphasis on soil, plant, and water components of the ecosystem. Graduates will be able to conduct and/or direct remediation strategies and conservation measures to maintain quality environments and to reclaim disturbed and damaged ecosystems.

Graduates are prepared for careers in government and nongovernment organizations and deal with a broad range of issues related to soil and water pollution, land reclamation, revegetation, remediation, and soil and water conservation. Graduates will contribute natural science expertise to environmental impact assessments and land-use planning.

- (1) **Requirements of the Major (★36)**
- a. ENCS 455, 475, REN R 475
  - b. ★3 chosen from ENCS 356, 406, PL SC 352, 354, 360
  - c. ★6 chosen from SOILS 420, 430, 440, 450, 460
  - d. Capstone course is REN R 485
  - e. ★15 Approved Program Electives (only ★6 are allowed at the 100- and 200-level)

## 34.6 BSc in Environmental and Conservation Sciences/BA in Native Studies Combined Degrees—Human Dimensions of Environmental Management Major

### 34.6.1 General Information

(See §§15.1.3 and 15.9.4)

- (1) The Faculty of Agriculture, Forestry, and Home Economics and the School of Native Studies offer a five-year integrated program of ★150 leading to Bachelor of Science and a Bachelor of Arts degrees. A better academic understanding of the Aboriginal use of resources can prepare students to work effectively in various contexts where knowledge of Aboriginal and Treaty rights and issues is required. The Combined Degrees between Environmental and Conservation Sciences and Native Studies are a means for students to specialize in the management of Aboriginal resources. The major in the Combined Degrees program is Human Dimensions of Environmental Management.

The program is open to both Native and non-Native applicants. Enrolment management procedures of the School of Native Studies and the Faculty of Agriculture, Forestry, and Home Economics will apply for all years of the program.

Students will remain in the Faculty or School to which they were admitted for the duration of their program.

- (2) **Required Courses** (See §103.5.2)

Courses for the Combined BSc in Environmental and Conservation Sciences/BA in Native Studies degrees must be carefully sequenced throughout the five years; therefore, students should plan their programs carefully with help from Academic Advisors from both the Faculty and the School.

a. **Arts Requirements (★27)**

- 1) ★3 Fine Arts from Art, Art History, CLASS 352 or 353, Design, Drama, FMS 200 or 205, HECOL 150, 250, 353, 354, or 454, Music, or NS 360 (See Note 1)
- 2) ★6 Humanities from (CLASS 110 and HIST 110), C LIT 100, (HIST 111 and 112), HIST 120, (PHIL 101 and 102), or RELIG 101
- 3) ECON 101 and 102
- 4) ENGL 101 (★6)
- 5) ★3 from SOC 100 or 300 (See Note 1)
- 6) SOC 315 (See Note 2)

b. **Science Requirements (★21)**

- 1) BIOL 107, 108, and 208
- 2) ★3 Organic Chemistry and ★3 from CHEM, PHYS 124, PHYS 126
- 3) MATH 113 or 114
- 4) STAT 151

c. **Native Studies Requirements (★30)**

- 1) NS 210, 211, 390
- 2) ★6 from NS 152, (NS 105 and 153), or (NS 154 and 155)
- 3) ★9 from NS 100, or NS courses at the 200- or 300-level (See Note 1) (See §103.1.3 Cross-listed Courses)
- 4) ★6 from any NS courses at the 400-level (See §103.1.3 Cross-listed Courses)

d. **Environmental and Conservation Sciences Requirements (★15)**

- 1) AREC 214
- 2) AREC 323
- 3) AFHE 304
- 4) ENCS 201, 203, 204, 260, 307, 352, 462, and 473
- 5) ENCS 308 (field school) (See Note 3)
- 6) HECOL 301 (See Note 2)
- 7) INT D 365
- 8) R SOC 355
- 9) Capstone course is RSOC 450
- 10) SOILS 210

e. **Electives (★21)**

- 1) ★18 chosen from Approved Program Electives (APEs). The list is available from the AFHE Student Services, 2-10 Agriculture/Forestry Centre. (See Note 1)
- 2) ★3 Free elective (See Note 1)

#### Notes

- (1) No more than ★48 can be taken at the junior (100) level. ★42 junior level is required in the program. As a result, ★6 is the total 100-level allowable from all of the following combined: ★3 Fine Arts, ★3 from SOC 100 or 300, ★9 from NS 100 or any NS courses at the 200- or 300-level; the APEs; and ★3 elective.
- (2) The HECOL 301 prerequisite (HECOL 100) has been waived. The SOC 315 prerequisite (SOC 210) has also been waived.
- (3) ENCS 308 is normally taken in the summer between third and fourth year.

### 34.6.2 Appeals and Graduation

#### (1) Appeals

Students registered in the Combined Degrees can obtain consistent information for formal and informal grade appeal and academic appeal procedures and regulations from both the Faculty of Agriculture, Forestry, and Home Economics, and the School of Native Studies.

#### (2) Graduation

Students registered in the BSc (Environmental and Conservation Sciences/BA (Native Studies) Combined Degrees require ★150 to graduate. The GPA and requirements check will be done in consultation with the School of Native Studies. See §§33.4 and 102.6.

## 34.7 BSc in Forest Business Management

### 34.7.1 General Information

This program develops graduates with the abilities required of foresters and of business professionals. Graduates should appreciate the need to manage forested areas with due concern for all resources and be capable of managing forested areas as integrated ecological entities. Graduates should also fully understand and appreciate the business management skills needed to manage organizations effectively and efficiently within the forest industry.

The Forest Business Management degree is intended to prepare students for careers as professional foresters and is for individuals planning careers focusing on forest practices, but who also demand specialized knowledge in business management practices. The Forest Business Management program prepares students for careers as Registered Professional Foresters. Graduates may immediately apply to the Alberta Registered Professional Foresters Association to complete the registration process.

The program is offered jointly by the Faculty of Agriculture, Forestry, and Home Economics and the Faculty of Business. Although it is administered in the Faculty of Agriculture, Forestry, and Home Economics, the program is managed by an interdisciplinary committee with representation from both Faculties. See §15.1.4 for admission and recommended courses in the first year of studies.

Students in the BSc in Forest Business Management program are provided with the analytical, scientific, and broad educational foundations on which to build the business and forestry components of their field. The forestry component includes courses in areas such as ecology, engineering, and conservation.

The program core includes four one-week field schools (FOR 101, 302, 303, and 304) that provide training in technical aspects of forestry. FOR 101 should be taken in the first year (or in the initial year in the BSc in Forest Business Management program) just before the start of regular classes. FOR 302, 303, and 304 are taken in the spring between second and third years.

The business management component of this degree consists of introductory and advanced courses in business, including accounting, finance, marketing, and human resources. Each student in the program is expected, through a Capstone course, to integrate knowledge from forestry-related sciences with the business management disciplines. This Capstone course is taken in the fourth year.

Students should complete all junior requirements before taking senior courses. Students must consider prerequisites for advanced courses when planning their program.

#### (1) **Forest Business Management Required Courses (★123)**

- a. ACCTG 311 and 322
- b. AFHE 304
- c. AREC 214 or MATH 120
- d. BIOL 208
- e. ★6 BUS electives 400-level
- f. Capstone course is CAPS 423
- g. CHEM 161
- h. ECON 101, 102, and 281
- i. ENCS 201 or 364
- j. ★3 ENGL (See Note 3)

- k. ENT 280
- l. FIN 301
- m. FOR 101, 302, 303 and 304 (field school) (See Note 1)
- n. FOR 210, 314, 322, 323, 340, and 350
- o. FOR EC 345 and 473
- p. FOREN 201, 335, and 355
- q. ★6 Free electives (See Note 3)
- r. MARK 301
- s. MATH 113 or 114
- t. ORG A 301
- u. PL SC 385
- v. REN R 110, 120, 220, 321, and 430
- w. SOILS 210
- x. STAT 151

**Notes**

- (1) FOR 101 (★0) must be taken in the student's first year (or in the student's initial year in the BSc in Forest Business Management program) just before the start of regular classes. FOR 302 (★1), 303 (★1) and 304 (★1) must be taken in the spring between second and third years.
- (2) BUS Electives are courses in the Faculty of Business.
- (3) ENGL 101 (★6) recommended. Students taking ENGL 101 reduce their free electives to ★3.

**34.7.2 Cooperative Education Option**

See §34.2.2.

**34.8 BSc in Forestry—Forest Management Major****34.8.1 General Information**

The Faculty offers courses leading to the degree of BSc in Forestry. The program offers a single major, Forest Management. The program consists of four years of University study with a yearly course load of ★30.

The BSc in Forestry develops graduates who appreciate the need to manage forested areas with due concern for all resources and who have the capability and knowledge to manage forested areas as integrated ecological entities. It focuses primarily on forest management, the protection, manipulation, and use of the forest resource while ensuring that sustainability and other social and cultural needs are met.

The field of forestry embraces topics as diverse as economics, ecology, engineering and conservation. As a consequence, a broad range of career opportunities exist for graduates. The program prepares students for careers as Registered Professional Foresters working in government or industrial organizations or as consultants. To complete the registration process, graduates apply directly to the appropriate Registered Professional Foresters Association.

Field school exercises provide training in technical aspects of forestry, including forest mensuration, engineering, ecology, and silviculture. All students must complete a Capstone course (FOR 431) in Integrated Resources Management. This course is taken in the final year and focuses on integrating concepts from various disciplines within the natural and social sciences and their application to problems and challenges in forest resource management. The required courses for completion of the BSc in Forestry program are indicated below.

**Requirements of the Common Core and the BSc Forestry Program Core**

- (1) **Common Core (★24)**
  - a. AFHE 304
  - b. ★3 from AREC 323, ORG A 301, 311, 321
  - c. ECON 101 and 102
  - d. ★12 Free electives
- (2) **Program Core (★99)**
  - a. AREC 214 or MATH 120
  - b. ★12 Approved Program Electives (only ★6 are allowed at the 100- and 200-level)
  - c. BIOL 208
  - d. CHEM 161
  - e. ENCS 201 or 364
  - f. ★6 ENGL (ENGL 101 recommended)
  - g. ENT 280
  - h. FOR 101, 302, 303, and 304 (field school) (See Note 1)
  - i. FOR 210, 314, 322, 323, 340, 350
  - j. Capstone course is FOR 431

- k. FOREC 345 and 473
- l. FOREN 201, 335, and 355
- m. MATH 113 or 114
- n. PL SC 385
- o. REN R 110, 120, 220, 321, and 430
- p. SOILS 210
- q. STAT 151

**Notes**

- (1) FOR 101 (★0) must be taken just before the start of regular classes in the first year. FOR 302 (★1), 303 (★1), and 304 (★1) must be taken in the spring between the second and third year.
- (2) FOR 431 is a capstone course that integrates content of other courses.
- (3) Students should complete all junior requirements before taking senior courses.
- (5) Students are required to follow prerequisites for advanced courses when planning their program. Scheduling of courses is also included in a program planning package provided to students with their registration package.
- (6) Students should consult the list of Approved Program Electives (APEs) in choosing courses for their major. Lists are available from Academic Advisors and Student Services, 2-10 Agriculture/Forestry Centre.

**34.9 BSc in Human Ecology****34.9.1 General Information**

Human Ecology is a multidisciplinary field that uses a holistic approach to solve human problems and to enhance human potential in all environments where people live and work: the social, natural, cultural, political, and material. Completion of ★120 is required.

Students should be aware that under the Alberta Protection of Persons in Care Act, they may be required to satisfy a criminal records check before being allowed to participate in the required practicum (field placement).

**(1) Requirements of the Common Core and the Human Ecology Program Core**

- a. **Common Core (★24)**
  - 1) AFHE 304
  - 2) ★3 from AREC 323, ORG A 301, 311, 321
  - 3) ECON 101 and 102
  - 4) ★12 Free electives
- b. **Program Core (★48)**
  - 1) ENGL 101 (★6)
  - 2) HECOL 100
  - 3) HECOL 200
  - 4) HECOL 201
  - 5) HECOL 300
  - 6) HECOL 301
  - 7) HECOL 408
  - 8) Capstone Course is HECOL 409 (★6)
  - 9) STAT 151 or SOC 210
  - 10) ★3 from MARK 312, NS 390, SOC 315, W ST 302
  - 11) ★6 Natural Sciences from BIOL 107, 108, CHEM 101, 161, 163, EAS 102, 205, 208, NUTR 100, PHYS
  - 12) ★6 from Social Science/ Humanities (see Note 5)

**Notes**

- (1) It is strongly recommended that students complete all junior requirements before taking senior courses.
- (2) Students are advised to consider prerequisites for advanced courses when planning their program, e.g. senior textile and conservation courses require CHEM 161 and 163 as the Natural Sciences requirement.
- (3) Students should consult the list of Approved Program Electives (APEs) in choosing courses for their major. Lists are available from Academic Advisors and Student Services, 2-10 Agriculture/Forestry Centre.
- (4) Professional Designation: To meet the educational requirements for Professional Human Ecologist/Home Economist designation, students must present ★48 in Human Ecology, Nutrition and Food Science, or Nutrition.
- (5) Social Sciences/Humanities course are selected from Anthropology, Canadian Studies, Classics, Comparative Literature, Earth and Atmospheric Sciences (Faculty of Arts courses only), Economics, Film and Media Studies, History, Languages, Linguistics, Native Studies (except NS 100), Philosophy, Political Science, Psychology (Faculty of Arts courses only), Religious Studies, Rural Sociology, Sociology, Theology, Women's Studies, and courses defined by the Faculty of Arts as Fine Arts.

**34.9.2 Practicum Program**

- (1) Two courses comprise the Practicum Program in Human Ecology: HECOL 408 and 409. HECOL 408 must be successfully completed prior to completing HECOL 409.

- (2) Students are not permitted to register in Practicum Program courses while on academic warning.
- (3) Registration in Practicum Program courses is a two-part process. Students must first complete and submit an application form to the Practicum Coordinator in April prior to the academic year they will take their practicum courses. Students then register in HECOL 408 and 409.
- (4) HECOL 408 is offered in Fall Term. HECOL 409 is offered in both Winter Term and Spring Term. Not all cooperating employers offer placements in both Winter and Spring.
- (5) Students registering in Spring Term HECOL 409 will not be eligible for convocation in June immediately following their practicum.
- (6) Because of the intensity of the workload while completing HECOL 409, students must not exceed the ★15 maximum in course registration for that term.
- (7) A student who has been assigned a grade of "W" or "NC" in a Practicum Program course is entitled to a second registration in this course. If a student receives a "W" or "NC" in the second attempt of a Practicum Program course, he/she is normally required to withdraw from the BSc in Human Ecology program.
- (8) Any student who has withdrawn from a Practicum Program course must receive the approval of the Practicum Coordinator to reregister in the course.
- (9) During their practicum students are expected to conduct themselves according to the AHEA Code of Ethics and the University of Alberta Code of Student Behavior.

### 34.9.3 Community Studies Major

#### General Information

Culture, heritage, values, resources, and the evolving political infrastructure are the key factors that define the dynamic interaction between communities and their environments. The community studies major will provide the student with an understanding of the nature of these interactions in local and global, rural and urban, mainstream and peripheral communities. Perspectives include the ecological, socio-economic and political implications for communities. Graduates will be employed in community agencies, government, and/or private industry, where communities interface with policy and program development.

- (1) **Requirements of the Major (★48)**
  - a. ANTHR 250 or NS 210
  - b. ★3 from EAS 191, 293, ENCS 260
  - c. ★6 from HECOL 150, 322, 412, 494, NU FS 323, 477
  - d. ★3 from HECOL 440, 441, AREC 473
  - e. HECOL 461, 462
  - f. ★3 from HECOL 494, INT D 370, NS 345, R SOC 310
  - g. R SOC 355
  - h. ★3 from SOC 352, 353, EAS 293
  - i. ★18 Approved Program Electives (★9 must be chosen from HECOL. Only ★6 are allowed at the 100- and 200-level.)

### 34.9.4 Family and Consumer Studies Major

The Family and Consumer Studies major allows students two streams, Working with Families and Family Finance. In the Working with Families stream, students will learn about family strengths, issues, prevention, and intervention techniques across the life span. Some areas that will be covered are parent-child relationships, family relations, sexuality, family challenges, aging, family finances, and consumer behavior. In the Family Finance stream, students will be given a background understanding of family functioning and challenges, in addition to more specialized courses in family finance. Graduates will work in jobs such as program coordinators, day care managers, career counsellors, social workers, family support workers, consumer educators, credit counsellors, financial counsellors, and retirement planners.

- (1) **Requirements of the Major (★48)**
  - a. HECOL 210
  - b. HECOL 310
  - c. HECOL 320
  - d. HECOL 322
  - e. HECOL 412
  - f. HECOL 413
  - g. HECOL 212 or 414
  - h. HECOL 440
  - i. ★24 Approved Program Electives (only ★6 are allowed at the 100- and 200-level)

### 34.9.5 Textiles and Clothing Major

The Textiles and Clothing major allows students two streams: Design and Merchandising, or Historic Dress and Culture. Students may study textile and fashion design including computer-aided design, the textile and apparel industries both locally and globally, textile properties and quality assurance, theories of fashion and dress, and museum curatorship and conservation. Graduates are employed in fashion buying and merchandising, fashion design, fashion media, computer-assisted designing, textile and apparel quality assurance, museum management or textile conservation, theatre costume design, interior design and housing, or as business entrepreneurs.

- (1) **Requirements of the Major (★51)**
  - a. HECOL 150
  - b. HECOL 170
  - c. HECOL 250 or ENGG 208
  - d. HECOL 268
  - e. HECOL 360
  - f. HECOL 370 or 472
  - g. HECOL 441
  - h. ★27 Approved Program Electives (★6 must be from HECOL at the 400-level or above. Only ★6 are allowed at the 100- and 200-level.)

### 34.10 BSc in Human Ecology/BEd (Secondary) Combined Degrees

- (1) **General Information** (See also §15.5.6)

The Faculty of Agriculture, Forestry, and Home Economics and the Faculty of Education offer a five-year integrated program of ★150 leading to the degrees of Bachelor of Science in Human Ecology and Bachelor of Education (Secondary). Students can do the Combined BSc in Human Ecology/BEd Degrees to teach in Career and Technology Studies (CTS) strands such as Fashion Studies, Career Transitions, Foods, Community Health, or other teachable majors as well as Career and Life Management (CALM). Students initially apply for admission to the Faculty of Agriculture, Forestry, and Home Economics and are registered in that Faculty for the first three years of the program. All qualified Year 3 BSc in Human Ecology/BEd students will be promoted to Year 4 in the Faculty of Education provided a minimum GPA of 2.0 has been achieved and a minimum of ★90 applicable to the BSc in Human Ecology/BEd program has been successfully completed.

#### Notes

- (1) Students in Year 3 must submit a Readmission or On-Campus Transfer application form. Students in Year 3 who have completed less than ★90 toward the BSc in Human Ecology/BEd program, but who have a GPA of at least 2.0, may remain in Year 3 of the BSc in Human Ecology/BEd program in the Faculty of Agriculture, Forestry, and Home Economics for one additional year.
- (2) A student who has been assigned a grade of "W" or "NC" in an Education Field Experience course is entitled to a second registration in this course. See also §22.1.3 Reregistration in Courses. Notwithstanding §22.1.3, students who receive a "W" or "NC" in the second attempt of a Field Experience course, will be required to withdraw from the combined degrees program, but may transfer back to the BSc in Human Ecology program.
- (3) The final year of the program will normally be taken in attendance at the University of Alberta. Exemptions from this regulation can be made only with approval of the Faculty of Agriculture, Forestry, and Home Economics and the Faculty of Education.

- (2) **Required Courses**

Courses for the Combined BSc in Human Ecology/BEd Degrees must be carefully sequenced throughout the five years; therefore, students should plan their programs carefully with help from Academic Advisors from both Faculties.

- a. **Program Core (★84)**
  - 1) AFHE 304
  - 2) ECON 101 and 102
  - 3) ENGL 101 (★6)
  - 4) ★6 Free Electives
  - 5) HECOL 100
  - 6) HECOL 150
  - 7) HECOL 170
  - 8) HECOL 200
  - 9) HECOL 201
  - 10) HECOL 210
  - 11) HECOL 211
  - 12) ★6 Natural Sciences chosen from BIOL 107, 108, CHEM 161, 163, EAS 102, 205, 208

- 13) HECOL 250
- 14) HECOL 320
- 15) HECOL 321 or HECOL 322
- 16) HECOL 354
- 17) ★6 HECOL at 300-level or above
- 18) ★6 HECOL at 400-level or above
- 19) ★3 Chosen from NU FS 100, 372 or 373
- 20) NUTR 100
- 21) ★3 from MARK 312, NS 390, SOC 315, W ST 302
- 22) STAT 151 or SOC 210

b. **BEd Core (★66)**

- 1) ★18 Minor
- 2) EDFX 200
- 3) EDFX 350
- 4) EDFX 450 (★6)
- 5) EDFX 451
- 6) EDPS 310
- 7) EDPS 410
- 8) EDPY 200
- 9) EDPY 301
- 10) EDPY 303
- 11) 300-level EDSE course (Minor)
- 12) EDSE 432
- 13) EDSE 433
- 14) HE ED 110
- 15) ★6 chosen from Faculty of Education

**Notes**

- (1) It is strongly recommended that students complete all junior requirements before taking senior courses.
- (2) Students are advised to consider prerequisites for advanced courses when planning their program, e.g., senior textile and conservation courses require CHEM 161 and 163 as the Natural Sciences requirement.
- (3) Students should consult the list of Approved Program Electives (APEs) in choosing courses for their major. Lists are available from Academic Advisors and Student Services, 2-10 Agriculture/Forestry Centre.
- (4) Professional Designation: To meet the educational requirements for Professional Human Ecologist/Home Economist designation, students must present ★48 in Human Ecology, Nutrition and Food Science, or Nutrition.

## 34.11 BSc in Nutrition and Food Sciences

### 34.11.1 General Information

The Faculty offers courses leading to the degree of Bachelor of Science in Nutrition and Food Sciences. Two majors are offered: Food Science and Technology and Nutritional Science. The Food Science and Technology Major meets the guidelines of the Canadian Institute of Food Science and Technology (CIFST) and the Institute of Food Technologists (IFT). The Nutritional Science Major, with appropriate courses from the Approved Program Electives, is accredited by the Dietitians of Canada. Students planning to be Registered Dietitians should carefully read the information provided under the Nutritional Science Major (see §34.11.3). Students in the Nutritional Science Major can meet the educational requirements for Professional Human Ecologist/Home Economist designation, provided they complete HECOL 100 and appropriate electives.

#### Requirements of the Common Core and the Nutrition and Food Sciences Program Core

- (1) **Common Core (★24)**
  - a. AFHE 304
  - b. ★3 from AREC 323, ORG A 301, 311 or 321
  - c. ECON 101 and 102
  - d. ★12 Free electives
- (2) **Program Core (★39)**
  - a. ★3 chosen from BIOCH 203, 220 or PL SC 331
  - b. BIOL 107
  - c. Capstone course is ★3 CAPS (See Note 2)
  - d. CHEM 101 and 102
  - e. CHEM 161 and 163
  - f. ★6 ENGL (ENGL 101 recommended) or ★3 ENGL and ★3 Social Sciences/Humanities (See Note 6)
  - g. NU FS 361 or 363 (See Note 1)
  - h. NU FS 372 or 373 (See Note 1)
  - i. NUTR 301
  - j. STAT 151

**Notes**

- (1) Food Science and Technology majors are required to take NU FS 361 and NU FS 372.
- (2) Food Science and Technology majors are required to take NU FS 450 as the ★3 CAPS requirement. Nutritional Science majors are required to take one of NU FS 450, NU FS 477, NUTR 440 or INT D 410 as the ★3 CAPS requirement.
- (3) It is strongly recommended that students complete all junior requirements before taking senior courses.
- (4) Students are advised to consider prerequisites for advanced courses when planning their program; e.g. NU FS 372/373 require CHEM 161 and 163 as a prerequisite.
- (5) Students should consult the list of Approved Program Electives (APEs) in choosing courses for their major. Lists are available from Academic Advisors and Student Services, 2-10 Agriculture/Forestry Centre.
- (6) Social/Sciences/Humanities courses are selected from the offerings of the Faculty of Arts and the School of Native Studies.

### 34.11.2 Food Science and Technology Major

This major focuses on applying chemistry, microbiology, and engineering to the food systems and technological processes used in food manufacturing, preservation, storage, and distribution.

Graduates of this major may enter the food industry as technical specialists or quality control managers. Opportunities also exist in government employment as inspectors, laboratory managers, and extension workers; in international development agencies; and in private laboratories providing consultative or technical service to the food industry and food marketing chains.

(1) **Requirements of the Major (★57)**

- a. CHEM 211 and 213
- b. MATH 113 or 114
- c. MATH 115
- d. MICRB 265
- e. NU FS 100 or NUTR 100 (See Note 1)
- f. NU FS 283, 312, 353, 374, 430 and 454
- g. NU FS 201 (recommended) or PHYS ★3
- h. ★18 Approved Program Electives [★9 must be from advanced (300- or 400-level) Food Science courses as noted on the APE list. Only ★6 are allowed at the 200-level.]

**Note:** Transfer students who are taking NU FS 372 and 374 in their first year in the program should select an Approved Program Elective or NUTR 100.

### 34.11.3 Nutritional Science Major

Graduates have a working knowledge of the fundamentals of nutrition. Metabolic processes involved in nutrient use during different physiological states and behavioral factors associated with nutrition will be integrated with the underlying physical, chemical, biological, and social sciences.

Additional coursework can be obtained in areas such as chemistry, biochemistry, physiology, endocrinology, and metabolic regulation. Students may choose programs emphasizing either animal or human nutrition as areas of concentration.

Students concentrating in human nutrition are prepared for careers in general health sciences, dietetics (see §34.11.4), health promotion, education, private practice, government and health protection agencies, and nutrition development programs. Those concentrating in animal nutrition are prepared for careers as nutritionists with feed companies, pharmaceutical and chemical supply companies, consulting companies, agricultural production enterprises, or with governments as extension agents and field service and regulatory personnel.

(1) **Requirements of the Major (★57)**

- a. ★6 from (AN SC 310 and 311) or PHYSL 210 (★6) or PHYSL 252 (★6) or (ZOO 241 and 242)
- b. AN SC 391 or BIOCH 205
- c. ★9 from AN SC 461, BIOCH 410, NUTR 365, NU FS 428, 452, 456, 468, 477, 478, 479
- d. BIOL 207
- e. NUTR 100 or NU FS 100 (See Note)
- f. NUTR 302
- g. ★30 Approved Program Electives [★12 must be from advanced (300- or 400-level) NU FS or NUTR courses. Only ★6 are allowed at the 200-level.]

**Note:** Transfer students who are taking NU FS 372 or 373 in their first year in the program should select an Approved Program Elective or NUTR 100.

### 34.11.4 Dietetics Program

To become a registered dietitian, students must complete an undergraduate degree in Nutrition and Food Sciences and a dietetic internship. **Students must meet the course requirements outlined below to be eligible for an approved dietetic internship.** Entrance to the Dietetics internship program is very competitive; not all qualified applicants are accepted. Eligible students may apply for the postgraduate internship in their fourth year.

As an alternative to the postgraduate internship, students may also apply for the department's Coordinated Dietetics Program (CDP). In the CDP, academic terms alternate with internship terms in cooperation with health care facilities throughout Alberta; the degree plus internship can normally be completed in 4.5 years and then the individual is eligible for membership in the Dietitians of Canada. Applications to the CDP are accepted during the second academic year. Under Alberta's Protection for Persons in Care Act, students may be required to satisfy a criminal records check before being allowed to participate in an internship program. Dietitians are employed in health care institutions, industry, government services, retail food services, teaching, community clinics, public relations, the media, and private practice.

Forest Economics (FOREC)  
 Forest Engineering (FOREN)  
 Forest Science (FOR)  
 Human Ecology (HECOL)  
 Interdisciplinary Courses (INT D)  
 Nutrition (NUTR)  
 Nutrition and Food Sciences (NU FS)  
 Plant Science (PL SC)  
 Renewable Resources (REN R)  
 Rural Sociology (R SOC)  
 Soil Science (SOILS)  
 University (UNIV)  
 Work Experience (WKEXP)

### 34.11.5 Required Course List for Dietetics Students

Students who wish to become Registered Dietitians must complete specific undergraduate course requirements and complete a dietetic internship (see Note). Students should enrol in the Nutritional Science major of the Nutrition and Food Sciences degree and plan their timetable such that the following required courses can be completed. These ★24 may be taken as approved program electives or free electives. This combination of the Nutritional Science major and the required course list is an accredited university undergraduate program with the Dietitians of Canada.

- (1) **Required Dietetics Courses** (★24)
- INT D 410 (See Note 2)
  - NU FS 323, 374, 461, 468, 476 and 477
  - ★3 chosen from NU FS 428, 452, 456, 478 or 479

#### Notes

- (1) Students planning to apply for the University of Alberta Coordinated Dietetic Internship Program must ensure that they register in NU FS 323 and 374, NU FS 372 or 373 and NUTR 301 or 302 in the second year of their program.  
 (2) It is recommended that students complete NU FS 468 prior to registering in INT D 410.

## 34.12 BSc After Approved Degrees

Holders of previous degrees may qualify for a BSc degree in the Faculty when they have fulfilled all program requirements. Holders of a four-year degree must complete a minimum of ★54 at the University of Alberta with a GPA of at least 2.0.

## 34.13 Graduate Studies

Programs leading to advanced degrees at the Master's and Doctorate levels are offered by most Faculty departments. Course programs and thesis projects are arranged in consultation with Faculty members or with the Department's graduate coordinator.

See this Calendar's Graduate Programs section for general information about graduate studies. Specific information about requirements and opportunities in a particular field of study may be obtained from the appropriate Department in the Faculty of Agriculture, Forestry, and Home Economics.

# 35 Courses

The Faculty of Agriculture, Forestry, and Home Economics courses are listed in §201, Course Listings, under the following subject headings:

Agricultural and Resource Economics (AREC)  
 Agricultural, Food and Nutritional Science (AF NS)  
 Agriculture, Forestry, and Home Economics (AFHE)  
 Animal Science (AN SC)  
 Bioresource Engineering (BIOEN)  
 Capstone Course (CAPS)  
 Environmental and Conservation Sciences (ENCS)