X—Degree Programs, Bachelor of Science in Agriculture [B.Sc.(Agr.)]

The B.Sc.(Agr.) degree program is a 4 year honours science program designed to provide a fundamental education in the science of agriculture. The curriculum includes courses in the agricultural sciences, the physical, biological and social sciences, and in the arts.

Program Information

Agricultural scientists must be effective communicators and problem solvers, self–directed in their learning, and have a global perspective on the agrifood systems. A series of 14 agricultural science (AGR*XXXX) courses throughout the program enables students to further develop their abilities in communications, analysis and problem solving, computer applications and to increase their interpersonal skills. Students will be involved in cooperative group learning activities and will experience courses that are multidisciplinary and integrate the teaching activities of many faculty and departments.

Students will have the option of completing an unspecialized program or identifying one of five areas of specialization, or majors, in which they take a series of 4.00 credits.

The curriculum provides opportunities for students to select courses that will help them prepare for professional careers as entrepreneurs, scientists, marketing specialists, financial managers, technical advisors, or communications specialists. Students will have a comprehensive understanding of the food system when they graduate. They will be able to integrate their knowledge of production agriculture, environmental management, resource allocation and business management as it applies to the food system nationally and globally.

Students will be encouraged to integrate their academic program with a well–planned series of employment activities in the summer months and to develop their leadership and interpersonal skills in on–campus and community activities. There is a strong commitment in the curriculum to the philosophy of ”whole person development” and students are encouraged to identify personal goals that they wish to accomplish in each of these areas of their development.

Graduates meet the educational requirements for membership in the Ontario Institute of Agrologists. The Ontario Institute of Agrologists is the professional organization in agriculture in the Province of Ontario. Professional institutes in the various provinces in Canada and the scientific societies in agriculture collectively comprise the Agricultural Institute of Canada. The program received full accreditation from the Agricultural Institute of Canada in April 1999.

Students may graduate with a degree in honours agricultural science. Courses are selected in consultation with a faculty advisor and must include 4 courses in the agricultural sciences at the 3000 level or higher. Students who wish to specialize in 1 of the major areas of study may do so by completing the 8 courses identified for each major and taken in semesters 5 through 8, plus the 2 designated restrictive electives in semesters 3 and 4.

Majors are available in:

- Agricultural Economics
- Agroecosystem Management
- Agronomy
- Animal Science
- Horticultural Science

Students may, with appropriate approvals, elect to complete Minors associated with other degree programs as listed in the undergraduate calendar.

Study Abroad

Students are encouraged to participate in national and international study opportunities at other faculties of agricultural science in Canada and in selected countries around the world.

The B.Sc.(Agr.) degree program is similar in many respects to programs offered at faculties of agricultural science in other provinces in Canada. On occasion students may wish to consider taking a year of study at one of these other faculties or colleges. Students interested in a transfer program should consult the B.Sc.(Agr.) Program Counsellor to discuss their interest, and refer to the scholarship section for financial support. Students are also encouraged to consider studying for 1 or 2 semesters in a faculty or college of agriculture in another country.

For more specific information on these opportunities refer to Section V—Special Study Opportunities in this calendar, or contact the OAC Dean’s Office.

Doctor of Veterinary Medicine

Students in the B.Sc.(Agr.) program normally apply for admission to the D.V.M. program after semester 4 or later. Applications must be submitted to the Admissions Services, Office of Registrarial Services. Students should consult the D.V.M. Section of the calendar. Students who do not gain admission to the D.V.M. program are eligible to continue in the B.Sc.(Agr.) program through to graduation.

Students planning to enter the D.V.M. program are advised to include biology, chemistry, and physics in addition to calculus in their OAC program in secondary school.

Continuation of Study

Students are advised to consult the regulations for continuation of study within the program which are outlined in detail in Section VIII—Undergraduate Degree Regulations & Procedures.

X—Degree Programs, Bachelor of Science in Agriculture [B.Sc.(Agr.)]

Core Program Requirements

Semester 1

AGR*1100	[0.50]	Introduction to the Agri–Food System
BIOL*1030	[0.50]	Biology I
CHEM*1040	[0.50]	General Chemistry I
ECON*1050	[0.50]	Introductory Microeconomics
MATH*1080	[0.50]	Elements of Calculus I

Semester 2

AGR*1250	[0.50]	Agrifood System Trends and Issues
BIOL*1040	[0.50]	Biology II
CHEM*1050	[0.50]	General Chemistry II
ENGL*1200	[0.50]	Reading the Contemporary World

0.50 elective

Semester 3

AGR*2350	[0.50]	Animal Production Systems and Industry
AGR*2401	[0.50]	Economics of the Canadian Food System
STAT*2040	[0.50]	Statistics I

0.50 restricted elective**

One of:

AGR*2301	[0.50]	Resources and Agroecosystems
AGR*2451	[0.50]	Plant Agriculture

Semester 4

AGR*2402	[0.50]	Economics of the Canadian Food System

0.50 elective

0.50 restricted elective**

One of:

AGR*2302	[0.50]	Resources and Agroecosystems
AGR*2452	[0.50]	Plant Agriculture

One of:

AGR*2360	[0.75]	Challenges and Opportunities in Animal Production
ANSC*2340	[0.50]	Structure of Farm Animals
ANSC*3150	[0.50]	Principles of Farm Animal Care and Welfare

Note: AGR*2360 is a Fall offering and ANSC*2340, ANSC*3150 are Winter offerings.

Semester 5

AGR*3330	[0.50]	Introduction to Food Processing

1.50 electives

One of:

AGR*2301	[0.50]	Resources and Agroecosystems
AGR*2451	[0.50]	Plant Agriculture

Semester 6

AGR*3400	[0.50]	Sustainable Rural Communities

1.50 electives

One of:

AGR*2302	[0.50]	Resources and Agroecosystems
AGR*2452	[0.50]	Plant Agriculture

Semester 7

Selection one of Option A or Option B

Option A

AGR*4400	[0.50]	Independent Research

2.00 electives

Option B

AGR*4450	[1.00]	Research Project in Agriculture I

1.50 electives

Semester 8

Selection one of Option A or Option B

Option A

AGR*4500	[0.50]	Agrifood Industry Problem–Solving

2.00 electives

Option B

AGR*4460	[1.00]	Research in Agriculture II

1.50 electives

Note: In Semester 8 students must select AGR*4500 if AGR*4400 was selected in Semester 7 and AGR*4460 if AGR*4450 was selected in Semester 7.

Restricted Electives**

1. 2 of the following Restricted Electives are required:

BOT*2100	[0.50]	Life Strategies of Plants
CHEM*2580	[0.50]	Introductory Biochemistry
ECON*1100	[0.50]	Introductory Macroeconomics
ECON*2310	[0.50]	Intermediate Microeconomics
GEOL*3130	[0.50]	Agrogeology
MBG*2000	[0.50]	Introductory Genetics
PHYS*1070	[0.50]	Introductory Physics for the Life Sciences I

2.A minimum of 4.00 credits of the electives must be at the 3000 level or higher, 2.00 credits of the electives must be in agricultural science and 2.00 credits of the electives must be at the 4000 level

Notes

In addition to the required courses students must select a minimum of 4.00 credits at the 3000 level or higher, 2.00 credits of which must be in agricultural science and 2.00 credits of which must be at the 4000 level.

A humanities or social science course selected from List A – Preferred Electives, is also required 0.50

Students may select 1 or more groups of elective courses in a number of subject areas as listed by department in List B – Electives in Agricultural Science and Related Disciplines.

Specialization

Students may graduate in honours agricultural science and use their elective opportunities in semesters 5 to 8 to take courses in many different areas. Groups of elective courses in the agricultural sciences and related disciplines are outlined in List B. 2.00 credits in agricultural science at the 3000 level or higher are required for graduation.

All students are considered to be registered in honours agricultural science in the first 4 semesters of the program. Those who wish to select a major may do so when they are selecting their courses for semester 5 or later. The course requirements are listed for each major in the following section.

X—Degree Programs, Bachelor of Science in Agriculture [B.Sc.(Agr.)]

Agricultural Economics (AGEC)

Department of Agricultural Economics and Business.
Faculty Advisor: Dr. J. Cranfield, Rm. 305, MacLachlan Building, Ext. 53708.

Major

AGEC*3030	[0.50]	The Firm and Markets
ECON*1100	[0.50]	Introductory Macroeconomics
ECON*2310	[0.50]	Intermediate Microeconomics
ECON*2410	[0.50]	Intermediate Macroeconomics
ECON*2770	[0.50]	Introductory Mathematical Economics
ECON*3740	[0.50]	Introduction to Econometrics
Four of:		
AGEC*2220	[0.50]	Financial Accounting
AGEC*4000	[0.50]	Agricultural and Food Policy
AGEC*4210	[0.50]	World Agriculture and Economic Development
AGEC*4220	[0.50]	Advanced Farm Management
AGEC*4240	[0.50]	Futures and Options Markets
AGEC*4290	[0.50]	Land Economics
AGEC*4310	[0.50]	Resource Economics
AGEC*4500	[0.50]	Decision Science

Note: ECON*1100 and ECON*2310 are restricted electives.

X—Degree Programs, Bachelor of Science in Agriculture [B.Sc.(Agr.)]

Agroecosystem Management (AGMN)

Department of Land Resource Science.
Faculty Advisors:
Dr. T. Gillespie, Rm. 034, Richards Building, Ext. 52645.
Dr. P. Voroney, Rm. 212, Richards Building, Ext. 53057.

Major

GEOL*2150	[0.75]	Glacial Geology
GEOL*3130	[0.50]	Agrogeology
PHYS*1070	[0.50]	Introductory Physics for the Life Sciences I
SOIL*3080	[0.50]	Soil and Water Conservation
SOIL*4170	[0.50]	Soil Processes in the Landscape

4 courses from 1 or more groupings in Land Resource Science as listed in List B – Elective Courses in the Agricultural Sciences and Related Disciplines
Note: GEOL*3130 and PHYS*1070 are restricted electives.

X—Degree Programs, Bachelor of Science in Agriculture [B.Sc.(Agr.)]

Agronomy (AGRO)

Departments of Plant Agriculture, Crop Science Division, and Land Resource Science.
Faculty Advisors:
Dr. K. Peter Pauls, Rm. 321, Crop Science Building, Ext. 52460.
Dr. R. Paul Voroney, Rm. 212, Richards Building, Ext. 53057.

Major

BOT*2100	[0.50]	Life Strategies of Plants
CHEM*2580	[0.50]	Introductory Biochemistry
CROP*4220	[0.50]	Cropping Systems
CROP*4240	[0.50]	Weed Science
MBG*3100	[0.50]	Plant Genetics
PBIO*3110	[0.50]	Crop Physiology
SOIL*3080	[0.50]	Soil and Water Conservation
SOIL*4090	[0.50]	Soil Management

Two of:

CROP*3300	[0.50]	Grain Crops
CROP*3310	[0.50]	Protein and Oilseed Crops
CROP*3320	[0.50]	Pasture and Grazing Management
CROP*3330	[0.50]	Forage Crops: Science and Technology

Highly Recommended courses:

CROP*2110	[0.50]	Crop Ecology
ENVB*3210	[0.50]	Plant Pathology
ENVB*4100	[0.50]	Applied Entomology
MBG*4160	[0.50]	Plant Breeding
PBIO*3750	[0.50]	Plant Tissue Culture
PBIO*4750	[0.50]	Genetic Engineering of Plants

Note: BOT*2100 and CHEM*2580 are restricted electives.

X—Degree Programs, Bachelor of Science in Agriculture [B.Sc.(Agr.)]

Animal Science (ANSC)

Department of Animal and Poultry Science.
Faculty Advisors:
Dr. I. Duncan, Rm. 247, Animal Science and Nutrition, Ext. 53652.
Dr. J. Wilton, Rm. 121, Animal Science and Nutrition, Ext. 53647.

Major

AGR*2360	[0.75]	Challenges and Opportunities in Animal Production
ANSC*3080	[0.50]	Agricultural Animal Physiology
ANSC*3150	[0.50]	Principles of Farm Animal Care and Welfare
CHEM*2580	[0.50]	Introductory Biochemistry
MBG*2000	[0.50]	Introductory Genetics
MBG*3090	[0.50]	Applied Animal Breeding
NUTR*3190	[0.50]	Fundamentals of Nutrition

2.00 additional credit from the following elective groups in List B: Animal Breeding, Animal Nutrition, Animal Physiology and Behaviour
Note: CHEM*2580 and MBG*2000 are restricted electives.

X—Degree Programs, Bachelor of Science in Agriculture [B.Sc.(Agr.)]

Horticultural Science (HORT)

Department of Plant Agriculture, Horticultural Science Division.
Faculty Advisors:
Dr. A. Sullivan, Rm. 4222, Bovey Building, Ext. 52792.
Dr. D. Wolyn, Rm. 4236, Bovey Building, Ext. 53092.

Major

BOT*2100	[0.50]	Life Strategies of Plants
CHEM*2580	[0.50]	Introductory Biochemistry
HORT*3230	[0.50]	Plant Propagation
HORT*3280	[0.50]	Greenhouse Production
HORT*3510	[0.50]	Vegetable Production
HORT*4300	[0.50]	Postharvest Physiology
HORT*4420	[0.50]	Fruit Crops
PBIO*3110	[0.50]	Crop Physiology
SOIL*4090	[0.50]	Soil Management

Note: Students are also required to select the plant science and resources courses in semesters 3 and 4 (AGR*2301/2, AGR*2451/2) and replace AGR*2350 in their schedule of studies with 2 electives from the following courses:

CROP*4240	[0.50]	Weed Science
ENVB*3210	[0.50]	Plant Pathology
ENVB*4100	[0.50]	Applied Entomology
PBIO*3750	[0.50]	Plant Tissue Culture
PBIO*4750	[0.50]	Genetic Engineering of Plants

Note: BOT*2100 and CHEM*2580 are restricted electives.

X—Degree Programs, Bachelor of Science in Agriculture [B.Sc.(Agr.)]

Electives

List A – Preferred Electives in Humanities and Social Science

0.50 credit at the 2000 level or above from the College of Arts or the College of Social and Applied Human Sciences.

List B – Electives in Agricultural Science and Related Disciplines

A list of faculty advisors for the following elective course groups is available from the Dean's Office, O.A.C.

Agricultural Economics and Business

Department of Agricultural Economics and Business

Business Management:

AGEC*2220	[0.50]	Financial Accounting
AGEC*2230	[0.50]	Management Accounting
AGEC*3310	[0.50]	Operations Management
AGEC*3320	[0.50]	Financial Management
AGEC*4370	[0.50]	Marketing Management

Farm Management:

AGEC*2220	[0.50]	Financial Accounting
AGEC*2230	[0.50]	Management Accounting
AGEC*4220	[0.50]	Advanced Farm Management
AGEC*4500	[0.50]	Decision Science

Finance:

AGEC*2220	[0.50]	Financial Accounting
AGEC*2230	[0.50]	Management Accounting
AGEC*3320	[0.50]	Financial Management
ECON*3560	[0.50]	Theory of Finance

Operations:

AGEC*2220	[0.50]	Financial Accounting
AGEC*2230	[0.50]	Management Accounting
AGEC*3310	[0.50]	Operations Management
AGEC*4500	[0.50]	Decision Science

Prices and Policy:

AGEC*3030	[0.50]	The Firm and Markets
AGEC*4000	[0.50]	Agricultural and Food Policy
ECON*2770	[0.50]	Introductory Mathematical Economics
ECON*3740	[0.50]	Introduction to Econometrics

Resource and Environmental Economics:

AGEC*2700	[0.50]	Survey of Natural Resource Economics
AGEC*4290	[0.50]	Land Economics
AGEC*4310	[0.50]	Resource Economics
ECON*2410	[0.50]	Intermediate Macroeconomics

Sales and Marketing:

AGEC*4240	[0.50]	Futures and Options Markets
AGEC*4360	[0.50]	Marketing Research
AGEC*4370	[0.50]	Marketing Management
AGEC*4410	[0.50]	Sales and Sales Management

Agronomy

Department of Plant Agriculture, Crop Science Divison, and Department of Land Resource Science

Crop Management Systems:

CROP*4220	[0.50]	Cropping Systems
CROP*4240	[0.50]	Weed Science

One of:

CROP*3300	[0.50]	Grain Crops
CROP*3310	[0.50]	Protein and Oilseed Crops

One of:

CROP*3320	[0.50]	Pasture and Grazing Management
CROP*3330	[0.50]	Forage Crops: Science and Technology

Crop Physiology:

BOT*4380	[0.50]	Metabolism in the Whole Life of Plants
PBIO*3110	[0.50]	Crop Physiology
PBIO*4100	[0.50]	Soil Plant Relationships
PBIO*4600	[0.75]	Plant Environment Interaction and Stress Physiology

Plant Biotechnology:

MBG*4160	[0.50]	Plant Breeding
PBIO*3750	[0.50]	Plant Tissue Culture

One of:

MBG*3100	[0.50]	Plant Genetics
PBIO*4030	[0.50]	Plant Cell Biology

Plant Genetic Resources:

MBG*3100	[0.50]	Plant Genetics
MBG*4160	[0.50]	Plant Breeding

One of:

MBG*4200	[0.50]	Transmission Genetics
MBG*4240	[0.50]	Applied Molecular Genetics

Soil Management and Fertility:

GEOL*4130	[0.50]	Clay and Humic Chemistry
SOIL*3060	[0.50]	Environmental Soil Chemistry
SOIL*3200	[0.50]	Environmental Soil Biology

One of:

CROP*4260	[0.50]	Crop Science Field Trip
SOIL*3600	[0.50]	Remote Sensing
SOIL*4090	[0.50]	Soil Management
SOIL*4110	[0.50]	Natural Resources Management Field Camp

Waste Management/Agriculture:

CHEM*3360	[0.50]	Environmental Chemistry and Toxicology
SOIL*3060	[0.50]	Environmental Soil Chemistry
SOIL*3200	[0.50]	Environmental Soil Biology
SOIL*4090	[0.50]	Soil Management

Water Management/Agriculture:

ENGG*2550	[0.50]	Water Management
GEOL*3060	[0.50]	Groundwater
SOIL*3070	[0.50]	Environmental Soil Physics

Animal and Poultry Science

Department of Animal and Poultry Science

Animal Breeding:

ANSC*4050	[0.50]	Recombinant DNA in Animal Science
MBG*3060	[0.50]	Quantitative Genetics
MBG*4030	[0.50]	Animal Breeding Methods

Animal Nutrition:

ANSC*3120	[0.50]	Introduction to Animal Nutrition
ANSC*4160	[0.25]	Beef Cattle Nutrition
ANSC*4170	[0.25]	Dairy Cattle Nutrition
ANSC*4180	[0.25]	Poultry Nutrition
ANSC*4190	[0.25]	Swine Nutrition
ANSC*4500	[0.25]	Horse Nutrition
ANSC*4510	[0.25]	Pet Nutrition
NUTR*3340	[0.50]	Nutrition of Fish and Crustacea
NUTR*3350	[0.50]	Wildlife Nutrition

Animal Physiology and Behaviour:

ANSC*4070	[0.50]	Applied Animal Behaviour
ANSC*4080	[0.50]	Environmental Management and Animal Productivity
ANSC*4120	[0.50]	Fundamentals of Animal Reproduction
ANSC*4130	[0.50]	Reproductive Management and Technology
ANSC*4480	[0.50]	Applied Endocrinology

Environmental Biology

Department of Environmental Biology

Environmental Stress Physiology:

BOT*4380	[0.50]	Metabolism in the Whole Life of Plants
PBIO*4100	[0.50]	Soil Plant Relationships
PBIO*4530	[0.50]	Environmental Pollution Stresses on Plants
PBIO*4600	[0.75]	Plant Environment Interaction and Stress Physiology

Pest Management:

CROP*4240	[0.50]	Weed Science
ENVB*2040	[0.50]	Biology of Plant Pests
ENVB*3210	[0.50]	Plant Pathology
ENVB*4100	[0.50]	Applied Entomology

Food Science

Department of Food Science

Food Business:

AGEC*4410	[0.50]	Sales and Sales Management
COST*2600	[0.50]	Fundamentals of Consumer Behaviour
COST*3010	[0.50]	Quality Management
FOOD*4700	[0.50]	Food Product Development

Food Science:

FOOD*4070	[0.50]	Food Packaging
FOOD*4120	[0.75]	Food Analysis
FOOD*4350	[0.50]	Processing Plant Technology

Food Technology:

FOOD*4110	[0.50]	Meat and Poultry Processing
FOOD*4400	[0.50]	Dairy Processing
FOOD*4520	[0.50]	Cereal Technology

Horticultural Science

Department of Plant Agriculture, Horticultural Science Division

Fruit/Vegetable Horticulture:

HORT*3280	[0.50]	Greenhouse Production
HORT*3510	[0.50]	Vegetable Production
HORT*4300	[0.50]	Postharvest Physiology
HORT*4380	[0.50]	Tropical and Sub–Tropical Horticultural Crops
HORT*4420	[0.50]	Fruit Crops

Ornamental Horticulture:

HORT*3010	[0.50]	Annual, Perennial and Indoor Plants – Identification and Use
HORT*3220	[0.50]	Turf Management
HORT*3260	[0.50]	Woody Plants
HORT*3340	[0.50]	Culture of Plants

HORT*4250 [0.50] Nursery Production

Urban Horticulture & Environmental Management:

ENVB*2040 [0.50] Biology of Plant Pests
ENVB*3030 [0.50] Pesticides and the Environment
HORT*3010 [0.50] Annual, Perennial and Indoor Plants – Identification and Use
HORT*3340 [0.50] Culture of Plants
PBIO*4530 [0.50] Environmental Pollution Stresses on Plants

Interdepartmental/Interdisciplinary

Animal Health:

ANSC*3080 [0.50] Agricultural Animal Physiology
POPM*3240 [0.50] Epidemiology
POPM*4230 [0.50] Animal Health

Aquatic Health:

PATH*4100 [0.50] Diseases of Aquatic Animals
ZOO*4110 [0.50] Principles of Fish and Wild Life Management

Biotechnology:

MICR*4260 [0.50] Microbial Technology
PBIO*3750 [0.50] Plant Tissue Culture

International Development:

AGEC*4210 [0.50] World Agriculture and Economic Development
AGR*2500 [0.50] Field Trip in International Agriculture
AGR*4000 [0.50] Seminar in International Agriculture
GEOL*3130 [0.50] Agrogeology
REXT*3060 [0.50] International Communication
REXT*4020 [0.50] Rural Extension in Change and Development

Toxicology:

BIOM*3090 [0.50] Principles of Pharmacology and Toxicology
TOX*2000 [0.50] Principles of Toxicology
TOX*3300 [0.50] Analytical Toxicology

Land Resource Science

Agroforestry:

BOT*2050 [0.50] Plant Ecology
ENVB*2030 [0.50] Current Issues in Forest Science
ENVB*4780 [0.50] Forest Ecology
HORT*3260 [0.50] Woody Plants
SOIL*4090 [0.50] Soil Management

Atmospheric Science:

GEOG*2110 [0.50] Climate and the Biophysical Environment
MET*2020 [0.50] Agrometeorology
MET*2030 [0.50] Meteorology and Climatology
MET*3050 [0.50] Microclimatology
MET*4210 [0.50] Atmospheric Monitoring and Physical Meteorology
MET*4300 [0.50] Atmospheric Transport and Chemistry

Computer–Assisted Resource Analysis:

CIS*1500 [0.50] Introduction to Programming
GEOG*2480 [0.50] Cartographic Methods
GEOG*4480 [0.50] Applied Geographic Information Systems
SOIL*3600 [0.50] Remote Sensing
SOIL*4170 [0.50] Soil Processes in the Landscape

One of:

ENGG*3340 [0.50] Geographic Information Systems in Environmental Engineering
GEOG*3480 [0.50] Geographic Information Systems

Natural Resource Management:

GEOG*3320 [0.50] Agricultural Systems and Dynamics
SOIL*2120 [0.50] Introduction to Environmental Stewardship
SOIL*3050 [0.50] Land Utilization
SOIL*3100 [0.50] Resource Planning Techniques
SOIL*4110 [0.50] Natural Resources Management Field Camp

Soil Science:

GEOL*4130 [0.50] Clay and Humic Chemistry
SOIL*3060 [0.50] Environmental Soil Chemistry
SOIL*3070 [0.50] Environmental Soil Physics
SOIL*3200 [0.50] Environmental Soil Biology
SOIL*4070 [0.50] Problems in Land Resource Science
SOIL*4090 [0.50] Soil Management
SOIL*4170 [0.50] Soil Processes in the Landscape

Terrestrial Ecology:

BOT*2050 [0.50] Plant Ecology
CROP*2110 [0.50] Crop Ecology
MICR*4140 [0.50] Soil Microbiology and Biotechnology
MICR*4290 [0.50] Microbial Ecology
SOIL*3200 [0.50] Environmental Soil Biology
SOIL*4090 [0.50] Soil Management

Rural Extension Studies

Communications:

GEOG*3320 [0.50] Agricultural Systems and Dynamics
REXT*3040 [0.50] Communication Process
REXT*3080 [0.50] Technology in Extension

Human Resource and Community Development:

REXT*2000 [0.50] Introduction to Rural Extension
REXT*3000 [0.50] Program Development and Evaluation
REXT*3100 [0.50] Teaching and Learning in Non–Formal Education
REXT*4100 [0.50] Leadership Development in Rural Organization