

2006-2007 Undergraduate Calendar

The information published in this Undergraduate Calendar outlines the rules, regulations, curricula, programs and fees for the 2006-2007 academic year, including the Summer Semester 2006, the Fall Semester 2006 and the Winter Semester 2007.

For your convenience the Undergraduate Calendar is available in PDF format.

If you wish to link to the Undergraduate Calendar please refer to the [Linking Guidelines](#).

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Disclaimer

University of Guelph 2006

The information published in this Undergraduate Calendar outlines the rules, regulations, curricula, programs and fees for the 2006-2007 academic year, including the Summer Semester 2006, the Fall Semester 2006 and the Winter Semester 2007.

The University reserves the right to change without notice any information contained in this calendar, including any rule or regulation pertaining to the standards for admission to, the requirements for the continuation of study in, and the requirements for the granting of degrees or diplomas in any or all of its programs. The publication of information in this calendar does not bind the University to the provision of courses, programs, schedules of studies, or facilities as listed herein.

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Bachelor of Bio-Resource Management Degree (B.B.R.M.)

The University of Guelph, in collaboration with the regional campus at Ridgetown, offers a 20.00 credit program, normally completed over 8 semesters, leading to a Bachelor of Bio-Resource Management degree (B.B.R.M.). This degree was designed for students who do not intend to pursue post-graduate studies and are strongly focused on securing employment that makes use of the knowledge acquired in their bachelor's degree.

This degree is a unique blend of applied and theoretical learning, with an emphasis on experiential learning opportunities. It is designed for those with a commitment to urban, regional, and/or rural stewardship and service of our living resources.

At the present time, two majors, Horticulture Management and Environmental Management, are available in the program through University of Guelph's Ridgetown campus (with Semester 5 to 8 credits available at the Guelph campus).

Program Information

Students are required to follow the Schedule of Studies for the major in Horticulture Management. A solid grounding in applied aspects of science, technology and business provides graduates with sufficient breadth or expertise to become knowledgeable managers in all aspects of the horticultural business. The first 10.00 credits are available through the Ridgetown campus, and the additional 10.00 credits are available through the Guelph campus.

Academic Advising and Counselling

Program Counselling

Program Counsellors are available at both the Ridgetown and Guelph campuses to assist students with course selection and other questions pertaining to the degree program. For information about how to contact a program counsellor, and for more information about academic advising and program counselling, see Section VII -- Academic Counselling of the current Undergraduate Calendar

Academic Advising

On entering the program all students are assigned to a faculty advisor who will mentor them throughout their first two years. The faculty advisor is familiar with the academic requirements of the program and is aware of career opportunities. Students are strongly encouraged to attend all meetings called by their advisor, and to set up individual meetings with him/her when they have questions or concerns about their performance or progress in the program.

Continuation of Study

Students are advised to consult the regulations for Continuation of Study which are outlined in detail in Section VIII -- Undergraduate Degree Regulations & Procedures in the current calendar.

Conditions for Graduation

To qualify for the degree Bachelor of Bio-Resource Management, the student must satisfy the following conditions:

- the student must have successfully completed the Schedule of Studies requirements for the specified major
- the student must have a cumulative average of 60% or higher.

Schedule of Studies

Courses specified in the Schedule of Studies are required courses and must be successfully completed. A full time course load normally includes 2.50 credits (normally 5 courses). Students must successfully complete a minimum of 4.00 university credits and/or course equivalents at the 3000 level or higher, of which at least 1.00 credits must be at the 4000 level. In addition to core requirements, students must successfully complete at least 4.00 credits from the list of Restricted Electives available in Semesters 5-8.

B.B.R.M. Program Regulations

Entry Credits

OSS Curriculum: Grade 12 U English; Grade 12 U Biology; 4 additional U or U/C credits.

Recommendations and Notes:

It is recommended that applicants include Grade 12U level science or math in their course of study. Students entering the degree program who are deficient in U level Mathematics or Chemistry should consult with the program counsellor. Summer semester courses will be available through a Ridgetown campus Summer Institute, Distance Education or other means. It is recommended that prior to enrolment in the degree program, students lacking Grade 12U Advanced Functions and Introductory Calculus enrol in the non-credit course "Getting Ready for Calculus" offered through the Office of Open Learning.

Special Expenses

Expenses for field trips can range from \$20 to \$50 per semester in the first 4 semesters and from \$25 to \$50 in each of the last 4 semesters. In certain courses modest expenses will be incurred for supplies.

Horticulture Management Major

This major will require the completion of 20.00 credits.

*Students deficient in U level Mathematics or Chemistry are required to enrol in the appropriate upgrading course(s), MATH*1000 or CHEM*1060 (available in a distance format) during their first year. MATH*1000 is to be completed before Semester 2 (may substitute for SOIL*2010 in Semester 1 and take SOIL*2010 as the restricted elective in Semester 2). CHEM*1060 must be completed before Semester 3. Students also may access summer distance education courses such as SOIL*2010 or ECON*1050, to maintain their progress.*

Semesters 1 to 4 offered at the Ridgetown campus

Semester 1 - Fall

| | | |
|-----------|--------|--|
| BIOL*1030 | [0.50] | Biology I |
| CIS*1000 | [0.50] | Introduction to Computer Applications |
| HORT*1050 | [0.50] | Introduction to Horticultural Management |
| SOIL*2010 | [0.50] | Soil Science |
| One of: | | |
| HORT*1060 | [0.50] | Plant Identification: Woody Plants |
| HORT*1070 | [0.50] | Fruit Production |
| HORT*1080 | [0.50] | Vegetable Production I |

Semester 2 - Winter

| | | |
|-----------|--------|------------------------------|
| AGEC*1100 | [0.50] | Introduction to Business |
| AGR*1050 | [0.50] | Communication Skills |
| ECON*1050 | [0.50] | Introductory Microeconomics |
| One of: | | |
| EDRD*1150 | [0.50] | Landscape Design |
| ENVB*1010 | [0.50] | Food Crop Pest Management |
| HORT*1100 | [0.50] | Plant Propagation Techniques |

0.50 restricted electives

Semester 3 - Fall

| | | |
|-----------|--------|---|
| AGEC*2110 | [0.50] | Sales and Society |
| AGEC*2220 | [0.50] | Financial Accounting |
| BIOL*1040 | [0.50] | Biology II |
| One of: | | |
| HORT*1200 | [0.50] | Vegetable Production II |
| HORT*2010 | [0.50] | Greenhouse Management |
| HORT*2060 | [0.50] | Plant Identification: Herbaceous Plants |

0.50 restricted electives

Semester 4 - Winter

| | | |
|-----------|--------|---------------------------|
| AGEC*2230 | [0.50] | Management Accounting |
| AGR*2100 | [0.50] | Human Resource Management |
| CHEM*1040 | [0.50] | General Chemistry I |
| HORT*2200 | [0.50] | Integrated Project |

0.50 restricted electives

Semesters 5 to 8 offered on Guelph campus

Semester 5 - Fall

| | | |
|-----------|--------|----------------------------------|
| AGEC*3310 | [0.50] | Operations Management |
| AGR*3500 | [0.50] | Experiential Education |
| One of: | | |
| BOT*2100 | [0.50] | Life Strategies of Plants |
| ENVB*2040 | [0.50] | Plant Health and the Environment |

1.00 restricted electives

Semester 6 - Winter

| | | |
|-----------|--------|--|
| SOIL*3000 | [0.50] | Environmental Issues in Agriculture and Landscape Management |
| STAT*2060 | [0.50] | Statistics for Business Decisions |
| One of: | | |
| BOT*3310 | [0.50] | Plant Growth and Development |
| PBIO*3110 | [0.50] | Crop Physiology |

0.50 restricted electives

0.50 electives

Semester 7 - Fall

| | | |
|-----------|--------|-----------------------------|
| AGR*4150 | [0.50] | Experiential Education II |
| One of: | | |
| MET*2020 | [0.50] | Agrometeorology |
| SOIL*3080 | [0.50] | Soil and Water Conservation |

0.50 restricted electives

1.00 electives

Semester 8 - Winter

| | | |
|---------------------------|--------|-----------------------------------|
| AGR*4050 | [0.50] | Professionalism and Agrology |
| AGR*4500 | [0.50] | Agrifood Industry Problem-Solving |
| 0.50 restricted electives | | |
| 1.00 electives | | |

Horticulture Management Major Restricted Electives

In addition to the 13.50 required credits listed above, students must take a minimum of 4.00 restricted electives throughout the program. Students must select at least 2.50 credits from List A (Science and Discipline) and at least 1.50 credits from List B (Business).

List A: Science and Discipline**Available at Regional Campus**

| | | |
|-----------|--------|---|
| EDRD*1150 | [0.50] | Landscape Design |
| EDRD*2050 | [0.50] | Landscape Construction and Planning |
| ENVB*1010 | [0.50] | Food Crop Pest Management |
| HORT*1060 | [0.50] | Plant Identification: Woody Plants |
| HORT*1070 | [0.50] | Fruit Production |
| HORT*1080 | [0.50] | Vegetable Production I |
| HORT*1100 | [0.50] | Plant Propagation Techniques |
| HORT*1200 | [0.50] | Vegetable Production II |
| HORT*2010 | [0.50] | Greenhouse Management |
| HORT*2060 | [0.50] | Plant Identification: Herbaceous Plants |
| HORT*2080 | [0.50] | Horticultural Weed Science |
| MCS*1000 | [0.50] | Introductory Marketing |

Available by Distance Education

| | | |
|-----------|--------|----------------------------|
| LARC*1950 | [0.50] | History of Cultural Form I |
|-----------|--------|----------------------------|

Available at Guelph Campus

| | | |
|-----------|--------|--|
| BOT*2100 | [0.50] | Life Strategies of Plants |
| ENVB*3030 | [0.50] | Pesticides and the Environment |
| ENVB*3040 | [0.50] | Natural Chemicals in the Environment |
| ENVB*3110 | [0.50] | Natural History of Insects |
| ENVB*3210 | [0.50] | Plant Pathology |
| GEOG*3320 | [0.50] | Agriculture and Society |
| HORT*2450 | [0.50] | Turf Management I |
| HORT*3010 | [0.50] | Annual, Perennial and Indoor Plants - Identification and Use |
| HORT*3260 | [0.50] | Woody Plants |
| HORT*3280 | [0.50] | Greenhouse Production |
| HORT*3340 | [0.50] | Culture of Plants |
| HORT*3510 | [0.50] | Vegetable Production |
| HORT*4250 | [0.50] | Nursery Production |
| HORT*4300 | [0.50] | Postharvest Physiology |
| HORT*4420 | [0.50] | Fruit Crops |
| HORT*4450 | [0.50] | Turf Management I |
| LARC*2820 | [0.50] | Urban and Regional Planning |
| MET*2020 | [0.50] | Agrometeorology |
| 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 |
| SOIL*2120 | [0.50] | Introduction to Environmental Stewardship |
| SOIL*3050 | [0.50] | Land Utilization |
| SOIL*3200 | [0.50] | Environmental Soil Biology |
| SOIL*4090 | [0.50] | Soil Management |

List B: Business**Available at Regional Campus**

| | | |
|-----------|--------|--------------------------------|
| AGEC*2120 | [0.50] | Business Marketing |
| ENVM*1090 | [0.50] | Occupational Health and Safety |
| ENVM*2020 | [0.50] | Environmental Law |

Available by Distance Education

| | | |
|-----------|--------|-------------------------|
| GEOG*3320 | [0.50] | Agriculture and Society |
| MCS*1000 | [0.50] | Introductory Marketing |
| PSYC*1100 | [0.50] | Principles of Behaviour |
| PSYC*1200 | [0.50] | Dynamics of Behaviour |
| SOC*1100 | [0.50] | Sociology |

Available at Guelph Campus

| | | |
|-----------|--------|--|
| AGEC*4210 | [0.50] | World Agriculture and Economic Development |
| AGEC*4250 | [0.50] | Business Policy |
| AGEC*4370 | [0.50] | Marketing Management |
| AGR*2400 | [0.50] | Economics of the Canadian Food System |
| ECON*1100 | [0.50] | Introductory Macroeconomics |
| ECON*2410 | [0.50] | Intermediate Macroeconomics |
| ECON*2740 | [0.50] | Economic Statistics |
| ECON*3560 | [0.50] | Theory of Finance |
| MATH*1080 | [0.50] | Elements of Calculus I |
| MCS*2600 | [0.50] | Fundamentals of Consumer Behaviour |
| REXT*3080 | [0.50] | Technology in Extension |

Environmental Management Major

This major will require the completion of 20.00 credits.

*Students deficient in U level Mathematics or Chemistry are required to enrol in the appropriate upgrading course(s), MATH*1000 or CHEM*1060 (available in a distance*

*format) during their first year. MATH*1000 is to be completed before Semester 2 (may substitute for SOIL*2010 in Semester 1 and take SOIL*2010 as the restricted elective in Semester 2). CHEM*1060 must be completed before Semester 3. Students also may access summer distance education courses such as SOIL*2010 or ECON*1050, to maintain their progress.*

Semesters 1 to 4 offered at the Ridgetown campus**Semester 1 - Fall**

| | | |
|-----------|--------|---------------------------------------|
| BIOL*1030 | [0.50] | Biology I |
| CIS*1000 | [0.50] | Introduction to Computer Applications |
| ENVM*1000 | [0.50] | Introductory Environmental Issues |
| ENVM*1050 | [0.50] | Surveying and GIS |
| SOIL*2010 | [0.50] | Soil Science |

Semester 2 - Winter

| | | |
|---------------------------|--------|--|
| AGEC*1100 | [0.50] | Introduction to Business |
| AGR*1050 | [0.50] | Communication Skills |
| ECON*1050 | [0.50] | Introductory Microeconomics |
| ENVM*1020 | [0.50] | Introduction to Environmental Microbiology |
| 0.50 restricted electives | | |

Semester 3 - Fall

| | | |
|---------------------------|--------|--------------------------------|
| BIOL*1040 | [0.50] | Biology II |
| ENVM*1090 | [0.50] | Occupational Health and Safety |
| ENVM*1100 | [0.50] | Ecology |
| ENVM*2020 | [0.50] | Environmental Law |
| 0.50 restricted electives | | |

Semester 4 - Winter

| | | |
|---------------------------|--------|------------------------------------|
| AGR*2100 | [0.50] | Human Resource Management |
| CHEM*1040 | [0.50] | General Chemistry I |
| ENVM*1150 | [0.50] | Water Resource Management |
| ENVM*2500 | [0.50] | Integrated Project (Environmental) |
| 0.50 restricted electives | | |

Restricted Electives Available at Ridgetown:

| | | |
|-----------|--------|---|
| ENVM*1070 | [0.50] | Nutrient Management |
| ENVM*1120 | [0.50] | Environmental Monitoring |
| ENVM*2050 | [0.50] | Agriculture and Environmental Stewardship |
| ENVM*2060 | [0.50] | Sewage and Wastewater Treatment |
| ENVM*2070 | [0.50] | Water Treatment |
| ENVM*2080 | [0.50] | Industrial Waste Management |
| ENVM*2090 | [0.50] | Spills Response Planning |

Semesters 5 to 8 offered on Guelph campus**Semester 5 - Fall**

| | | |
|--|--------|--------------------------------------|
| AGR*3500 | [0.50] | Experiential Education |
| AGEC*2700 | [0.50] | Survey of Natural Resource Economics |
| AGEC*4290 | [0.50] | Land Economics |
| SOIL*3080 | [0.50] | Soil and Water Conservation |
| 0.50 selected course group or elective | | |

Semester 6 - Winter

| | | |
|---------------|--------|-----------------------------------|
| GEOG*3130 | [0.50] | Agrogeology |
| MET*2020 | [0.50] | Agrometeorology |
| SOIL*3300 | [0.50] | Land Resource Stewardship |
| STAT*2060 | [0.50] | Statistics for Business Decisions |
| 0.50 elective | | |

Semester 7 - Fall

| | | |
|-----------|--------|---|
| One of: | | |
| ENVB*4420 | [0.50] | Problems in Environmental Biology |
| SOIL*4110 | [0.50] | Natural Resources Management Field Camp |
| SOIL*4250 | [0.50] | Soils in the Landscape |
| One of: | | |
| GEOG*2480 | [0.50] | Mapping and GIS |
| SOIL*3600 | [0.50] | Remote Sensing |

0.50 electives

1.00 credits from selected course group

Semester 8 - Winter

| | | |
|----------------------------|--------|------------------------------|
| AGR*4050 | [0.50] | Professionalism and Agrology |
| AGEC*4310 | [0.50] | Resource Economics |
| GEOG*3060 | [0.50] | Groundwater |
| 0.50 selected course group | | |
| 0.50 electives | | |

Course Groups

Students would be required to take a minimum of four courses in one selected group, and would be required to consult with a faculty advisor in planning their choice. Students are advised to pay particular attention to pre-requisite requirements when choosing individual courses, and seek advice as needed.

Nutrient Management

| | | |
|-----------|--------|--|
| ENVB*4020 | [0.50] | Water Quality and Environmental Management |
| PBIO*4100 | [0.50] | Soil Plant Relationships |
| SOIL*3060 | [0.50] | Environmental Soil Chemistry |
| SOIL*3070 | [0.50] | Environmental Soil Physics |
| SOIL*3170 | [0.50] | Soil Processes in Landscape |
| SOIL*3200 | [0.50] | Environmental Soil Biology |
| SOIL*4090 | [0.50] | Soil Management |

Natural Resource Management

| | | |
|-----------|--------|--|
| ENVB*2030 | [0.50] | Current Issues in Forest Science |
| ENVB*3300 | [0.50] | Applied Ecology and Environment |
| ENVB*4020 | [0.50] | Water Quality and Environmental Management |
| ENVB*4780 | [0.50] | Forest Ecology |
| GEOG*3610 | [0.50] | Environmental Hydrology |
| SOIL*2120 | [0.50] | Introduction to Environmental Stewardship |
| SOIL*3050 | [0.50] | Land Utilization |
| SOIL*3100 | [0.50] | Resource Planning Techniques |

Environmental Protection

| | | |
|-----------|--------|---|
| BIOC*2580 | [0.50] | Introductory Biochemistry |
| ENVB*2010 | [0.50] | Food Production and the Environment |
| ENVB*2040 | [0.50] | Plant Health and the Environment |
| ENVB*3030 | [0.50] | Pesticides and the Environment |
| ENVB*3300 | [0.50] | Applied Ecology and Environment |
| ENVB*4240 | [0.50] | Biological Activity of Pesticides |
| MICR*4140 | [0.50] | Soil Microbiology and Biotechnology |
| MICR*4180 | [0.50] | Microbial Processes in Environmental Management |
| PBIO*4530 | [0.50] | Environmental Pollution Stresses on Plants |

Note: Students have three fall and one winter time slots available to take the courses above, and two fall and one winter spaces for free electives, during semesters 5-8. This meshes well with the course offerings except for the final group, where students may have to plan to use their winter free elective space for one of the courses.