

## University of Lethbridge

### Approved Undergraduate Course List for Registration with the Agrology Profession in Alberta, 2022/23

This list is intended for use by students **presently enrolled** in the University of Lethbridge (UofL) degree programs. This list is not exhaustive and is based ONLY on the current course offerings at UofL for the current academic year. It does not include courses from past academic years which might still be recognized for registration.

To be eligible to be registered as an Agrologist in Training (AIT) leading to the Professional Agrologist (PAg) designation, applicants must have obtained a 4-year 120-credit baccalaureate degree in agriculture or environmental science from a post-secondary institution recognized by AIA Council. This degree must meet the following course requirements:

1. Total Agrology (introductory + senior agrology) coursework must be a minimum of 60 credits with a minimum of 24 of these credits at a senior level (usually a third- or fourth-year course).
2. Foundational natural science coursework must be a minimum of 15 credits. Courses must be foundational to the Agrology profession and provide the scientific foundation upon which Agrology courses are built.
3. Mathematics OR calculus OR statistics coursework must be a minimum of 3 credits.
4. English OR communications coursework must be a minimum of 3 credits.
5. Economics coursework must be a minimum of 3 credits.

University of Lethbridge courses that are considered eligible for meeting the above coursework requirements are listed below in the following categories: Introductory Agrology, Senior Agrology, Foundational Natural Sciences, Mathematics, Calculus or Statistics, English or Communications, Economics.

#### Introductory Agrology Courses

*Introductory + Senior Agrology coursework must total a minimum of 60 credits*

*\* Courses marked with an asterisk require submission of additional documentation and approval by the Registrar of AIA.*

| Course ID | Title                             |
|-----------|-----------------------------------|
| AGEM 2600 | Business of Agriculture           |
| AGEM 2610 | Legal Aspects of Agriculture      |
| AGST 1000 | The Evolution of Agriculture      |
| AGST 3300 | Modelling of Agricultural Systems |

|           |  |
|-----------|--|
| BCHM 2300 | Elements of Human Nutrition                    |
| ECON 2150 | Economics of Agricultural Issues               |
| ECON 2350 | Economics of Agricultural Markets I            |
| ENVS 2000 | Fundamentals of Environmental Science          |
| GEOG 1000 | Introduction to Physical Geography             |
| GEOG 2030 | Geomorphology                                  |
| GEOG 2090 | Biogeography                                   |
| GEOG 2300 | Weather and Climate                            |
| GEOG 2535 | Introduction to Planning                       |
| GEOG 2700 | Geographical Data and Analysis                 |
| GEOG 2735 | Introduction to Geographic Information Systems |
| GEOG 3075 | Environmental Resources Management             |
| GEOG 3080 | Soils  |
| GEOG 3400 | Hydrology                                      |
| GEOG 3740 | Remote Sensing                                 |
| GEOG 3740 | Geographical Information Systems               |

### **Senior Agrology Courses**

*(Minimum of 24 credits from the list)*

*\* Courses marked with an asterisk require submission of additional documentation and approval by the Registrar of AIA.*

| <b>Course ID</b> | <b>Title</b>                               |
|------------------|--|
| AGEM 3275        | Agricultural Marketing and Sales           |
| AGEM 3475        | Agricultural Finance and Markets           |
| AGEM 3485        | Applied Risk Management in Agriculture     |
| AGEM 3635        | International Trade                        |
| AGEM 4125        | Accounting and Agricultural Enterprises    |
| AGEM 4615        | Sustainable Agriculture and Management     |
| AGEM 4625        | Issues in Agricultural Business            |
| AGST 4000*       | Seminar in Agricultural Issues             |
| AGST 4300        | Advanced Modelling of Agricultural Systems |
| BIOL 3420        | Animal Physiology                          |
| BIOL 3460        | Plant Physiology                           |
| BIOL 3560        | Integrated Plant Biology                   |
| BIOL 3630        | Field Biology                              |
| BIOL 3660        | Field Botany                               |
| BIOL 3700        | Ecosystem Ecology                          |
| BIOL 3710        | Population Ecology                         |
| BIOL 3720        | Community Ecology                          |
| BIOL 4100        | Advances in Biotechnology                  |
| BIOL 4210        | Environmental Genomics                     |

|            |  |
|------------|--|
| BIOL 4440  | Toxicology                                   |
| BIOL 4500* | Seminars in Biological Sciences              |
| BIOL 4570  | Plant Breeding and Genetics                  |
| BIOL 4605  | Conservation Biology                         |
| BIOL 4700  | Molecular Ecology                            |
| BIOL 4740  | Behavioral Ecology                           |
| BIOL 4800  | Biology of Parasitism                        |
| BIOL 4840  | Limnology                                    |
| ECON 3210  | Natural Resource Economics                   |
| ECON 3220  | Environmental Economics                      |
| ECON 3300  | Agricultural Policy I                        |
| ECON 3350  | Economics of Agricultural Markets II         |
| ECON 4300  | Agricultural Policy II                       |
| ENVS 3000* | Selected Studies in Environmental Science I  |
| ENVS 3440  | Wetlands                                     |
| ENVS 4000* | Selected Studies in Environmental Science II |
| GEOG 3060  | Glaciology and Glacial Geomorphology         |
| GEOG 3095  | Advanced Biogeography                        |
| GEOG 3210  | Food Systems Analysis                        |
| GEOG 3300  | Microclimatology                             |
| GEOG 3440  | Wetlands                                     |
| GEOG 3710  | Field Techniques in the Earth Sciences       |
| GEOG 3792* | Field Excursion in Physical Geography        |
| GEOG 4030* | Advanced Physical Geography                  |
| GEOG 4060  | Agricultural Soil Management                 |
| GEOG 4065  | Irrigation Science                           |
| GEOG 4400  | Advanced Hydrology                           |
| GEOG 4700  | Advanced Digital Mapping                     |
| GEOG 4710  | Remote Sensing Field Techniques              |
| GEOG 4725  | Advanced Remote Sensing                      |
| GEOG 4730  | Spatial Statistics                           |
| GEOG 4740  | Advanced Geographic Information Systems      |
| GEOG 4751  | Spatial Modelling                            |
| GEOG 4753* | Seminar in Remote Sensing                    |

## **Foundational Natural Sciences**

*(Minimum 15 credits from the list)*

| <b>Course ID</b> | <b>Title</b>                         |
|------------------|--------------------------------------|
| BCHM 2000        | Introduction to Biochemistry         |
| BCHM 3100        | Proteins, Enzymes, and Nucleic Acids |
| BCHM 3300        | Bioenergetics and Metabolism         |

|           |                                    |
|-----------|------------------------------------|
| BIOL 1010 | Cellular Basis of Life             |
| BIOL 1020 | Diversity of Life                  |
| BIOL 2000 | Principles of Genetics             |
| BIOL 2200 | Principles of Ecology              |
| BIOL 2300 | Cell Biology                       |
| BIOL 3000 | Gene Expression and Regulation     |
| BIOL 3300 | Evolution                          |
| BIOL 3400 | Principles of Microbiology         |
| CHEM 1000 | General Chemistry I                |
| CHEM 1110 | Chemistry for the Life Sciences I  |
| CHEM 2000 | General Chemistry II               |
| CHEM 2120 | Chemistry for the Life Sciences II |
| CHEM 2410 | Analytical Chemistry I             |
| CHEM 2500 | Organic Chemistry I                |
| CHEM 2600 | Organic Chemistry II               |
| CHEM 2730 | Physical Chemistry I               |
| CHEM 3730 | Physical Chemistry II              |
| CHEM 3830 | Inorganic Chemistry I              |
| CHEM 3840 | Inorganic Chemistry II             |
| GEOG 2065 | Physical Geology                   |
| PHYS 1000 | Introduction to Physics I          |
| PHYS 1050 | Introduction to Biophysics         |
| PHYS 2000 | Introduction to Physics II         |
| PHYS 2120 | Introduction to Physics III        |

### **Mathematics or Statistics Courses**

*(Minimum of 3 credits selected from the list)*

| <b>Course ID</b> | <b>Title</b>                               |
|------------------|--|
| BIOL 2150        | Biostatistics                              |
| BIOL 4810        | Experimental Design and Analysis           |
| GEOG 3735        | Analysis of Environmental Data             |
| MATH 1010        | Introduction to Calculus                   |
| MATH 1410        | Elementary Linear Algebra                  |
| MATH 1560        | Calculus I                                 |
| MATH 1565        | Accelerated Calculus I                     |
| MATH 2560        | Calculus II                                |
| MATH 2565        | Accelerated Calculus II                    |
| MATH 3410        | Linear Algebra                             |
| STAT 1770        | Introduction to Probability and Statistics |
| STAT 2200        | Survey Design and Analysis                 |
| STAT 2780        | Statistical Inference                      |

**Communication or Equivalent Courses***(Minimum of 3 credits selected from the list)*

| <b>Course ID</b> | <b>Title</b>                                     |
|------------------|--|
| ENGL ****        | Any ENGL course with a reading and writing focus |
| MGMT 2081        | Professional Communications Skills               |
| WRIT 1000        | Introduction to Academic Writing                 |

**Economics Courses***(Minimum of 3 credits selected from the list)*

| <b>Course ID</b> | <b>Title</b>                   |
|------------------|--------------------------------|
| ECON 1010        | Introduction to Microeconomics |
| ECON 1012        | Introduction to Macroeconomics |