

# University of Alberta Approved Course List for Registration with the Agrology Profession in Alberta

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 the senior course (third or fourth year) level.
2. Foundational natural science coursework must be a minimum of 15 credits. Courses must be foundational to the agrology profession
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 Alberta 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.

Please note courses may be accepted by the Registration Committee on a case by case basis depending on the type of degree and potential practice areas.

## Introductory Agrology Courses

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

*\*Some courses have been renamed or discontinued for 2014 at the University of Alberta*

Course ID	Title
AN SC 100	Introduction to Animal Health Sciences
AN SC 110	Introduction to Equine Science
AN SC 200	Principles of Animal Agriculture
AN SC 260	Fundamentals of Animal Nutrition
AREC 173	The Plate, the Planet and Society
AREC 200	Current Economic Issues for Agriculture and Food
AREC 214	Applications of Linear Models to Food, Resources and the Environment



AREC 323	Introduction to Management for Agri-Food, Environmental, and Forestry Business
BOT 384*	Global Change and Ecosystems
EAS 202	Violent Weather
EAS 204	Environment Alberta
EAS 221	Intro to GIS and Remote Sensing
EAS 225	Earth Surface Processed and Landforms
EAS 250	Biogeography
EAS 270	The Atmosphere
EAS 294*	Natural Resources and Environmental Management
EAS 296*	Planning Theory and Practice
EAS 391*	Introduction to Environmental Planning
ENT 207	Agricultural Entomology
ENT 220	Insect Biology
NU FS 100	Intro to Food Science and Technology
NU FS 200	Intro to Functional Foods and Nutraceuticals
NU FS 201	Physical Principles of Food Structure and Functionality
NU FS 223	The Cultural Ecology of Food and Health
NU FS 283	Introduction to Food Engineering
NU FS 377	Introduction to Nutrition in the Community
PL SC 221	Introduction to Plant Sciences
REN R 110	Natural Resource Measurement
REN R 120	Woody Plants 1
REN R 205*	(ENCS 201) Wildlife Biodiversity & Ecology
REN R 210*	(SOILS 210) Introduction to Soil Science & Soil Resources
REN R 220	Woody Plants 2
REN R 250	Water Resource Management
REN R 260*	(ENCS 260) History & Fundamentals: Enviro Protection & Conservation
REN R 271*	(ENCS 271) The Politics of Food and Natural Resources
REN R 299	Environmental and Conservation Sciences Field School

### **Senior Agrology Courses**

*(Minimum of 24 credits from the list)*

<b>Course ID</b>	<b>Title</b>
AFNS 450	Compost Science and Technology
AN SC 310	Physiology of Domestic Animals
AN SC 311	Metabolic Physiology of Domestic Animals
AN SC 312	Reproductive Physiology of Domestic Animals
AN SC 318	Influence of microorganisms on Animal Biology
AN SC 320	Livestock Growth and Meat Production



AN SC 322*	Poultry Product Technology
AN SC 375	Animal Health and Disease
AN SC 376	Animal Welfare
AN SC 377	Food Animal Behavior
AN SC 391	Metabolism
AN SC 400	Individual Study
AN SC 409*	Management of Animal Environments
AN SC 410	Regulation of Reproduction in Domestic Animals
AN SC 411	Veterinary Immunology
AN SC 412	Equine Nutrition and Reproduction
AN SC 420	Carcass and Meat Quality
AN SC 461	Ruminant Digestion, Metabolism and Nutrition
AN SC 462	Swine Nutrition
AN SC 463	Poultry Nutrition
AN SC 471	Applied Poultry Science
AN SC 472	Applied Dairy Production Science
AN SC 474	Applied Beef Cattle Science
AN SC 475	Applied Wildlife Production Science
AN SC 476	Applied Swine Science
AN SC 479	Integrative Problem Solving Project in Animal Science
AN SC 484	Animal Molecular Biology
AN SC 485	Animal Genetic Improvement
AN SC 496	Research on the Human Animal Bond
AN SC 499	Animal Health Science
AREC 333	Economics of Production and Resource Management
AREC 365	Natural Resource Economics
AREC 384	Food Market Analysis
AREC 400	Special Topics
AREC 410	Advanced Methods and Applications in Applied Economics
AREC 423	Advanced Management Methods & Applies for Agri-Food, Enviro & Forestry
AREC 433	Financial Management in Resource Industries
AREC 450*	Economics and Social Impact Assessment
AREC 465	Advanced Natural Resource Economics
AREC 473	Food and Agriculture Policies
AREC 475*	(AREC 375) World Food and Agriculture
AREC 482	Cooperatives and Alternative Business Institutions
AREC 484	Strategic Management in Food and Resource Businesses
AREC 485	Trade and Globalization in Food and Resources
BIOL 331	Population Ecology
BIOL 332	Community Ecology
BIOL 333	Wetland Ecology and Management



BIOL 340	Global Biogeochemistry
BIOL 364	Freshwater Ecology
BIOL 365	Methods in Freshwater Ecology
BIOL 366	Northern Ecology
BIOL 367	Conservation Biology
BIOL 409	Zoonoses
BIOL 432	(Methods in Plant Ecology) Field Methods in Ecology
BIOL 433	Plant-Animal Interactions
BIOL 440	Watershed Ecology
BIOL 450*	The Ecology of Below-Ground Communities
BIOL 468	Problems in Conservation Biology
BIOL 471	Landscape Ecology
BOT 306*	Biology of Fungi
BOT 308	Plant Anatomy
BOT 314	Biology of Bryophytes
BOT 321	Flowering Plants
BOT 322	Field Botany
BOT 330	Biodiversity and Ecosystem Function of Algae
BOT 332	Plant Ecology
BOT 340	(Whole) Plant Biology
BOT 350*	Plant Biochemistry
BOT 382	Plant Biotechnology
BOT 445	Molecular Plant Physiology
CHEM 303	Environmental Chemistry 1
CHEM 305	Environmental Chemistry 2
EAS 324	Quaternary Geoscience and Terrain Analysis
EAS 351	Environmental Applications of GIS
EAS 354	Environmental Earth Science Field School
EAS 370	Applied Atmospheric Physics
EAS 372	Weather Analysis and Forecasting
EAS 373	The Climate System
EAS 425	Contaminant Hydrogeology
EAS 451	Digital Remote Sensing
EAS 468	Geochemical Processes
EAS 476	Introductory Microclimatology and Micrometeorology
EAS 491*	Resource Management and Environmental Policy
ECON 323	International Economics
ECON 355	Economics of Project Evaluation
ECON 365	Resource Economics
ECON 421	International Trade
ECON 467	Environmental and Natural Resource Policy



ENCS 352	Natural Resource and Environmental Law
ENCS 355*	Ecological Risk Assessment
ENCS 356	Principles of Rangeland Conservation & Habitat Management
ENCS 406	Rangeland Plant Communities of Western Canada
ENCS 407	Rangeland Plant Communities of North America
ENCS 471	Case Studies in Rangeland Management & Conservation
ENCS 473	Environmental Policy & Law
ENT 378	Insect Pathology
IND 665*	(IND 365) Natural Resource Economics
NU FS 300	Fundamentals of Dairy Science
NU FS 305	Introduction to the Principles of Nutrition
NU FS 312	Quality Assurance
NU FS 352*	Current Topics and Controversies in Nutrition
NU FS 353	Unit Operations in Food Processing
NU FS 356	Nutrition Across the Lifespan
NU FS 361	(NU FS 363) Food Microbiology
NU FS 372	(NU FS 373) Food Chemistry
NU FS 374	Food Fundamentals and Quality
NU FS 400	Undergraduate Reading Project
NU FS 402	Brewing, Enology, and Food Fermentations
NU FS 403	Processing of Milk and Dairy Products
NU FS 404	Muscle Food Science and Technology
NU FS 406	Science and Technology of Cereal and Oilseed Processing
NU FS 425	Methods and Applications in Nutritional Product Dev & Quality Assurance
NU FS 426	Biology, Photochemistry and Processing of Edible Plants
NU FS 427	Nutritional Toxicology and Food Safety
NU FS 428	Advances in Functional Foods and Natural Health Products
NU FS 430	Principles of Sensory Evaluation of Foods
NU FS 450	Food Product Development
NU FS 454	Unit Operations in Food Preservation
NU FS 461	Food Service Management
NU FS 480	Foodborne Pathogens
NU FS 481	Advanced Foods
NU FS 490	Innovations in Food Science
NU FS 499	Advanced Agri-Chemical Analysis
PLSC***	Any 300 or higher level PLSC course is accepted as Senior Agrology
REN R 307*	(ENCS 307) Environmental Assessment, Principles and Methods
REN R 314*	(FOR 314) Forest Soils
REN R 322*	(FOR 322) Forest Ecosystems
REN R 327	The Mosses of Alberta: Conservation and Identification
REN R 350	Physical Hydrology



REN R 360*	(ENCS 360) Soil and Water Conservation
REN R 364*	(ENCS 364) Principles of Managing Natural Diversity
REN R 376*	(ENCS 376) Wildlife Productivity and Management
REN R 401	(Special Topics in) Renewable Resources
REN R 414	Agroforestry Systems
REN R 426	Geographical Information Systems Applications in Renewable Resources
REN R 430	Forest Resources Management
REN R 440	Disturbance Ecology
REN R 441*	(SOILS 420) Soil Formation & Landscape Processes
REN R 442*	(SOILS 430) Soil Biogeochemistry
REN R 443*	(SOILS 440) Soil Physics
REN R 444*	(SOILS 450) Soil Environmental Chemistry
REN R 445*	(SOILD 460) Soil Fertility
REN R 446*	(ENCS 461) Climates & Ecosystems
REN R 450	Environmentally Sustainable Agriculture
REN R 452	Forest Watershed Management
REN R 462*	(ENCS 462) Protected Areas Planning and management
REN R 464*	(ENCS 464) Conservation and Management of Endangered Species
REN R 469	Biodiversity Analysis
REN R 474*	(ENCS 474) Utilization Wildlife Resources
REN R 476*	(ENCS 476) Dynamics of Wildlife and Rangeland Ecosystems
REN R 477	Wildlife-Human Activities: Conflicts, Assessment and Mitigation
REN R 478	(Enviro Assess) Ecological Footprints w/ Historical Perspectives
REN R 480	Experimental Design and Data Analysis in the Environmental Sciences
REN R 482*	(ENCS 455) Soil Remediation
REN R 483*	Waste Management and Utilization
REN R 495	Land reclamation and Revegetation
REN R 496	Conservation Planning
R SOC 355	Principles of Rural Sociology
R SOC 450	Environmental Sociology

### **\*Zoology Courses\***

*Zoology courses may be accepted by the Registration Committee on a case by case basis depending on the type of degree and potential practice areas. These practice areas can include livestock production and management, wildlife management, and some areas in conservation.*

### **Foundational Natural Sciences**

*(Minimum 15 credits from the list)*



Course ID	Title
BIOCH***	Any Biochemistry Course Foundational to Agrology
BIOL 107	Introduction to Cell Biology
BIOL 108	Introduction to Biological Diversity
BIOL 207	Molecular Genetics and Heredity
BIOL 208	Principles of Ecology
BIOL 380	Genetic Analysis of Populations
BIOL 464	Limnology
BIOL***	Any Biology Course not listed under Introductory or Senior Agrology that is foundational to agrology
BOT 205	Fundamentals of Plant Biology
BOT 210	Biology of Land Plants
BOT 303	Plant Development
CHEM 101/103	Introductory University Chemistry I
CHEM 102/105	Introductory University Chemistry II
CHEM 164	Organic Chemistry I
CHEM 241	Introduction to Inorganic Chemistry
CHEM 243	Advanced Inorganic Chemistry
CHEM 261	Organic Chemistry I
CHEM 262	Organic Chemistry 2
CHEM***	Any Chemistry Course not listed under Senior Agrology
EAS 320	Geochemistry I
EAS 323	Introduction to Hydrogeology
PHYS***	Any Physics course foundational to agrology

### **Mathematics or Statistics Courses**

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

Course ID	Title
AREC 313	Statistical Analysis
Math 113	Elementary Calculus I
MATH 114	Elementary Calculus II
MATH 115	Elementary Calculus III
MATH 120	Basic Linear Algebra
MATH 201	Differential Equations
STAT 141	Introduction to Statistics
STAT 151	Introduction to Applied Statistics I
STAT 221	Applied Probability

### **English or Communications Courses**

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

<b>Course ID</b>	<b>Title</b>
ALES 204	Communication Theory and Practice
ENGL ***	Any English Course

### **Economics Courses**

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

<b>Course ID</b>	<b>Title</b>
ECON 101	Introduction to Microeconomics
ECON 102	Introduction to Macroeconomics