

University of British Columbia Approved Course List for Registration with the Agrology Profession in British Columbia

*List includes courses from the Departments of Land and Food Systems, Forestry and Geography
It should be noted that the BSc in Agroecology is no longer offered although
those that hold this degree may qualify.*

To be registered as an Articling Agrologist (AAg) leading to the Professional Agrologist (PAg) designation, applicants must have obtained:

A Bachelor's Degree with a science focus from a recognized university of which the course work must consist of the following:

a. A minimum of 8 entry level foundational knowledge courses, usually at the 100 or 200 level, in the subject matters listed on the Academic Worksheet. Applicants may have more than 1 entry level course in the same subject matter and cannot double count in the other two sections of the worksheet.

These can include courses in:

- biology
- biochemistry
- hydrology
- genetics
- chemistry
- earth sciences
- physical geography
- physics
- ecology

- microbiology
- geology

May include courses that are of benefit to the study of natural sciences or agrology:

- math
- statistics
- computer science
- economics
- communications/Writing

b. At least 20 courses in agricultural **or** natural sciences **or** agricultural **or** resource economics that relate directly to agrology (as defined by the *Agrologists Regulation, 2021*).

c. At least 8 senior level courses (can come from within the above noted 20 course requirement) in agricultural **or** natural sciences **or** agricultural **or** resource economics that relate directly to agrology (as defined by the *Agrologists Regulation, 2021*). Only senior courses (3rd year level and higher) taught by a Recognized University are recognized as senior level courses.

Courses that are considered eligible for meeting the coursework requirements for BCIA registration are listed in the following categories: Agrology, Foundational Natural Science; Mathematics or Statistics; Economics, Communications /Writing and Computer Science. *The Credentials Committee has the authority to limit how many foundational courses are accepted in each subject matter.*

*Course requires supporting documentation; may or may not be accepted depending on subject matter

This course listing is a guideline only; the Credentials Committee determines eligibility based on a comprehensive course by course review ensuring the academic worksheet is optimized while remaining within the minimum registration requirements.

100-200 Agrology Courses

Course ID	Title
APBI 100	Soil and Global Environment
APBI 200	Introduction to Soil Science
APBI 210 (BIOL 210)	Vascular Plants
APBI 222	Introduction the Horticulture
APBI 235	Biotechnology in Agricultural Food Production
APBI 244, GEOB 204 (GEOS 204)	Introduction to Biometeorology
APBI 260	Agroecology I: Introduction to Principles and Techniques
APBI 265	Sustainable Agriculture and Food Systems
BIOL 203	Eukaryotic Microbiology
BIOL 204	Vertebrate Structure and Function
BIOL 205	Comparative Invertebrate Zoology
BIOL 209	Biodiversity of Algae, Fungi, and Bryophytes
BIOL 210 (APBI 210)	Vascular Plants
CONS 200	Foundations of Conservation
EOSC 112	The Fluid Earth: Atmosphere and Ocean
EOSC 270	Marine Ecosystems
FRST 200	Forest Plant Biology I
FRST 201	Forest Ecology
FRST 203	Silvics of Forest Trees of Western Canada
FRST 210	Forest Plan Biology II
FRST 211	Forest Classification and Silvics
GEOB 102 (GEOS 102)	Our Changing Environment: Climate and Ecosystems
GEOB 102	Introduction to Geographical Biogeosciences: Climate and Vegetation
GEOB 103 (GEOS 103)	Our Changing Environment: Water and Landscapes
GEOB 200 (GEOS 200)	Atmospheric Environments
GEOB 204 (GEOS 204), APBI 244	Introduction to Biometeorology
GEOB 206 (GEOS 206)	Geomorphic Processes and Hazards
GEOB 207 (GEOS 207)	Introduction to Biogeography
GEOB 270 (GEOS 270)	Geographic Information Science
GEOS 102 (GEOB 102)	Our Changing Environment: Climate and Ecosystems
GEOS 103 (GEOB 103)	Our Changing Environment: Water and Landscapes
GEOS 200 (GEOB 200)	Atmospheric Environments
GEOS 204 (GEOB 204), APBI 244	Introduction to Biometeorology
GEOS 206 (GEOB 206)	Geomorphic Processes and Hazards
GEOS 207 (GEOB 207)	Introduction to Biogeography
GEOS 270 (GEOB 270)	Geographic Information Science
LFS 250	Land, Food and Community I: Introduction to Food Systems and Sustainability

300-400+ Agrology Courses

Course ID	Title
APBI 311 (BIOL 364)	Comparative Cardiovascular, Respiratory and Osmoregulatory Physiology
APBI 312	Reproductive and Digestive Physiology
APBI 314	Animals and Society
APBI 315	Animal Welfare and the Ethics of Animal Use
APBI 316	Equine Biology, Health and Welfare
APBI 318	Applied Plant Breeding
APBI 319	Aquaculture and the Environment
APBI 322	Horticultural Techniques
APBI 324 (BIOL 324)	Introduction to Seed Plant Taxonomy
APBI 326 (BIOL 316)	Introduction to Plant Pathology
APBI 327 (BIOL 327)	Introduction to Entomology
APBI 328 (BIOL 317)	Weed Science
APBI 342 (FRST 310)	Soil Biology
APBI 351 (BIOL 351)	Plant Physiology
APBI 360	Agroecology II: Application and Analysis
APBI 361	Key Indicators of Agroecosystem Sustainability
ABPI 401	Soil Processes
APBI 402	Sustainable Soil Management
APBI 403	Soil Sampling, Analysis and Data Interpretation
APBI 405	Plant Water Relations
APBI 406	Pollination Biology
APBI 410	Applied Animal Health and Physiology
APBI 411	Reproductive Physiology and Technology
APBI 412 (CONS 412) (FRST 512)	Belowground Ecosystems
APBI 413	Stress and Coping in Animals
APBI 414	Animals and Global Issues
APBI 415	Applied Animal Behaviour
APBI 417	Production and Postharvest Physiology of Vegetable Crops
APBI 418	Intensive Fish Production
APBI 419	Fish Health
APBI 423 (UFOR 403)	Ecological Restoration
APBI 426 (BIOL 421)	Plant-Microbe Interactions
APBI 427 (BIOL 411)	Insect Ecology
APBI 428	Integrated Pest Management
APBI 440 (BIOL 440)	Plant Genomics
APBI 442	Wine Grape and Berry Biology
APBI 444 (FRST 444)	Agroforestry
APBI 460	Agroecology III: Synthesis and Evaluation
APBI 461	Applied Agroecology
APBI 462 (PLNT 590)	Conservation Agriculture and Biodiversity Monitoring
APBI 463	Insects in Agroecosystems
APBI 465 *	Capstone in Sustainable Agriculture and Food Systems

APBI 490 *	Advanced Topics in Applied Biology
APBI 490B	Pollination Ecology
APBI 495 (CONS 495)	Principles of Wildlife Management in Forests & Agricultural Environments
APBI 497 *	Directed Studies
APBI 499 *	Undergraduate Thesis
AGEC 549 *	Master's Thesis
ATSC 303	Methods in Atmospheric Science
BIOL 302	Community and Ecosystem Biology
BIOL 303	Population Biology
BIOL 305	Introduction to Geological & Biological Oceanography
BIOL 306	Advanced Ecology
BIOL 310	Introduction to Animal Behaviour
BIOL 316 (APBI 326)	Introductory Plant Pathology
BIOL 317 (APBI 328)	Weed Science
BIOL 320	Survey of Algae
BIOL 323	Structure and Reproduction of Fungi
BIOL 324 (APBI 324)	Introduction to Seed Plant Taxonomy
BIOL 325	Introduction to Animal Mechanics and Locomotion
BIOL 326	Experimental Biology of Invertebrates
BIOL 327 (APBI 327)	Introduction to Entomology
BIOL 328	Introductory Parasitology
BIOL 331	Developmental Biology
BIOL 332	Protistology
BIOL 335	Molecular Genetics
BIOL 338	Introduction to Genomics
BIOL 351 (APBI 351) (FRST 311)	Plant Physiology
BIOL 352	Plant Physiology II: Plant Development
BIOL 353	Vertebrate Physiology
BIOL 364 (APBI 311)	Comparative Cardiovascular, Respiratory and Osmoregulatory Physiology
BIOL 402	Aquatic Ecology
BIOL 404	Ecological Methodology
BIOL 406	Plant Ecology I
BIOL 407	Plant Ecology II
BIOL 408	Principles of Applied Ecology
BIOL 409 *	Field Course in Ecology
BIOL 410 *	Current Topics in Animal Behaviour
BIOL 411	Insect Ecology
BIOL 412	Phytogeography
BIOL 413	Zoogeography
BIOL 415	Evolutionary Processes in Plants
BIOL 416	Principles of Conservation Biology
BIOL 421 (APBI 426)	Plant-Microbe Interactions
BIOL 423	Plant Stress Ecophysiology
BIOL 425	Biomechanics
BIOL 426	Mammalogy

BIOL 427	Ornithology and Herpetology
BIOL 428	Evolutionary Morphology of Marine Invertebrates
BIOL 431	Evolutionary Cell Biology
BIOL 433	Plant Genetics
BIOL 436 (FNH 436)	Integrated Functional Genomics
BIOL 440 (APBI 440)	Plant Genomics
BIOL 441	Cell Biology of Intracellular Trafficking
BIOL 444	Techniques in Plant Molecular Biology
BIOL 448 *	Directed Studies in Biology
BIOL 450	Molecular Adaptation of Animals to the Environment
BIOL 454 *	Comparative Animal Physiology
BIOL 455 *	Comparative Neurobiology
BIOL 456 *	Comparative and Molecular Endocrinology
BIOL 462 (FRST 413)	Ecological Plant Biochemistry
BIOL 464	Animal Developmental Genetics
BIOL 465	Diversity and Evolution of Fishes
BIOL 552A*	Directed Studies in Biology
BIOL 599*	MSc Thesis
CHEM 301	Aqueous Environmental Chemistry
CHEM 302	Atmospheric Environmental Chemistry
CONS 330	Conservation Science and Sustainability
CONS 340	Introduction to Geographic Information Systems for Forestry and Conservation
CONS 412 (APBI 412) (FRST 512)	Belowground Ecosystems
CONS 449 *	Directed Studies in Natural Resources Conservation
CONS 451	Integrated Field School
CONS 486	Fish Conservation and Management
CONS 495 (APBI 495)	Principles of Managing Problem Wildlife in Forests and Agricultural Environments
CONS 505	Ecological Restoration
ECON 371	Economics of the Environment
ECON 374 (FRE 374)	Land and Resource Economics
EESC 512	Applied Data Analysis in Geosciences
EESC 550	Research Seminar in Earth and Environmental Sciences
ENVR 300	Introduction to Research in Environmental Science
ENVR 400 *	Research Project in Environmental Sciences
ENVR 420	Ecohydrology of Watersheds and Water Systems
ENVR 440	Analytical Methods in Sustainability Science
ENVR 448 *	Directed Studies in Environmental Sciences
ENVR 449 *	Environmental Science Honours Thesis
EOSC 325	Principles of Physical Hydrogeology
EOSC 329	Groundwater Hydrology
EOSC 330	Principles of Geomorphology
EOSC 333	Elemental and Isotopic Geochemistry
EOSC 340	Global Climate Change

EOSC 371	Introduction to Geological & Biological Oceanography
EOSC 372	Introductory Oceanography: Circulation and Plankton
EOSC 373	Introductory Oceanography: Climate and Ecosystems
EOSC 428	Field Techniques in Groundwater Hydrology
EOSC 429	Groundwater Contamination
EOSC 431	Groundwater Remediation
EOSC 447 *	Thesis
EOSC 448 *	Directed Studies
EOSC 449 *	Thesis
EOSC 470	Biological Oceanography
EOSC 472	Chemical Oceanography and Marine Geochemistry
EOSC 473	Methods in Oceanography
EOSC 474	Marine Pollution
EOSC 478	Introduction to Fisheries Science
EOSC 533	Advanced Groundwater Hydrology
FNH 300	Principles of Food Engineering
FNH 301	Food Chemistry I
FNH 302	Food Analysis
FNH 303	Food Product Development
FNH 309	Food Process Science
FNH 313	Food Microbiology
FNH 330	Introduction to Wine Science I
FNH 335	Introduction to Wine Science II
FNH 340	Food Theory
FNH 341	Food Theory Applications
FNH 350	Fundamentals of Nutrition
FNH 402	Functional Foods and Nutraceuticals
FNH 403	Food Laws, Regulations and Quality Assurance
FNH 405	Microbiology of Food and Beverage Fermentation
FNH 413	Food Safety
FNH 430	Enology and Wine Technology
FNH 436 (BIOL 436)	Integrated Functional Genomics
FNH 454	Fish Nutrition
FOOD 510	Advances in Food Science
FOOD 512	Hazard Analysis and Critical Control Point and Food Safety Management
FOOD 515	Fundamentals of Agri-Food Business
FOOD 520	Advances in Food Analysis
FOOD 521	Advances in Food Biotechnology
FOOD 522	Advances in Food Chemistry
FOOD 523	Advances in Food Microbiology
FOOD 524	Advances in Food Process Science
FOOD 525	Advances in Food Toxicology
FOOD 530 *	Directed Studies
FOOD 549 *	Master's Thesis
FRE 302	Small Business Management in Agri-Food Industries
FRE 306	Introduction to Global Food Markets

FRE 340	International Agricultural Development
FRE 402	Market Research and Analysis in Agri-Food Industries
FRE 460	Economics of Food Consumption
FRE 501	Strategic Economic Analysis of Agrifood Markets (was Commodity Markets and Price Analysis)
FRE 502	Food Market Analysis
FRE 515	Agribusiness Management
FRE 516	Financial and Marketing Management in Agri-Food Industries
FRE 547*	Graduating Project
FRST 302	Forest Genetics
FRST 303	Principles of Forest Science
FRST 305	Silviculture
FRST 307	Biotic Disturbances
FRST 308	Forest Entomology
FRST 309	Forest Pathology
FRST 310 (APBI 342)	Soil Biology
FRST 311 (BIOL 351) (APBI 351)	Plant Physiology 1
FRST 320	Abiotic Disturbances: Fire & Climate
FRST 385	Watershed Hydrology
FRST 386	Aquatic Ecosystems and Fish in Forested Watersheds
FRST 395	Forest Wildlife Ecology and Management
FRST 404	Advances in Silviculture
FRST 406	Advanced Forest Pathology
FRST 408	Advanced Forest Insect Ecology
FRST 410	Introduction to Landscape Ecology and Management
FRST 413 (BIOL 462)	Ecological Plant Biochemistry
FRST 432	Molecular Ecology
FRST 443	Remote Sensing for Ecosystem Management
FRST 444	Agroforestry
FRST 485	Forest Watershed Management
FRST 495	Biological Diversity and Conservation
FRST 505C	Directed Studies in Forest Science
FRST 508	Advanced Forest Insect Ecology
FRST 512 (APBI 412) (CONS 412)	Belowground (Forest) Ecosystems
FRST 513	Biotechnology in Tree Improvement
FRST 516	Tree Physiology
FRST 523	Forest and Environmental Policy
FRST 538	Advanced Geomatics for Natural Resource Management
FRST 549 *	Master's Thesis
FRST 588	Fluvial Ecohydrology
FRST 592	Hydrological Modelling Applications in Forestry
FRST 598	Tracer Methods in Hydrology
GEM 500	Landscape Ecology and Management
GEM 510	Geographic Information Systems for Forestry and Conservation

GEM 511	Advanced Geographic Information Systems for Environmental Management
GEM 520	Remote Sensing for Ecosystem Management
GEM 521	Advanced Earth Observation and Image Processing
GEM 530	Geospatial Data Analysis
GEM 540	Linear Regression Models and Introduction to Spatial Statistics
GEOB 300 (GEOS 300)	Microscale Weather and Climate
GEOB 305 (GEOS 305)	Introduction to Hydrology
GEOB 307 (GEOS 307)	Biogeography and Global Change
GEOB 308 (GEOS 308)	Quaternary and Applied Geomorphology
GEOB 370 (GEOS 370)	Advanced Geographic Information Science
GEOB 372 (GEOS 372)	Cartography
GEOB 373 (GEOS 373)	Introductory Remote Sensing
GEOG 400 (GEOS 400)	Global Biogeochemistry
GEOB 405 (GEOS 405)	Fluvial Geomorphology
GEOB 406 (GEOS 406)	Watershed Geomorphology
GEOB 407 (GEOS 407)	Vegetation Dynamics: Disturbance Climate and Human Impacts
GEOB 448A* (GEOS 448)	Directed Studies in Geographical Sciences
GEOB 448B* (GEOS 448)	Directed Studies in Geographical Sciences
GEOB 449A* (GEOS449)	Undergraduate Thesis
GEOB 449B* (GEOS449)	Undergraduate Thesis
GEOB 503A*	Topics in Geomorphology and Hydrology
GEOB 507A*	Directed Studies in Physical Geography
GEOG 319	Environmental Impact Assessment
GEOS 307	Biogeography and Global Change
GEOS 309	Geographical Sciences Field Course
GEOS 402	Air Pollution Meteorology
GEOS 406	Watershed Geomorphology
GRS 397B*	Regional Directed Field Studies
GRS 497B*	Regional Directed Field Studies
HGSE 320B	Environmental Assessment in Cross Cultural and Indigenous Contexts
HGSE 320C	Plant Ecology and Diversity
HGSE 320D	Ethnoecology and Ethnobotany
HGSE 355	Applied Ecology of Coastal Terrestrial Ecosystems
HGSE 356	Biophysical Dynamics of the Marine-Terrestrial Interface
HGSE 357	Ecology and Management of Island Wildlife
IWME 503	Chemical and Biological Industrial Water Treatment Design
IWME 504	Water and Wastewater Management Strategies
LFS 301	Aquaculture Field Studies
LFS 302A*	International Field Studies
LFS 350	Land, Food and Community II
LWS 501 (SOIL 501)	Advanced Soil Processes
LWS 515 (SOIL 515)	Watershed Science
LWS 517 (Soil 517)	Land and Water Resource Evaluation
LWS 548 *	Major Project`

PLNT 530 *	Directed Studies
PLNT 532	Advanced Insect Physiology
PLNT 542	Grapevine and Berry Biology
PLNT 549 *	Master's Thesis
PLNT 590 (APBI 462)	Conservation Agriculture and Biodiversity Monitoring
RES 515	Integrated Watershed Management
SOIL 501 (LWS 501)	Advanced Soil Processes
SOIL 502	Advanced Sustainable Soil Management
SOIL 503	Advanced Soil Sampling, Analysis and Data Interpretation
SOIL 512	Advanced Soil Biology
SOIL 513	Advanced Soil Physics
SOIL 514	Biometeorology
SOIL 515 (LWS 515)	Watershed Science
SOIL 517 (LWS 517)	Land and Water Resource Evaluation
SOIL 520	Agricultural Watershed Management
SOIL 524	Instrumentation for Biometeorology
SOIL 530B	Directed Studies
SOIL 548 *	Major Project
SOIL 549 *	Master's Thesis
UFOR 403 (APBI 423)	Ecological Restoration
UFOR 511	Geomatics Principles and Applications

Foundational Natural Science Courses – for Section 1 in the BCIA Academic Worksheet

Course ID	Title
BIOL 111	Introduction to Modern Biology
BIOL 112	Biology of the Cell
BIOL 121	Genetics, Evolution and Ecology
BIOL 200	Fundamentals of Cell Biology
BIOL 201	Introduction to Biochemistry
BIOL 230	Fundamentals of Ecology
BIOL 234	Fundamentals of Genetics
BIOL 260	Fundamentals of Physiology
BIOL 334	Basic Genetics
CHEM 100	Foundation of Chemistry
CHEM 111	Principles of Chemistry 1
CHEM 121 (CHEM 111) (CHEM 120)	Structure and Bonding in Chemistry
CHEM 123 (CHEM 113) (CHEM 130)	Thermodynamics, Kinetics and Organic Chemistry
CHEM 201	Introduction to Physical Chemistry
CHEM 202	Coordination Chemistry
CHEM 205	Physical Chemistry
CHEM 211	Analytical Chemistry

CHEM 233	Organic Chemistry for the Biological Sciences
ENVR 200	Introduction to Environmental Science
EOSC 314	The Ocean Environment
EOSC 315	The Ocean Ecosystem
FNH 200	Exploring Our Food
MICB 201	Introductory Environmental Microbiology
PHYS 100	Introductory Physics
PHYS 101 (PHYS 131)	Energy and Waves
PHYS 102	Elementary Physics II
PHYS 117	Dynamics and Waves

Mathematics, Calculus, Statistics Courses – for Section 1 in the BCIA Academic Worksheet

Course ID	Title
BIOL 300	Fundamentals of Biostatistics
BIOL 301	Biomathematics
DATA 501	Data Analytics
FRST 231	Introduction to Biometrics
FRST 430	Advanced Biometrics
GEOG 374	Statistics in Geography
LFS 252	Land, Food and Community: Quantitative Data Analysis
MATH 100	Differential Calculus with Applications to Physical Sciences and Engineering
MATH 101	Integral Calculus with Applications to Physical Sciences and Engineering
MATH 102	Differential Calculus with Applications to the Life Sciences
MATH 103	Integral Calculus with Applications to the Life Sciences
MATH 110	Differential Calculus
MATH 180	Differential Calculus with Physical Applications
MATH 190	Calculus Survey
MATH 200	Calculus III
MATH 221	Matrix Algebra
STAT 200	Elementary Statistics for Applications

Economics, Communications/Writing Courses – for Section 1 in the BCIA Academic Worksheet

Course ID	Title
APBI 398	Research Methods in Applied Biology
ECON 101 (ECON 310)	Principles of Microeconomics
ECON 102 (ECON 311)	Principles of Macroeconomics
ECON 310	Principles of Microeconomics
EOSC 211	Computer Methods in Earth, Ocean and Atmospheric Sciences
ENGL 110	Approaches to Literature
ENGL 112	Strategies for University Writing
FCOR 510	Professional Communication (1.5 credit)
FCOR 599	Project Proposal Development and Proof-of-Concept
FRE 295	Managerial Economics

FRE 326	Empirical Methods for Food and Resource Economics
FRE 374	Land and Resource Economics
FRE 420	The Economics of International Trade and the Environment
FRST 101	Principles of Microeconomics for Forestry and Land and Food Systems
FRST 150	Scholarly Writing and Argumentation in Forestry
FRST 232	Computer Applications in Forestry
FRST 319	Principles of Forestry Economics
FRST 430	Advanced Biometrics
LFS 150	Scholarly Writing and Argumentation in Land and Food Systems
LWS 550	Professional Communications Strategies