

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:

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| - biology | - microbiology |
| - biochemistry | - geology |
| - hydrology | |
| - genetics | May include courses that are of benefit to the study of natural sciences or agrology: |
| - chemistry | - math |
| - earth sciences | - statistics |
| - physical geography | - computer science |
| - physics | - economics |
| - ecology | - 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 |
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| APBI 100 | Soil and Global Environment |
| 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 | 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 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 |
| LFS 252 | Land, Food and Community: Quantitative Data Analysis |

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| MICB 201 | Introductory Environmental Microbiology |
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300-400+ Agrolgy Courses

| Course ID | Title |
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| 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, BIOL 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 410 | Applied Animal Health and Physiology |
| APBI 411 | Reproductive Physiology and Technology |
| APBI 412 | Belowground Ecosystems |
| APBI 413 | Stress and Coping in Animals |
| APBI 414 | Animals and Global Issues |
| APBI 415 | Applied Animal Behaviour |
| APBI 416 | Animal Welfare and Conservation Biology |
| APBI 417 | Production and Postharvest Physiology of Vegetable Crops |
| APBI 418 | Intensive Fish Production |
| APBI 419 | Fish Health |
| 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 465 * | Capstone in Sustainable Agriculture and Food Systems |
| APBI 490 * | Advanced Topics in Applied Biology |
| APBI 495, CONS 495 | Principles of Wildlife Management in Forests & Agricultural Environments |
| APBI 497 * | Directed Studies |

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| APBI 499 * | Undergraduate Thesis |
| AGEC 549 * | Masters Thesis |
| 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 336 | Fundamentals of Evolutionary Biology |
| 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 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 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 | Plant Genomics |
| BIOL 441 | Cell Biology of Intracellular Trafficking |
| BIOL 444 | Techniques in Plant Molecular Biology |

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| 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 340 | Introduction to Geographic Information Systems for Forestry and Conservation |
| CONS 412, APBI 412 | Below Ground 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 |
| ENVR 300 | Introduction to Research in Environmental Science |
| ENVR 400 * | Research Project in Environmental Sciences |
| ENVR 420 | Ecohydrology of Watersheds and Water Systems |
| 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 473 | Methods in Oceanography |
| EOSC 474 | Marine Pollution |
| EOSC 478 | Introduction to Fisheries Science |

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| 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 * | Masters Thesis |
| FRE 302 | Small Business Management in Agro-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 |

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| 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 | Problems of Forest Entomology |
| FRST 410 | Advanced Forest Insect Ecology |
| 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 Forest Management |
| FRST 505C | Directed Studies in Forest Science |
| FRST 508 | Advanced Forest Insect Ecology |
| 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 * | Masters 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 |
| GEOB 405 (GEOS 405) | Fluvial Geomorphology |
| GEOB 407 (GEOS 407) | Vegetation Dynamics: Disturbance Climate and Human Impacts |
| GEOB 448A* (GEOS | Directed Studies in Geographical Sciences |

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| 448) | |
| GEOB 448B* (GEOS 448) | Directed Studies in Geographical Sciences |
| GEOB 449A* (GEOS 448) | Undergraduate Thesis |
| GEOB 449B* (GEOS 449) | Undergraduate Thesis |
| GEOB 503A* | Topics in Geomorphology and Hydrology |
| GEOG 312 | Climate Change: Science and Society |
| 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 497B* | Regional Directed Field Studies |
| HGSE 320C | Plant Ecology and Diversity |
| 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, SOI 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 * | Masters Thesis |
| 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 548 * | Major Project |
| SOIL 549 * | Masters Thesis |
| UFOR 403 | Ecological Restoration |
| UFOR 511 | Geomatics Principles and Applications |

Foundational Natural Science Courses

| Course ID | Title |
|-------------------|--|
| APBI 200 | Introduction to Soil Science |
| 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 |
| CHEM 121 (or 111) | Structure and Bonding in Chemistry |
| CHEM 123 (or 113) | Thermodynamics, Kinetics and Organic 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 315 | The Ocean Ecosystem |
| FNH 200 | Exploring Our Food |
| PHYS 101 | Energy and Waves |

Mathematics, Calculus & Statistics Courses

| Course ID | Title |
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| BIOL 300 | Fundamentals of Biostatistics |
| BIOL 301 | Biomathematics |
| FRST 231 | Introduction to Biometrics |
| FRST 430 | Advanced Biometrics |
| GEOG 374 | Statistics in Geography |
| 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 Science |
| MATH 103 | Integral Calculus with Applications to the Life Sciences |
| MATH 104 | Differential Calculus with Applications to Commerce and Social Sciences |
| MATH 110 | Differential Calculus |
| MATH 105 | Integral Calculus with Applications to Commerce and Social Sciences |
| MATH 180 | Differential Calculus with Physical Applications |
| MATH 184 | Differential Calculus for Social Science and Commerce |
| MATH 190 | Calculus Survey |
| MATH 200 | Calculus III |
| STAT 200 | Elementary Statistics for Applications |

Economics, Communications/Writing and Computer Science

| Course ID | Title |
|---------------------|---|
| APBI 398 | Research Methods in Applied Biology |
| ECON 101 (ECON 310) | Principles of Microeconomics |
| ECON 102 (ECON 311) | Principles of Macroeconomics |
| EOSC 211 | Computer Methods in Earth , Ocean and Atmospheric Sciences |
| ENGL 112 | Strategies for University Writing |
| 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 |