Simon Fraser University Approved Course List for Registration

with the Agrology Profession in British Columbia

List includes courses from the Departments of Biological Science, Marine Sciences, Environmental Sciences and Geography

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
BISC 204	Ecology (effective Fall 2023)
BISC 272*	Special Topics in Biology
EASC 208	Introduction to Geochemistry
EASC 209W	Environmental Geoscience
EVSC 205	Methods in Environmental Science
GEOG 150	Digital Earth
GEOG 213	Introduction to Geomorphology
GEOG 214	Weather and Climate
GEOG 215	Biogeography
GEOG 251	Quantitative Geography
GEOG 253	Introduction to Remote Sensing
GEOG 255	Geographical Information Science I
MBB 222	Molecular Biology and Biochemistry
MBB 231	Cellular Biology and Biochemistry

300-400+ Agrology Courses

Course ID	Title
BISC 302	Genetic Analysis
BISC 303	Microbiology
BISC 304	Animal Ecology
BISC 305	Animal Physiology
BISC 306	Invertebrate Biology
BISC 308	Environmental Toxicology: An Ecological Perspective
BISC 309	Conservation Biology
BISC 313	Environmental Toxicology: A Mechanistic Perspective
BISC 316	Vertebrate Biology
BISC 317	Insect Biology
BISC 318	Parasitology
BISC 326	Biology of Algae and Fungi
BISC 333	Developmental Biology
BISC 337	Plant Biology
BISC 357	Genetic Engineering
BISC 360W	Techniques in Ecology and Evolution
BISC 366	Plant Physiology
BISC 374	Brewing Science with Lab
BISC 403*	Current Topics in Cell Biology
BISC 404W*	Plant Ecology
BISC 405	Neurobiology
BISC 407	Population Dynamics
BISC 410	Behavioural Ecology
BISC 412	Aquatic Ecology
BISC 413	Fisheries Ecology

BISC 414	Limnology
BISC 420	Community Ecology
BISC 421	Models in Biology
BISC 422	Population Genetics
BISC 423	Developmental Neurobiology
BISC 424	Applied Genomics
BISC 430	Microbe-Plant interactions
BISC 435	Introduction to Pest Management
BISC 439	Industrial Microbiology
BISC 445	Environmental Physiology of Animals
BISC 455	Endocrinology
BISC 457	Plant Molecular Biology and Biotechnology
BISC 471*	Special Topics in Cells, Molecules and Physiology
BISC 472*	Special Topics in Cells, Molecules and Physiology
BISC 473*	Special Topics in Ecology, Evolution and Conservation
BISC 475*	Special Topics in Biology
BISC 490, 491, 492W*	Research Project
BISC 601	Agriculture, Horticulture and Pest Management
BISC 602	Forest Pest Management
BISC 603	Crop Pest Management
BISC 604	Orchard Pest Management
BISC 605	Management of Animal Diseases
BISC 650	Environmental Risk Assessment
BISC 651	Toxicity Tests I: Ecological Effects Based Tests
BISC 652	ET Tests II: Mammalian Toxicity Tests
BISC 654	Food and Drug Toxicology
BISC 655*	Environmental Toxicity Seminar
BISC 829	Conservation Ecology
BISC 834	Essential Cell Biology
BISC 839	Industrial Microbiology
BISC 841	Plant Diseases and Plant Biotechnology
BISC 844	Biological Controls
BISC 846	Insecticide Chemistry and Toxicology
BISC 847	Pest Management in Practice
BISC 848	Nematology
BISC 849*	Master of Pest Management Thesis
BISC 852	Ecological and Molecular Interactions between Insect Vectors and Parasites
BISC 854	Ecotoxicology
BISC 855	Biochemical Toxicology
BISC 859*	Special Topics in Biological Science I
BISC 869*	Special Topics in Biological Science II
BISC 884*	Special Topics in Pest Ecology and Management
BISC 887*	Special Topics in Plant Biology
BISC 889*	Directed Readings in Biology
BISC 898*	Master of Science Thesis

CHEM 371	Aqueous Environment
CHEM 372	Atmospheric Environment
CHEM 380	(Chemical and Instrumental Methods of) Identification of Organic Compounds
EASC 303W	Environmental Geoscience
EASC 304	Hydrogeology
EASC 315W	Geochemistry of Natural Waters
EASC 400*	Selected Topics Earth Sciences
EASC 403	Quaternary Geology
EASC 405	Water, Environment, Climate
EASC 410	Groundwater Contamination
EASC 411	Terrain Analysis
EASC 413	Resource Geotechnics
EASC 415	Groundwater Modelling
EASC 693	Water, Environment, and Climate Change
ECO 611	Ecological Restoration & the Biological Environment
ECO 622	Project Management & Policy for Ecological Restoration
ENV 319	Environmental Law
ENV 321 (REM 321)	Ecological Economics
EVSC 300*	Seminar in Environmental Science (3 credits considered only)
EVSC 305	Methods in Environmental Science
EVSC 320	Watershed Ecology
EVSC 395*	Special Topics in Environmental Science
EVSC 400*	Environmental Science Capstone
EVSC 445	Environmental Data Analysis
EVSC 460 (EVSC 660)	Ecogeomorphology
EVSC 490*	Environmental Science Thesis
EVSC 495*	Special Topics in Environmental Science
EVSC 660 (EVSC 460)	Ecogeomorphology
GEOG 304	Coasts and Climate Change
GEOG 310	Physical Geography Field School
GEOG 311	Hydrology
GEOG 313	River Geomorphology
GEOG 314	The Climate System
GEOG 315	World Ecosystems
GEOG 316	Global Biogeochemical and Water Cycles
GEOG 317	Soil Science
GEOG 318	Soils in our Environment
GEOG 351	Multimedia Cartography
GEOG 352	Spatial Analysis
GEOG 353	Advanced Remote Sensing
GEOG 355	Geographic Information Science II
GEOG 356	3D Geovisualization
GEOG 385	Agriculture and the Environment (up to Fall 2020)
GEOG 411	Advanced Hydrology
GEOG 412W	Glacial Processes and Environments

GEOG 414	Climate Change
GEOG 417	Advanced Soil Science
GEOG 417W	Advanced Soil Science with Writing
GEOG 418	Ecohydrology
GEOG 445	Resource Planning
GEOG 451	Spatial Modeling
GEOG 453*	Theoretical and Applied Remote Sensing
GEOG 455*	Theoretical and Applied GIS
GEOG 491*	Honours Essay
GEOG 606	Research Design and Analytical Techniques in Physical Geography
GEOG 611	Hydrology
GEOG 612	Glacial Geomorphology
GEOG 613	Fluvial Geomorphology
GEOG 614	Climatology
GEOG 617	Soil Science
GEOG 651	Advanced Spatial Analysis and Modelling
GEOG 653	Remote Sensing of Environment
GEOG 655	Advanced Principles of Geographic Information Science
GEOG 657	Geovisualization Interfaces
GEOG 691*	Directed Studies
GEOG 697*	MSc Thesis
GEOG 698*	MSc Thesis
MASC 400*	Directed Studies
MASC 401*	Directed Studies in Marine Sciences
MASC 410	Marine Invertebrate Zoology
MASC 411	Comparative Embryology of Marine Invertebrates
MASC 412	Biology of Fishes
MASC 415	Structure and Function in Animals
MASC 430	Marine Ecology
MBB 323	Introduction to Physical Biochemistry
MBB 331	Molecular Biology
MBB 491*	Undergraduate Research
REM 311	Applied Ecology and Sustainable Environments
REM 319	Environmental and Planning Law
REM 321 (ENV 321)	Ecological Economics
REM 356W	Institutional Arrangements for Sustainable Environmental Management
REM 356	Environmental Policy
REM 363*	Special Topic
REM 370	Global Resource Issues in Oceanography (Ocean Resources)
REM 375	Ecology and Conservation of Coastal BC
REM 388	STT - Wildlife Conservation
REM 412	Environmental Modeling
REM 423	Research Methods in Fisheries Assessment
REM 431	Climate Change and Environmental Management
REM 445	Environmental Risk Assessment
REM 471	Forest Ecosystem Management

REM 475	STT – Coastal Ecology/Conservation
REM 611	Applied Ecology (Population/Community Ecology)
REM 621	Ecological Economics

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

Course ID	Title
BISC 100	Introduction to Biology
BISC 101	General Biology
BISC 102	General Biology
BISC 202	Genetics
BISC 204	Introduction to Ecology
CHEM 110	Introductory Chemistry
CHEM 111	Introductory Chemistry/Lab
CHEM 121	General Chemistry/Lab I
CHEM 122	General Chemistry II
CHEM 215	Introduction to Analytical Chemistry
CHEM 230	Inorganic Chemistry
CHEM 281	Organic Chemistry I
CHEM 282	Organic Chemistry II
EASC 101	Physical Geology/ Dynamic Earth
EASC 106	Earth Through Time
EASC 204	Structural Geology I
EASC 205	Introduction to Petrology
EASC 207	Intro to Applied Geophysics
EASC 210	Evolving Earth/Historical Geology
EVSC 100	Introduction to Environmental Science
GEOG 111	Earth Systems
MBB 201	Biochemistry of the Cell
PHYS 100	Introduction to Physics
PHYS 101	Physics for Life Sciences I
PHYS 102	Physics for Life Sciences II
PHYS 120	Mechanics and Modern Physics
PHYS 121	Optics, Electricity, Magnetism

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

Course ID	Title
MATH 100	Precalculus
MATH 150	Calculus I with Review
MATH 151	Calculus I
MATH 152	Calculus II
MATH 154	Calculus I for the Biological Sciences
MATH 155	Calculus II for the Biological Sciences
MATH 232	Applied Linear Algebra

MBB 243	Data Analysis for Molecular Biology and Biochemistry
STAT 100	Chance and Data Analysis
STAT 101	Introduction to Statistics
STAT 201	Statistics for Life Sciences
STAT 270	Introduction to Probability and Statistics
STAT 302	Experiment/Observational Data
STAT 341	Introduction to Statistical Computing and Exploratory Data Analysis
STAT 403	Intermediate Sampling

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

Course ID	**Title**
ECON 103	Principles of Microeconomics
ECON 105	Principles of Macroeconomics
EVSC 201W (EVSC 200)	Environmental Science in Practice
GEOG 266W	Geography in Practice
REM 202W	Technical Communication for Environmental Professionals and Planners