SUSTAINABLE AGRICULTURE SYSTEMS (B.SC. (AG.ENV.SC.))

Offered by: Plant Science (Faculty of Agricultural and Environmental Sciences)
Degree: Bachelor of Science (Agricultural and Environmental Sciences)
Program credit weight: 69

Program Description

The B.Sc.(Ag.Env.Sc.); Major in Sustainable Agricultural Systems focuses on the knowledge, skills, and hands-on experience needed to drive positive change in the agricultural sector, ensuring that it supports healthy communities and a thriving planet, including ecological stewardship, innovative farming practices, and the promotion of food security through sustainable methods. The Major includes practical field experiences and collaborative opportunities. Along with the Specialization in Professional Agrology, this Major will allow eligibility to become a member of the Ordre des agronomes du Québec (OAQ).

Required Courses (48 credits)

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Course	Title	Credits
AEMA 204	Data Analytics for Biosystems	3
AEMA 310	Statistical Methods 1.	3
AGEC 200	Principles of Microeconomics.	3
AGEC 231	Economic Systems of Agriculture.	3
AGRI 215	Agro-Ecosystems Field Course.	3
AGRI 310	Internship in Agriculture/Environment.	3
AGRI 340	Principles of Ecological Agriculture.	3
ANSC 250	Introduction to Livestock Management	3
BREE 329	Precision Agriculture.	3
ENVB 210	The Biophysical Environment.	3
ENVR 201	Society, Environment and Sustainability.	3
LSCI 204	Genetics.	3
LSCI 211	Biochemistry 1.	3
LSCI 230	Introductory Microbiology.	3
PLNT 200	Introduction to Crop Science	3
SOIL 315	Soil Nutrient Management.	3

Complementary Courses (21 credits)

6-12 credits [3-6 credits from two of the following three groups]; courses chosen from these groups may not be the same as those chosen in the student's specialization [i.e., no double-counting of credits of the Specialization and this Major is permitted]:

Field Crops and Horticulture

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Course	Title	Credits
PLNT 302	Forage Crops and Pastures.	3
PLNT 305	Plant Pathology.	3
PLNT 307	Agroecology of Vegetables and Fruits.	3
PLNT 353	Plant Structure and Function.	3
PLNT 434	Weed Biology and Control.	3
PLNT 435	Plant Breeding.	3

Global Food Security

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Course	Title	Credits
AEIS 230	Indigenous Health & Nutrition	3
AGEC 430	Agriculture, Food and Resource Policy.	3
AGEC 442	Economics of International Agricultural Development.	3
AGRI 411	Global Issues on Development, Food and Agriculture.	3
AGRI 493	International Project Management.	3
NUTR 341	Global Food Security.	3

Livestock

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Course	Title	Credits
ANSC 301	Principles of Animal Breeding.	3
ANSC 303	Farm Animal Internship	3
ANSC 324	Developmental Biology and Reproduction.	3
ANSC 433	Animal Nutrition and Metabolism.	3
ANSC 458	Advanced Livestock Management	3
ANSC 555	The Use and Welfare of Animals.	3

0-15 credits from the following:

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Course	Title	Credits
ANSC 312	Animal Health and Disease.	3
ANSC 323	Mammalian Physiology.	3
ANSC 514	Coding for Production Data	3
ANSC 560	Biology of Lactation.	3
BREE 217	Hydrology and Water Resources.	3
BREE 327	Bio-Environmental Engineering.	3
ENTO 330	Insect Biology.	3
FDSC 200	Introduction to Food Science.	3
PLNT 310	Plant Propagation.	3
PLNT 312	Urban Horticulture.	3
PLNT 322	Greenhouse Management.	3
PLNT 358	Flowering Plant Diversity.	3
SOIL 535	Soil Ecology.	3

0-9 credits from the following [for students who to apply to the Ordre des agronomes du Quebec]:

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Course	Title	Credits
AGRI 330	Agricultural Legislation.	1
AGRI 410	Agrology Internship.	6
AGRI 430	Professional Practice in Agrology.	2
PLNT 430	Pesticides in Agriculture.	3

Electives

To meet the minimum credit requirement for the degree.