

## Bachelor of Science in Agroecology

Requirements	Credit Hours (CH)
Faculty Core	39
Degree Core	36
Restricted Electives	18
Free Electives	27
Total Credit Hours	120

Faculty Core (Required)		
Course	Course Name	Credit Hours
ABIZ 1000	Introduction to Agribusiness Management	3
AGRI 1500	Natural Resources and Primary Agricultural Production	3
AGRI 1510	Production, Distribution and Utilization of Agricultural Products	3
AGRI 2030	Technical Communications	3
BIOL 1020	Biology 1: Principles and Themes	3
BIOL 1030	Biology 2: Biological Diversity, Function and Interactions	3
CHEM 1300	University 1 Chemistry: Structure and Modelling in Chemistry	3
CHEM 1310 or CHEM 1320	University 1 Chemistry: An Introduction to Physical Chemistry  University 1 Chemistry: An Introduction to Organic Chemistry	3
STAT 1000	Basic Statistical Analysis 1	3
ECON 1010	Introduction to Microeconomic Principles	3
ECON 1020	Introduction to Macroeconomic Principles	3
One Math Course from the following*:		
MATH 1200	Elements of Discrete Mathematics	
MATH 1210	Techniques of Classical and Linear Algebra	
MATH 1300	Vector Geometry and Linear Algebra	
MATH 1310	Matrices for Management and Social Sciences	
MATH 1500	Introduction to Calculus	
MATH 1520	Introductory to Calculus for Management and Social Sciences	3
One Philosophy Course from the following:		
PHIL 1290	Critical Thinking	
PHIL 2740	Ethics and Biomedicine	
PHIL 2750	Ethics and the Environment	
PHIL 2830	Business Ethics	3
*Please note MATH 1200 and MATH 1310 are no longer offered at the University of Manitoba but are still accepted for credit for the Math requirement if transferred in.		
Total Credit Hours		39

<b>Degree Core (Required)</b>		
Course	Course Name	Credit Hours
ABIZ 2390/ ECON 2390	Introduction to Environmental Economics	3
AGEC 2370/ BIOL 2300	Principles of Ecology	3
AGEC 3510	Agroecology	3
AGEC 4550	Project in Agroecology	6
ANSC 2500	Animal Production	3
BIOL 3312	Community Ecology	3
CHEM 2770/ MBIO 2770	Elements of Biochemistry 1	3
PLNT 2500	Crop Production	3
PLNT 2520	Genetics	3
SOIL 3600	Soils and Landscapes in Our Environment	3
Total Credit Hours		33

<b>Restricted Electives</b>		
<b>Group 1 – Agricultural Science</b>		Credit Hours
Three courses from the following:		
Any 2000, 3000 or 4000 level course from -		
ANSC	Department of Animal Science	
ENTM	Department of Entomology	
PLNT	Department of Plant Science	9
<b>Group 2 – Land Science</b>		
Two courses from the following:		
Any 3000 or 4000 level course from -		
SOIL	Department of Soil Science	
Or		
GEOG 2250	Introduction to Geographic Information systems	6
<b>Group 3 – Policy and Economics</b>		
One course from the following:		
Any 3000 or 4000 level course from -		
ABIZ	Department of Agribusiness	3
<b>Group 4 – Applied Agroecology</b>		
One course from the following:		
ANSC 4410	Grassland agriculture: plant, animal and environment	
ENTM 4520	Physiological ecology of insects	
PLNT 3540	Weed science	
PLNT 3560	Organic crop production on the Prairies	
SOIL 4400	Soil ecology	3
*Note that courses from this group are in addition to the Group 1 requirement.		
Total Credit Hours		
Total Credit Hours		21

<b>Free Electives</b>	27 CH
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**Suggested Progression of Agroecology Program:****Year 1**

Course	Course Name	Credit Hours
AGRI 1500	Natural Resources and Primary Agricultural Production	3
AGRI 1510	Production, Distribution and Utilization of Agricultural Products	3
BIOL 1020	Biology 1: Principles and Themes	3
BIOL 1030	Biology 2: Biological Diversity, Function and Interactions	3
CHEM 1300	University 1 Chemistry: Structure and Modelling in Chemistry	3
CHEM 1310 or CHEM 1320	University 1 Chemistry: An Introduction to Physical Chemistry  University 1 Chemistry: An Introduction to Organic Chemistry	3
STAT 1000	Basic Statistical Analysis 1	3
ECON 1010	Introduction to Microeconomic Principles	3
ECON 1020	Introduction to Macroeconomic Principles	3
One Math Course from the following:		
MATH 1200	Elements of Discrete Mathematics	
MATH 1210	Techniques of Classical and Linear Algebra	
MATH 1300	Vector Geometry and Linear Algebra	
MATH 1310	Matrices for Management and Social Sciences	
MATH 1500	Introduction to Calculus	
MATH 1520	Introductory to Calculus for Management and Social Sciences	3
Total Credit Hours		30

**Year 2**

Course	Course Name	Credit Hours
ABIZ 1000	Agribusiness Management	3
AGRI 2030	Technical Communications	3
AGEC 2370/ BIOL 2300	Principles of Ecology	3
ANSC 2500	Animal Production	3
CHEM 2770/ MBIO 2770	Elements of Biochemistry 1	3
PLNT 2500	Crop Production	3
PLNT 2520	Genetics	3
STAT 1000	Basic Statistical Analysis 1	3
Restricted/Free Electives/Philosophy		6
Total Credit Hours		30

**Year 3**

Course	Course Name	Credit Hours
ABIZ 2390/ ECON 2390	Introduction to Environmental Economics	3
AGEC 3510	Agroecology	3
BIOL 3312	Community Ecology	3
SOIL 3600	Soils and Landscapes in Our Environment	3
Restricted/Free Electives/Philosophy		18
Total Credit Hours		30

**Year 4**

Course	Course Name	Credit Hours
AGEC 4550	Project in Agroecology	6
Restricted/Free Electives/Philosophy		24
Total Credit Hours		30