

Course Parameters for Agriculture

Facilities

Some courses in the Agriculture scope and sequence can be delivered in a typical classroom setting. Others require access to more specialized in-school and off-campus facilities, such as:

- a land laboratory or outdoor environment
- science, design, construction, fabrication and mechanics laboratories
- controlled growing environments with adequate ventilation suited to plant or livestock production
- lighting capabilities conducive to horticulture
- observation and training sites sponsored by relevant industry, government or post-secondary agencies
- resource centres equipped with computers, software and audio-visual material.

Also desirable, though not essential, are instructional facilities that have:

- water and sinks
- display and storage areas for specimens and artifacts
- whiteboards/bulletin boards
- fresh air and fume extraction
- an exterior exit
- telephone service.

Courses that require access to facilities in addition to those present in a typical classroom setting are identified in the Course Parameters. For more information, see the corresponding course in Sections D, E and F of the *Guide to Standards and Implementation*.

Equipment

An equipment list for each course in the scope and sequence is provided in the Course Parameters chart. Though not exhaustive, the list identifies recommended and optional equipment for meeting the outcomes of the courses.

Equipment for courses in Agriculture can be obtained through a combination of purchasing, borrowing, renting, improvising and constructing. When choosing a suitable option for obtaining equipment, give consideration to:

- adequacy of budgets for purchase
- capabilities regarding in-school maintenance and storage
- the logistics and cost of renting
- potential for loan from industry, government or post-secondary agencies
- joint purchases with other organizations in the community
- opportunities for improvising or constructing.

Teachers may find it desirable to develop a list of additional materials and supplies required for specific learning activities planned within each course.

Safety Considerations

Facilities used to support an Agriculture program must ensure a safe learning/working environment. Students must be aware of federal, provincial and local regulations governing the tasks they perform, and adhere to appropriate personal and environmental health and safety procedures in courses that involve:

- the use of specialized hand/power equipment
- the handling and storage of hazardous materials
- practical skills in animal care.

Students must understand immediate and potential hazards associated with the tasks they perform, and the possible impact of these hazards on self, others and the environment.

Instructional Qualifications

Courses in Agriculture can be implemented by Alberta Certified Teachers who have interest in providing instruction in classroom, laboratory and/or outdoor environments. A background in science, social studies or a relevant industry, such as plant/animal production, animal husbandry, interior/exterior plantscape, floristry, agrifoods, market development or environmental management is an asset to those who provide instruction in Agriculture courses, particularly at the intermediate and advanced levels. Teachers may find it desirable to access sources of instructional support available from industry, professional associations and consultants, Alberta Agriculture, Food and Rural Development and other relevant government agencies.

Credentiaing Opportunities

Some courses within the Agriculture strand provide opportunities for students to earn either complete or partial credentials recognized by business, industry and/or post-secondary institutions. Courses that link with credentialing opportunities relevant to the agriculture or horticulture sectors are identified in the Course Parameters chart. For more information regarding the credential, requirement/qualification and credentialing agency, see the corresponding course in Sections D, E and F of the *Guide to Standards and Implementation*.

Course Parameters

LEVEL

- 1 – Introductory
- 2 – Intermediate
- 3 – Advanced

THEME

- A. Social and Cultural Perspectives
- B. Technology and Applications
- C. Management and Conservation

EQUIPMENT

- ✓ Recommended in order to meet course outcomes
- Optional in providing access to supportive learning environments

LEVEL	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
THEME	A	B	B	B	B	B	B	C	A	B	B	B	B	B	B	B	B	C	C	C	B	A	B	B	B	B	B	B	B	B	C	C	C	C	C	B	
INSTRUCTIONAL QUALIFICATIONS																																					
INSTRUCTIONAL FACILITIES		*		*	*		*		*	*	*		*	*	*		*	*	*	*	*		*	*		*	*	*		*		*		*		*	
CREDENTIALLING OPPORTUNITIES										*	*			*			*					*	*		*	*					*					*	
EQUIPMENT	Agriculture: The Big Picture	Production Basics	Consumer Products & Services	Basic Landscape/Turf Care	Basic Floral Design	Market Fundamentals	Agriculture Technology	Resource Management	Animal Husbandry/Welfare	Field Crops 1	Livestock/Poultry 1	Agrifoods 1	Landscape/Turf Management 1	Equine 1	Floral Design 1	Marketing 1	Protected Structures	Soils Management 1	Integrated Pest Management	Nursery/Greenhouse Crops 1	Issues in Agriculture	Field Crops 2	Livestock/Poultry 2	Agrifoods 2	Landscape/Turf Management 2	Equine 2	Floral Design 2	Marketing 2	Biotechnology	Water Management	Soils Management 2	Sustainable Agriculture Systems	Nursery/Greenhouse Crops 2				
	1010	1030	1060	1070	1080	1090	1100	1110	2020	2030	2040	2050	2060	2070	2080	2090	2100	2120	2130	2140	3010	3030	3040	3050	3060	3070	3080	3090	3100	3110	3120	3130	3140				
Autoclave										○							○			○		○													○		
Computers and software (1)				○	○	○	○		○	○	○		○	○	○	○	○			○		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
Floral equipment and materials (2)				✓											✓													✓								○	
Heating coil and controller		○																			○		○													○	
Landscape equipment, hand (3)		○		✓									✓							✓		✓			✓										✓		
Landscape equipment, power (4)				✓									✓							○		○			✓										○		
Lighting equipment (5)		○			✓										✓		○			○		○						○							○		
Maps, hydrogeological																																					
Maps, soil																			✓																		
Meter, electrical conductivity																			✓															✓		○	
Meters, pH								○											✓				○											✓	○	○	
Microscope		○		✓				○		✓	○	○	✓							✓		○	○	○	○										○	○	
Plant propagation materials (6)		○		✓	✓					✓			✓		✓				✓		✓		✓		✓								✓		✓		

- (1) Computer software may include breeding records, financial management, design and layout, marketing databases as required.
- (2) Floral equipment and materials include glue gun, netting, spray paint, water picks, pins, ribbon, floral foams, tape, knives, floral shears, wire, assorted florals, packaging materials, floral containers.
- (3) Hand landscape equipment includes hoe, rake shovel, trowel, spade, wheelbarrow, garden fork.
- (4) Power landscape equipment includes aerator, lawn mower, lawn rake, rototiller.
- (5) Lighting equipment may include tungsten filament lamps, fluorescent lamps, high intensity discharge lamps and timers as required.
- (6) Plant propagation materials include plant pots/containers, growing media, soil amendments, fertilizer, rooting hormone.

* Refer to specific 1-credit courses listed in Sections D, E and F of the corresponding *Guide to Standards and Implementation* for additional information.

Course Parameters

AGRICULTURE

LEVEL

- 1 – Introductory
- 2 – Intermediate
- 3 – Advanced

THEME

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- B. Technology and Applications
- C. Management and Conservation

EQUIPMENT

- ✓ Recommended in order to meet course outcomes
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THEME	A	B	B	B	B	B	B	C	A	B	B	B	B	B	B	B	C	C		A	B	B	B	B	B	B	B	B	C	C	C	C	B		
INSTRUCTIONAL QUALIFICATIONS																																			
INSTRUCTIONAL FACILITIES		*		*	*				*	*	*		*	*	*		*	*	*	*		*	*		*	*	*		*		*		*		
CREDENTIALLING OPPORTUNITIES										*	*			*			*				*	*		*	*				*				*		
EQUIPMENT	Agriculture: The Big Picture	Production Basics	Consumer Products & Services	Basic Landscape/Turf Care	Basic Floral Design	Market Fundamentals	Agriculture Technology	Resource Management	Animal Husbandry/Welfare	Field Crops 1	Livestock/Poultry 1	Agrifoods 1	Landscape/Turf Management 1	Equine 1	Floral Design 1	Marketing 1	Protected Structures	Soils Management 1	Integrated Pest Management	Nursery/Greenhouse Crops 1	Issues in Agriculture	Field Crops 2	Livestock/Poultry 2	Agrifoods 2	Landscape/Turf Management 2	Equine 2	Floral Design 2	Marketing 2	Biotechnology	Water Management	Soils Management 2	Sustainable Agriculture Systems	Nursery/Greenhouse Crops 2		
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Protective clothing (7)		○	○	✓	✓		○		✓	✓	✓	○	✓	✓	✓		○	○	✓	✓		✓	✓	○	✓	✓	✓		○		○		✓		
Pruning tools		○		✓	○					✓			✓		✓					✓		○			✓	✓	✓						✓		
Refrigerator		○	○	○	✓						○	○	○		✓					○	○	○	○	○	○	○	✓						○		
Riker (permanent display) mounts		○	○	○	○			○		○	○	○	○							○	○	○	○	○	○	○		○						○	
Samples: agriculture commodity	✓	✓	✓							✓	✓	✓										✓	✓	✓											
feed		○							✓		✓			✓								✓	✓	✓			✓								
fertilizer		○		✓						✓			✓							✓		✓	✓			✓								✓	
pesticide		○		✓			✓			✓			✓				○		✓		✓	✓	✓			✓								✓	
seed		○		○					✓	✓			○							✓	✓	✓	✓			○								✓	
soil				○			○			○		○	○				○	✓		✓		○		○	○	○	○				✓			✓	
Slides/specimens, plant and animal (8)	✓	○	✓	✓	✓				✓	✓	✓	✓	✓	✓	✓					✓		✓	✓	✓	✓	✓	✓	✓						✓	
Sprayer, chemical				○						○			○				○		○	○	○	○	○	○	○	○	○							○	
Tables, media mixing		○		○									○												○										○

(7) Protective clothing may include rubber/steel-toed boots, gloves, protective eyewear, coveralls, rubber pants and jacket as required.

(8) Slides/specimens may include plant or animal structures, pests and diseases as required.

* Refer to specific 1-credit courses listed in Sections D, E and F of the corresponding *Guide to Standards and Implementation* for additional information.

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CREDENTIALLING OPPORTUNITIES										*	*					*					*	*		*	*				*						
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Tables, seedage		○		○									○							○					○									○	
Water culture containers										○							○			○		○			○									○	
Water distiller/deionizer				○						○			○					✓		○		○			○				○	✓				○	
Watering equipment (9)		○		✓	✓					✓			✓		✓				✓		✓		✓		✓		✓							✓	
Weigh scales										✓	○			○				○		✓		✓				○							○		✓

(9) Watering equipment includes hoses, water sprinklers/sprayers, watering cans.

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