



# Agriculture and Food Production Diploma

## PLAR Candidate Guide

Prior Learning Assessment and Recognition (PLAR)

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### Prior learning credit options at Saskatchewan Polytechnic

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See [Get Credit for What you Know](#) for important information about all options to get credit for prior learning at Sask Polytech, including PLAR, transfer credit, Canadian Armed Forces credit, and equivalency credit.

### How to navigate this document

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This document contains links to other document sections or webpages. To return to where you were from another section in this document, press the *ALT* key and *left arrow* key at the same time. To return to this webpage from another webpage, close the other webpage or click back on the browser tab for this document.

### Contents of this guide

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This guide contains the following specific PLAR information and tools for this program

- A. [PLAR fees](#)
- B. [PLAR eligibility and options](#)
- C. [Dates when PLAR assessment is available](#)
- D. [Special directions for this program](#)
- E. [PLAR contact person](#)
- F. [Self-rating course outlines](#)

## A. PLAR fees

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Fees for PLAR challenges are set to cover our costs for consultation, assessment, and related administrative tasks. PLAR fees are non-refundable and non-transferrable.

The PLAR fees policy is subject to change for each new academic year. Please see the **Cost** section on the [PLAR webpage](#) for current fee information.

## PLAR eligibility and options

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To be eligible for PLAR for courses in this program, you must first apply for admission and be accepted into the program. You must also consult with the [PLAR contact person](#) and be approved for PLAR assessment.

### Course prerequisites and corequisites

Some courses have one or more other courses that must be completed first (prerequisite) or at the same time (corequisite). See [course outlines](#) in this guide to identify any pre- or co-requisites for each course. Discuss with your [PLAR contact person](#) how to deal with courses with corequisites.

### Block assessment

Some programs may assess a cluster of courses together in one block, which may save you time and effort. Ask the [PLAR contact person](#) whether there are any block assessment options in this program.

## B. Dates when PLAR assessment is available

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PLAR assessment for this program is available from Sept 1 to June 15 in each academic year.

**All PLAR assessments must be completed by June 15 of each academic year.**

## C. Special directions for this program

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1. **Review** the [PLAR process and FAQs](#) and the information in this guide.
2. **Self-rate** your learning for each course using the [Course Outlines](#) in this guide.
3. **Consult** with the [PLAR contact person](#) for PLAR approval. Be prepared to provide your resume, course self-ratings (see [section F](#)), and a partially completed [PLAR application](#). If you are approved for PLAR, the contact person will sign your PLAR application and explain next steps.
4. Apply for admission to the program. See [directions](#) for applying.
5. **Register** for PLAR at [Registration/Enrolment Services](#) once you have signed approval on your [PLAR Application Form](#). The PLAR fee will be added to your student account.
6. **Finalize** an assessment plan with your assigned assessor.
7. **Complete** assessment before your PLAR registration expires.

## D. PLAR contact person

Contact one of the Program Heads below to arrange a consultation **after** you have read this guide and [general PLAR information](#) and rated yourself for each course (see next section). Consultation may be by phone, online, or in person. Be prepared to provide your resume, course self-ratings, and a partially completed [PLAR application](#). If agreement is reached to go ahead with PLAR, the contact person will sign approval on your PLAR application and explain the next steps. Admission to the program is required before you can register for PLAR.

**Bryan Sarauer, Program Head**  
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## E. Self-rating course outlines

Clicking on a course code below opens a page where you can rate yourself on the knowledge and skills assessed for PLAR credit. For Arts & Sciences courses, clicking on the course code opens another PLAR guide. The [PLAR contact person](#) for this program will refer you to another person to discuss PLAR for courses delivered by Arts & Sciences or another program/department.

COURSE CODE	COURSE NAME	Delivered by another department/program
<b>Semester 1</b>		
<a href="#">AGMC 100</a>	Agricultural Machinery 1	
<a href="#">AGRI 101</a>	Introduction to Agribusiness	
<a href="#">CHEM 102</a>	General Chemistry 1	<a href="#">Arts &amp; Sciences</a>
<a href="#">COM 170</a>	Professional Workplace Communication	<a href="#">Arts &amp; Sciences</a>
<a href="#">GIS 101</a>	Geographic Information Systems 1	
<a href="#">GPS 100</a>	Basics of Global Positioning Systems (GPS)	
<a href="#">HIST 100</a>	History of Agriculture in Western Canada	
<a href="#">MATH 114</a>	Mathematics	<a href="#">Arts &amp; Sciences</a>
<a href="#">SAFE 105</a>	Safety Systems	
<b>Semester 2</b>		
<a href="#">AGMC 101</a>	Precision Agriculture 1	

<b>COURSE CODE</b>	<b>COURSE NAME</b>	<b>Delivered by another department/program</b>
<a href="#">AGRI 100</a>	Agricultural Business Applications	
<a href="#">AGRI 102</a>	Agricultural Entomology	
<a href="#">AGRI 103</a>	Agronomy	
<a href="#">AGRI 105</a>	Principles of Crop Production	
<a href="#">AGRI 106</a>	Weed Management	
<a href="#">CLTR 200</a>	Culture and Diversity	<a href="#">Arts &amp; Sciences</a>
<a href="#">ETHC 100</a>	Professional Ethics	
<a href="#">MKTG 101</a>	Commodity Marketing 1	
<b>Co-operative Work Term</b>		
<a href="#">COOP 101</a>	Co-operative Work Term	
<b>Semester 3</b>		
<a href="#">AGMC 205</a>	Harvesting, Hay, and Forage Machinery	
<a href="#">AGRI 200</a>	Principles of Sustainable Agriculture	
<a href="#">ANLT 200</a>	Food Security	
<a href="#">APIC 300</a>	Apiculture	
<a href="#">IRRI 200</a>	Pesticide Management	
<a href="#">PEST 200</a>	Pesticide Management	
<a href="#">SOIL 200</a>	Soil and Crop Nutrition	
<a href="#">WTER 200</a>	Water Management	
<b>Semester 4</b>		
<a href="#">AGMC 204</a>	Agriculture Machinery 2	
<a href="#">AGMC 206</a>	Precision Agriculture 2	
<a href="#">AGRI 104</a>	Agricultural Business Planning	
<a href="#">AGRI 201</a>	Beef Cattle Production	

<b>COURSE CODE</b>	<b>COURSE NAME</b>	<b>Delivered by another department/program</b>
<a href="#">AGRI 202</a>	Rangeland Management	
<a href="#">ECON 200</a>	Introduction to Agricultural Economics	
<a href="#">IOT 200</a>	Internet of Things: Applications in Agriculture	
<a href="#">MKTG 204</a>	Commodity Marketing 2	
<a href="#">RLAW 105</a>	Indigenous Resource Rights	
<b>Co-operative Work Term</b>		
<a href="#">COOP 201</a>	Co-operative work Term	
<a href="#">COOP 301</a>	Co-operative Work Term	
<b>Semester 5</b>		
<a href="#">AGRI 300</a>	Agricultural Intelligence	
<a href="#">AGRI 301</a>	Grain, Handling, Storage and Conveyance	
<a href="#">AGRI 302</a>	Post-Harvest Good Production	
<a href="#">ANLT 301</a>	Globalization	
<a href="#">BLAW 281</a>	Business Law	
<a href="#">CLIM 200</a>	Meteorology	
<a href="#">LEAD 301</a>	Innovation and Leadership	
<a href="#">PROJ 206</a>	Capstone Project	
<a href="#">TCOM 103</a>	Technical Communication	<a href="#">Arts &amp; Sciences</a>

## AGMC 100 - Agricultural Machinery 1

You will receive an introduction to agricultural equipment and drive systems. You will become familiar with the function, operation and adjustment of selected equipment including tillage, spraying, cutting, harvesting, baling and forage equipment. You will also learn about tractor performance, driveline components, light duty transmissions, clutches and differentials.

**Credit unit(s):** 3.0  
**Prerequisites:** SAFE 105  
**Corequisites:** none  
**Equivalent course(s):** none

<p>Use a checkmark (✓) to rate yourself as follows for each learning outcome</p> <p><b>Competent:</b> I can apply this outcome without direction or supervision.  <b>Learning:</b> I am still learning skills and knowledge to apply this outcome.  <b>None:</b> I have no knowledge or experience related to this outcome.</p>	Competent	Learning	None
1. Identify factors that influence tractor field performance.			
2. Describe cutting, hay and tillage equipment.			
3. Adjust cutting hay and tillage equipment.			
4. Describe the components and use of selected types of tillage equipment.			
5. Describe adjustments and repairs of other selected types of equipment.			
6. Describe basic gearing principles.			
7. Inspect seals and bearing, common clutch types, a standard light duty transmission, drive lines and universal joint.			
8. Service common seals and bearing, common clutch types, a standard light duty transmission, drive lines and universal joint.			
9. Explain the functions and operating principles of drive axle assemblies.			

**AGRI 101 - Introduction to Agribusiness**

You will discuss the nature of agricultural business from both a local and an international perspective. You will explore the global policy framework as well as national laws and programs which support agricultural enterprise. You will investigate selected sectors of the industry in relation to the various perspectives.

**Credit unit(s):** 3.0  
**Prerequisites:** none  
**Corequisites:** none  
**Equivalent course(s):** none

<p><b>Use a checkmark (✓) to rate yourself as follows for each learning outcome</b></p> <p><b>Competent:</b> I can apply this outcome without direction or supervision.  <b>Learning:</b> I am still learning skills and knowledge to apply this outcome.  <b>None:</b> I have no knowledge or experience related to this outcome.</p>	Competent	Learning	None
1. Describe key trends in Canadian agriculture.			
2. Describe the key factors for success in western Canadian agri-business.			
3. Describe the global trading environment with respect to agri-products.			
4. Describe the general structure and legislative framework of select industry sectors.			
5. Describe common risk mitigation strategies used in the agriculture industry.			
6. Describe the bio-refining sector of the industry.			
7. Explore the role of value-added agri-business in relation to provincial industry.			
8. Explore future developments in the agriculture industry.			

## CHEM 102 - General Chemistry 1

You will study essential chemical concepts including atomic structure, nomenclature, stoichiometry, aqueous solutions, thermodynamics, quantum theory and chemical bonding. In the mandatory lab component, you will be introduced to standard laboratory techniques.

**Credit unit(s):** 3.0  
**Prerequisites:** none  
**Corequisites:** none  
**Equivalent course(s):** none

<b>Use a checkmark (✓) to rate yourself as follows for each learning outcome</b>  <b>Competent:</b> I can apply this outcome without direction or supervision. <b>Learning:</b> I am still learning skills and knowledge to apply this outcome. <b>None:</b> I have no knowledge or experience related to this outcome.	<b>Competent</b>	<b>Learning</b>	<b>None</b>
1. Examine fundamental qualitative and quantitative aspects of Chemistry.			
2. Examine atomic structure and concepts of mass.			
3. Characterize molecular and ionic compounds.			
4. Analyze chemical reactions using mass and stoichiometric relationships.			
5. Examine chemical reactions involving aqueous solutions.			
6. Examine matter in the gas phase.			
7. Analyze the energy and enthalpy of chemical reactions.			
8. Examine the electronic structure of atoms and ions.			
9. Examine chemical bonding and the geometry of molecules.			



## COM 170 - Professional Workplace Communication

You will focus on specific skills, behaviours, and attitudes needed to work productively with others. You will examine the role and effects of social media and digital communications in and outside the workplace. You will also practice conflict resolution skills as well as teamwork skills.

**Credit unit(s):** 3.0  
**Prerequisites:** none  
**Corequisites:** none  
**Equivalent course(s):** none

<p><b>Use a checkmark (✓) to rate yourself as follows for each learning outcome</b></p> <p><b>Competent:</b> I can apply this outcome without direction or supervision.  <b>Learning:</b> I am still learning skills and knowledge to apply this outcome.  <b>None:</b> I have no knowledge or experience related to this outcome.</p>	<b>Competent</b>	<b>Learning</b>	<b>None</b>
1. Examine fundamentals of workplace communication.			
2. Examine elements of verbal and nonverbal communication.			
3. Examine group communication and teamwork skills.			
4. Practice conflict resolution skills.			
5. Discuss the role of digital communication and social media in the workplace.			

## GIS 101 - Geographic Information Systems 1

You will achieve a basic understanding of Geographic Information Systems (GIS) concepts and principles. You will study how to display spatial data, work with tables and create a map layout using GIS software.

**Credit unit(s):** 2.0  
**Prerequisites:** none  
**Corequisites:** none  
**Equivalent course(s):** none

<p><b>Use a checkmark (✓) to rate yourself as follows for each learning outcome</b></p> <p><b>Competent:</b> I can apply this outcome without direction or supervision.  <b>Learning:</b> I am still learning skills and knowledge to apply this outcome.  <b>None:</b> I have no knowledge or experience related to this outcome.</p>	Competent	Learning	None
1. Describe the nature and uses of Geographic Information Systems (GIS).			
2. Perform basic spatial analysis.			
3. Perform basic spatial analysis using spatial data			
4. Manage attribute tables.			
5. Manage Global Positioning System data in a Geographic Information System (GIS).			
6. Integrate Geographic Information Systems (GIS) skills in a GIS project.			

## GPS 100 - Basics of Global Positioning Systems (GPS)

You will study Global Position Systems (GPS) for agriculture. You will gain hands-on GPS receivers experience and study how to navigate using handheld GPS receivers. You will also study how to convert GPS data into different file formats.

**Credit unit(s):** 2.0  
**Prerequisites:** none  
**Corequisites:** none  
**Equivalent course(s):** none

<p><b>Use a checkmark (✓) to rate yourself as follows for each learning outcome</b></p> <p><b>Competent:</b> I can apply this outcome without direction or supervision.  <b>Learning:</b> I am still learning skills and knowledge to apply this outcome.  <b>None:</b> I have no knowledge or experience related to this outcome.</p>	Competent	Learning	None
1. Describe the basic theory of the Global Positioning System (GPS) as it applies to agriculture.			
2. Prepare a GPS mission plan.			
3. Apply a GPS receiver to collect waypoints and tracks in field applications.			
4. Compare uncorrected and corrected GPS data.			
5. Demonstrate GPS data import and export.			
6. Demonstrate proper setup of a GPS base station and link to a rover.			

## HIST 100 - History of Agriculture in Western Canada

You will be introduced to the history of agriculture in Western Canada from pre-contact to present day. You will examine climate and geography, Indigenous peoples, immigration, farm settlements and the formation of agricultural societies. You will also examine the historical context of new markets, product segmentation and diversification.

**Credit unit(s):** 3.0  
**Prerequisites:** none  
**Corequisites:** none  
**Equivalent course(s):** none

<p><b>Use a checkmark (✓) to rate yourself as follows for each learning outcome</b></p> <p><b>Competent:</b> I can apply this outcome without direction or supervision.  <b>Learning:</b> I am still learning skills and knowledge to apply this outcome.  <b>None:</b> I have no knowledge or experience related to this outcome.</p>	<b>Competent</b>	<b>Learning</b>	<b>None</b>
1. Examine Western Canadian climate and geography.			
2. Discuss the agricultural practices of Indigenous people.			
3. Examine farm settlements in Western Canada.			
4. Discuss the role of agricultural movements.			
5. Identify the significant events influencing Western Canadian agriculture.			
6. Analyze the history of agricultural product segmentation.			
7. Compare past and current market trends in agricultural diversification.			
8. Explore the history of current regulatory organizations.			

**MATH 114 - Mathematics**

You will develop the required background in algebra, geometry and trigonometry that is necessary to do basic calculations in applied areas. The course content includes algebraic operations, solution of equations, functions, probability, statistics, graphing plane geometry, trigonometry, and vectors. Problem solving will be emphasized throughout the course.

**Credit unit(s):** 3.0  
**Prerequisites:** none  
**Corequisites:** none  
**Equivalent course(s):** none

<p><b>Use a checkmark (✓) to rate yourself as follows for each learning outcome</b></p> <p><b>Competent:</b> I can apply this outcome without direction or supervision.  <b>Learning:</b> I am still learning skills and knowledge to apply this outcome.  <b>None:</b> I have no knowledge or experience related to this outcome.</p>	<p><b>Competent</b></p>	<p><b>Learning</b></p>	<p><b>None</b></p>
1. Use algebraic equations, factors, ratios, and proportions to solve technical problems.			
2. Plot graphs of mathematical data.			
3. Examine basic statistics and probability.			
4. Apply the basic principles of plane geometry.			
5. Apply the basic principles of plane trigonometry.			
6. Perform basic arithmetic operations on vectors.			

## SAFE 105 - Safety Systems

Your studies will address occupational health, safety, and assurance systems, as well as electrical systems, driving, protective equipment and confined space. You will acquire the core requirements and responsibilities needed to work safely.

**Credit unit(s):** 3.0  
**Prerequisites:** none  
**Corequisites:** none  
**Equivalent course(s):** none

<p><b>Use a checkmark (✓) to rate yourself as follows for each learning outcome</b></p> <p><b>Competent:</b> I can apply this outcome without direction or supervision.  <b>Learning:</b> I am still learning skills and knowledge to apply this outcome.  <b>None:</b> I have no knowledge or experience related to this outcome.</p>	<b>Competent</b>	<b>Learning</b>	<b>None</b>
1. Examine Saskatchewan's Occupational Health and Safety (OH&S) legal requirements.			
2. Interpret the rights and responsibilities of internal and external stakeholders.			
3. Examine the concept of due diligence.			
4. Explore the linkages between work and wellbeing.			
5. Discuss the significance of food safety.			
6. Demonstrate the safe operation of equipment.			
7. Demonstrate the selection, care, and use of personal protective equipment.			
8. Explain the responsibilities associated with confined or restricted space entry.			

### AGMC 101 - Precision Agriculture 1

Your studies will include a general overview of the farm machinery and technology used in Western Canada. You will become familiar with the uses and purposes of tractors and combines as well as tillage, seeding, spraying and forage equipment. You will also study precision farming principles and components.

**Credit unit(s):** 3.0  
**Prerequisites:** AGMC 100, GPS 100  
**Corequisites:** none  
**Equivalent course(s):** none

<p><b>Use a checkmark (✓) to rate yourself as follows for each learning outcome</b></p> <p><b>Competent:</b> I can apply this outcome without direction or supervision.  <b>Learning:</b> I am still learning skills and knowledge to apply this outcome.  <b>None:</b> I have no knowledge or experience related to this outcome.</p>	<b>Competent</b>	<b>Learning</b>	<b>None</b>
1. Explain tractor systems, power, traction, and ballasting procedures.			
2. Describe the operation of tillage equipment.			
3. Describe the operation of seeding equipment.			
4. Describe the operation of spraying equipment.			
5. Describe the operation of hay and forage equipment.			
6. Describe the operation of harvest equipment.			
7. Describe the use of Global Positioning Systems (GPS) in precision farming practices.			
8. Describe farm tractor maintenance procedures.			

## AGRI 100 - Agricultural Business Applications

You will learn how to use a personal computer as a small business tool to conduct financial, statistical, and marketing research. You will discuss the process of business idea generation and opportunity identification, feasibility analysis and the importance of business planning. The course content includes methods of getting into business and forms of ownership.

**Credit unit(s):** 3.0  
**Prerequisites:** none  
**Corequisites:** none  
**Equivalent course(s):** none

Use a checkmark (✓) to rate yourself as follows for each learning outcome		Competent	Learning	None
Competent:	I can apply this outcome without direction or supervision.			
<b>Learning:</b>	I am still learning skills and knowledge to apply this outcome.			
<b>None:</b>	I have no knowledge or experience related to this outcome.			
1.	Use the personal computer as a small business tool.			
2.	Use word processing, spreadsheet, presentation, and email applications.			
3.	Utilize file management techniques.			
4.	Use the Internet to find financial, statistical, and marketing information.			
5.	Identify potential business ideas.			
6.	Analyze a selected business idea.			
7.	Review forms of ownership for your business.			
8.	Identify the components of a business plan.			



## AGRI 102 - Agricultural Entomology

You will study the life cycles and roles of beneficial insects and insect pests that affect crops and livestock. You will focus on the fundamentals of pollination, disease and parasite control including the effect on food security.

**Credit unit(s):** 3.0  
**Prerequisites:** none  
**Corequisites:** none  
**Equivalent course(s):** none

<p><b>Use a checkmark (✓) to rate yourself as follows for each learning outcome</b></p> <p><b>Competent:</b> I can apply this outcome without direction or supervision.  <b>Learning:</b> I am still learning skills and knowledge to apply this outcome.  <b>None:</b> I have no knowledge or experience related to this outcome.</p>	Competent	Learning	None
1. Distinguish between beneficial insects and insect pests.			
2. Discuss the significance of beneficial insects.			
3. Discuss the impact of insect pests on crops and livestock.			
4. Examine life cycles of beneficial and pest insects.			
5. Identify the role of beneficial insects and domesticated bees in crop pollination.			
6. Examine the principles of disease, parasitic mites, and the impact on food security.			
7. Discuss insect control methods.			
8. Examine pesticide formulations for control of insects and disease.			

### AGRI 103 - Agronomy

You will study the basic principles of plant morphology, anatomy, and physiology. You will study environmental and management factors affecting plant growth and development. You will focus on cereal, pulse, and oilseed crop production.

**Credit unit(s):** 3.0  
**Prerequisites:** none  
**Corequisites:** none  
**Equivalent course(s):** none

<p><b>Use a checkmark (✓) to rate yourself as follows for each learning outcome</b></p> <p><b>Competent:</b> I can apply this outcome without direction or supervision.  <b>Learning:</b> I am still learning skills and knowledge to apply this outcome.  <b>None:</b> I have no knowledge or experience related to this outcome.</p>	<b>Competent</b>	<b>Learning</b>	<b>None</b>
1. Discuss the current and ongoing role of agronomy globally, economically, and culturally.			
2. Describe the structure and function of plant organs and tissues.			
3. Describe how plants are identified using morphological and anatomical features in dicots and monocots.			
4. Describe the conditions that may affect seed germination and seedling growth.			
5. Explain the growth and development of the monocot and dicot plants.			
6. Describe how environmental factors affect the vegetative and reproductive growth of crops.			
7. Identify plant health and symptoms in crops.			
8. Discuss management practices which influence the growth and development of agronomic crops.			

### AGRI 105 - Principles of Crop Production

You will be introduced to the environment, soil, and crops produced relevant to prairie agriculture. You will study cultural practices, land preparation, cropping systems, plant breeding and technology as it relates to crop production. You will study the production of major prairie crops.

**Credit unit(s):** 3.0  
**Prerequisites:** none  
**Corequisites:** none  
**Equivalent course(s):** none

<p><b>Use a checkmark (✓) to rate yourself as follows for each learning outcome</b></p> <p><b>Competent:</b> I can apply this outcome without direction or supervision.  <b>Learning:</b> I am still learning skills and knowledge to apply this outcome.  <b>None:</b> I have no knowledge or experience related to this outcome.</p>	Competent	Learning	None
1. Describe the crop production landscape of the prairie region.			
2. Explain the environmental conditions needed for crop growth.			
3. Describe soil characteristics and agroecosystems as they relate to crop production.			
4. Describe the major prairie crops.			
5. Describe structures of plants as they relate to crop production.			
6. Describe cultural practices in crop production.			
7. Discuss field management and crop rotations.			
8. Discuss plant breeding functions and variety development.			
9. Describe the techniques used in crop production.			

## AGRI 106 - Weed Management

You will study noxious and common weeds, methods of control, and herbicide performance and tolerance. You will be introduced to the characteristics, formulations and application methods of herbicides, biological and cultural control methods. Safety measures and proper handling of chemicals will be addressed.

**Credit unit(s):** 3.0  
**Prerequisites:** none  
**Corequisites:** none  
**Equivalent course(s):** none

<p><b>Use a checkmark (✓) to rate yourself as follows for each learning outcome</b></p> <p><b>Competent:</b> I can apply this outcome without direction or supervision.  <b>Learning:</b> I am still learning skills and knowledge to apply this outcome.  <b>None:</b> I have no knowledge or experience related to this outcome.</p>	<b>Competent</b>	<b>Learning</b>	<b>None</b>
1. Identify weeds and the methods by which they spread.			
2. Identify the parts and functions of dicot anatomy.			
3. Identify the parts and functions of monocot anatomy.			
4. Identify significant weeds of the prairies.			
5. Examine weed control methods.			
6. Describe herbicide and insecticide injury symptoms.			
7. Describe herbicide resistance in weeds.			

## CLTR 200 - Culture and Diversity

Your studies will focus on the many dimensions of culture and approaches to promoting inclusion and innovation. You will explore culture in Canadian society as it pertains to Indigenous and immigrant populations. You will also examine the correlation between culture and diversity.

**Credit unit(s):** 2.0  
**Prerequisites:** none  
**Corequisites:** none  
**Equivalent course(s):** none

<p><b>Use a checkmark (✓) to rate yourself as follows for each learning outcome</b></p> <p><b>Competent:</b> I can apply this outcome without direction or supervision.  <b>Learning:</b> I am still learning skills and knowledge to apply this outcome.  <b>None:</b> I have no knowledge or experience related to this outcome.</p>	<b>Competent</b>	<b>Learning</b>	<b>None</b>
1. Discuss how cultural dimensions shape the diversity of Canada.			
2. Discuss the prominent dimensions of culture in Canadian society such as tradition, familial relations, and employment.			
3. Describe the interrelationships produced when the dimensions of various cultures interact.			
4. Describe the dimensions of culture as it relates to Indigenous and immigrant populations.			
5. Discuss the correlation between culture, diversity, and innovation.			

## ETHC 100 - Professional Ethics

You will learn the appropriate approach to sensitive ethical and environmental issues.

**Credit unit(s):** 3.0  
**Prerequisites:** none  
**Corequisites:** none  
**Equivalent course(s):** none

<p><b>Use a checkmark (✓) to rate yourself as follows for each learning outcome</b></p> <p><b>Competent:</b> I can apply this outcome without direction or supervision.  <b>Learning:</b> I am still learning skills and knowledge to apply this outcome.  <b>None:</b> I have no knowledge or experience related to this outcome.</p>	Competent	Learning	None
1. Describe the importance of professional ethics.			
2. Discuss ethical arguments.			
3. Identify the sociological, economic, political, and legal dimensions of ethical discourse.			
4. Analyze the theoretical basis of ethical arguments.			
5. Analyze ethical decision making models.			
6. Explore professionalism, ethics, and the requirements of a regulated occupation.			

## MKTG 101 - Commodity Marketing 1

You will examine strategies of commodity marketing of agricultural products. You will explore marketing principles in various market situations as well as work with forward contracts, basis contracts, futures contracts, and option strategies in agriculture commodities.

**Credit unit(s):** 2.0  
**Prerequisites:** AGRI 101  
**Corequisites:** none  
**Equivalent course(s):** none

<p><b>Use a checkmark (✓) to rate yourself as follows for each learning outcome</b></p> <p><b>Competent:</b> I can apply this outcome without direction or supervision.  <b>Learning:</b> I am still learning skills and knowledge to apply this outcome.  <b>None:</b> I have no knowledge or experience related to this outcome.</p>	<b>Competent</b>	<b>Learning</b>	<b>None</b>
1. Describe commodity market fundamentals.			
2. Compare futures' prices and commodity cash prices.			
3. Describe the basis as it relates to commodity marketing.			
4. Describe commodity hedging.			
5. Describe fundamental analysis.			
6. Describe technical analysis.			
7. Determine cost of production.			

### COOP 101 - Co-operative Work Term

Your co-operative education term will provide you with the opportunity to consolidate theoretical and practical concepts learned in the classroom and gain valuable experience in a work setting.

**Credit unit(s):** 0.0  
**Prerequisites:** none  
**Corequisites:** none  
**Equivalent course(s):** none

<p><b>Use a checkmark (✓) to rate yourself as follows for each learning outcome</b></p> <p><b>Competent:</b> I can apply this outcome without direction or supervision.  <b>Learning:</b> I am still learning skills and knowledge to apply this outcome.  <b>None:</b> I have no knowledge or experience related to this outcome.</p>	Competent	Learning	None
1. Develop personal employment search skills.			
2. Communicate in the workplace.			
3. Work as a member of the team.			
4. Demonstrate effective work habits.			
5. Become familiar with safe work practices.			
6. Develop personal management skills.			
7. Identify roles and responsibilities of personnel in the workplace.			
8. Assimilate learned theories and concepts in a workplace setting.			
9. Demonstrate essential skills.			



**AGMC 205 - Harvesting, Hay, and Forage Machinery**

You will examine the theory and operation of harvesting, hay and forage equipment and related attachments. Precision farming as it relates to harvesting equipment will be covered.

**Credit unit(s):** 3.0  
**Prerequisites:** AGMC 100  
**Corequisites:** none  
**Equivalent course(s):** none

<p><b>Use a checkmark (✓) to rate yourself as follows for each learning outcome</b></p> <p><b>Competent:</b> I can apply this outcome without direction or supervision.  <b>Learning:</b> I am still learning skills and knowledge to apply this outcome.  <b>None:</b> I have no knowledge or experience related to this outcome.</p>	<b>Competent</b>	<b>Learning</b>	<b>None</b>
1. Describe the construction of belts, chains and power take off (PTO) shafts.			
2. Inspect belts, chains, and PTO shafts.			
3. Describe hydrostatic drive systems.			
4. Inspect hydrostatic drive systems.			
5. Describe the theory of operation for combines and component monitoring.			
6. Inspect components on hay and forage equipment.			
7. Perform adjustments on harvesting equipment based upon harvesting conditions.			
8. Describe yield monitoring and satellite based yield mapping components and sensors.			
9. Understand the operation of harvesting, hay, and forage equipment.			

## AGRI 200 - Principles of Sustainable Agriculture

You will discuss the principles of sustainable agriculture. You will learn about soil and water management and their application in sustainable agricultural systems. You will explore sustainable crop production, including the pros and cons. You will also examine biodiversity and the significance of public trust to agriculture.

**Credit unit(s):** 3.0  
**Prerequisites:** none  
**Corequisites:** none  
**Equivalent course(s):** none

<p><b>Use a checkmark (✓) to rate yourself as follows for each learning outcome</b></p> <p><b>Competent:</b> I can apply this outcome without direction or supervision.  <b>Learning:</b> I am still learning skills and knowledge to apply this outcome.  <b>None:</b> I have no knowledge or experience related to this outcome.</p>	<b>Competent</b>	<b>Learning</b>	<b>None</b>
1. Discuss the principles of sustainable agriculture.			
2. Discuss the role of a carbon sequestration as applied to farm management.			
3. Describe the significance of nutrient cycling, storage, and filtration of water.			
4. Discuss sustainable water conservation techniques.			
5. Describe the types of sustainable crop production.			
6. Discuss the pros and cons of sustainable crop production.			
7. Describe the significance of biodiversity and modern industrial agriculture.			
8. Evaluate environmental stewardship in agriculture.			
9. Discuss the significance of public trust.			

## ANLT 200 - Food Security

This course explores global as well as local issue in food production, processing, distribution, and consumption. Students will examine food prices and food policy analysis; agricultural subsidies; international trade; and food interventions. Students will also explore the overall effect of income, policies, markets, and prices as they affect food security.

**Credit unit(s):** 3.0  
**Prerequisites:** none  
**Corequisites:** none  
**Equivalent course(s):** none

<p><b>Use a checkmark (✓) to rate yourself as follows for each learning outcome</b></p> <p><b>Competent:</b> I can apply this outcome without direction or supervision.  <b>Learning:</b> I am still learning skills and knowledge to apply this outcome.  <b>None:</b> I have no knowledge or experience related to this outcome.</p>	<b>Competent</b>	<b>Learning</b>	<b>None</b>
1. Describe the concept of food security.			
2. Discuss food security from a local to a global scale.			
3. Explore the environmental, social, and economic impacts on food security.			
4. Compare mainstream agricultural production and alternatives as a means of enhancing food production.			
5. Explore the role of technology and innovation in promoting more efficient and sustainable agricultural production.			
6. Examine food policies and food security strategies.			
7. Examine the role of intellectual property rights in agriculture.			

### APIC 300 - Apiculture

You will be introduced to the science and practice of beekeeping. You will explore the development, morphology, physiology, genetics and social behaviour of the honey bee, as well as beekeeping equipment, management of bees, honey production, bee diseases and the role of bees in pollination.

**Credit unit(s):** 3.0  
**Prerequisites:** none  
**Corequisites:** none  
**Equivalent course(s):** none

<p><b>Use a checkmark (✓) to rate yourself as follows for each learning outcome</b></p> <p><b>Competent:</b> I can apply this outcome without direction or supervision.  <b>Learning:</b> I am still learning skills and knowledge to apply this outcome.  <b>None:</b> I have no knowledge or experience related to this outcome.</p>	<b>Competent</b>	<b>Learning</b>	<b>None</b>
1. Discuss the fundamentals of beekeeping.			
2. Examine bee and colony life cycles.			
3. Discuss hive products.			
4. Examine bee and colony diseases.			
5. Identify the role of bees in pollination.			
6. Examine the impact of pesticides on bees.			
7. Describe commercial beekeeping.			

## IRRI 200 - Irrigation

You will discuss the significant role irrigation plays in agriculture. You will examine soil characteristics, irrigation scheduling, drainage, and types of irrigation systems. You will develop an irrigation set-up for a test plot.

**Credit unit(s):** 3.0  
**Prerequisites:** none  
**Corequisites:** none  
**Equivalent course(s):** none

<p><b>Use a checkmark (✓) to rate yourself as follows for each learning outcome</b></p> <p><b>Competent:</b> I can apply this outcome without direction or supervision.  <b>Learning:</b> I am still learning skills and knowledge to apply this outcome.  <b>None:</b> I have no knowledge or experience related to this outcome.</p>	Competent	Learning	None
1. Discuss the significance of irrigation.			
2. Differentiate soils, their purposes, and their physical properties.			
3. Estimate plant irrigation needs and scheduling.			
4. Explore the types of drainage systems.			
5. Explain the function of pumps, filters, storage, recirculation, and reuse in irrigation systems.			
6. Describe the types of irrigation systems and technology for various agriculture situations.			
7. Set up an irrigation system for a test plot.			

## PEST 200 - Pesticide Management

You will examine integrated pest management. You will interpret pesticide labels and acquire information on pesticides and their uses and safe handling and storage. You will discuss legislation as it relates to the human and environmental risks associated with applying pesticides.

**Credit unit(s):** 3.0  
**Prerequisites:** CHEM 102, SAFE 105  
**Corequisites:** none  
**Equivalent course(s):** none

<p><b>Use a checkmark (✓) to rate yourself as follows for each learning outcome</b></p> <p><b>Competent:</b> I can apply this outcome without direction or supervision.  <b>Learning:</b> I am still learning skills and knowledge to apply this outcome.  <b>None:</b> I have no knowledge or experience related to this outcome.</p>	<b>Competent</b>	<b>Learning</b>	<b>None</b>
1. Examine integrated pest management.			
2. Discuss legislation applicable to pesticide applications.			
3. Interpret pesticide labels.			
4. Discuss the human health risks involved with applying pesticides.			
5. Discuss the environmental risks associated with applying pesticides.			
6. Demonstrate the proper use of personal protective equipment (PPE).			
7. Demonstrate pesticide safe handling and storage techniques.			
8. Demonstrate emergency response procedures.			

## SOIL 200 - Soil and Crop Nutrition

You will examine the principles of soil formation, management, and soil fertility. You will also learn soil sampling strategies, the interpretation of soil test reports and basic fertilizer blending.

**Credit unit(s):** 3.0  
**Prerequisites:** none  
**Corequisites:** none  
**Equivalent course(s):** none

<p><b>Use a checkmark (✓) to rate yourself as follows for each learning outcome</b></p> <p><b>Competent:</b> I can apply this outcome without direction or supervision.  <b>Learning:</b> I am still learning skills and knowledge to apply this outcome.  <b>None:</b> I have no knowledge or experience related to this outcome.</p>	Competent	Learning	None
1. Describe soil and identify the components that comprise a soil.			
2. Discuss the soil forming factors and processes of agricultural soils.			
3. Describe how soil zones affect crop productivity.			
4. Describe soil physical properties and their importance to agroecosystems.			
5. Describe soil chemical properties and their importance to agroecosystems.			
6. Describe the influence of plant nutrients and fertilizers on crop growth.			
7. Explain results of a soil test report.			
8. Describe effective fertilizer application methods.			

## WTER 200 - Water Management

You will learn how water is managed at federal, provincial, and municipal levels. With an emphasis on how water is valued, you will learn how decisions are made to protect consumptive and non-consumptive uses and how watershed planning is used to protect the quality of water.

**Credit unit(s):** 3.0  
**Prerequisites:** none  
**Corequisites:** none  
**Equivalent course(s):** none

<p><b>Use a checkmark (✓) to rate yourself as follows for each learning outcome</b></p> <p><b>Competent:</b> I can apply this outcome without direction or supervision.  <b>Learning:</b> I am still learning skills and knowledge to apply this outcome.  <b>None:</b> I have no knowledge or experience related to this outcome.</p>	<b>Competent</b>	<b>Learning</b>	<b>None</b>
1. Describe the role of various governments in the management of water.			
2. Calculate water demand for current and future conditions for municipal, domestic, and agricultural uses.			
3. Describe why and how surface and groundwater sources can be protected.			
4. Explain the value of natural and constructed wetlands.			
5. Explain the importance of riparian areas.			
6. Evaluate the process and outcomes of watershed planning.			
7. Compare public consultation processes in watershed planning.			
8. Describe the impact of agriculture on water.			



## AGMC 204 - Agricultural Machinery 2

You will study the equipment used in seeding, spraying and harvesting. You will study monitors and Global Positioning Systems (GPS) used on the equipment as well as precision farming practices, components, and software.

**Credit unit(s):** 3.0  
**Prerequisites:** AGMC 100  
**Corequisites:** none  
**Equivalent course(s):** none

<p><b>Use a checkmark (✓) to rate yourself as follows for each learning outcome</b></p> <p><b>Competent:</b> I can apply this outcome without direction or supervision.  <b>Learning:</b> I am still learning skills and knowledge to apply this outcome.  <b>None:</b> I have no knowledge or experience related to this outcome.</p>	Competent	Learning	None
1. Explain the application of Global Positioning System (GPS) mapping as it pertains to precision farming techniques.			
2. Identify Global Positioning Systems (GPS) steering guidance systems.			
3. Demonstrate the operation and adjustments of seeding equipment.			
4. Explain the application of Variable-rate Technology (VRT) as it pertains to precision farming techniques.			
5. Describe the operation of sprayer systems.			
6. Calibrate equipment used in the agricultural spraying industry.			
7. Explain suspension system features used on high-clearance sprayers.			
8. Demonstrate the operation and adjustments of combines.			
9. Explain the application of Yield Monitors as it pertains to precision farming techniques.			

## AGMC 206 - Precision Agriculture 2

You will study the hardware, software, and management strategies of precision agriculture. Areas of study will include Geographic Information Systems (GIS), Global Positioning Systems (GPS), Variable-rate Technology (VRT), remote sensing, differential correction, yield monitoring, and grid mapping. You will apply agriculture software solutions.

**Credit unit(s):** 3.0  
**Prerequisites:** AGMC 101  
**Corequisites:** none  
**Equivalent course(s):** none

<p><b>Use a checkmark (✓) to rate yourself as follows for each learning outcome</b></p> <p><b>Competent:</b> I can apply this outcome without direction or supervision.  <b>Learning:</b> I am still learning skills and knowledge to apply this outcome.  <b>None:</b> I have no knowledge or experience related to this outcome.</p>	<b>Competent</b>	<b>Learning</b>	<b>None</b>
1. Demonstrate how Global Positioning Systems (GPS) is used within the agricultural industry.			
2. Identify the primary methods of soil sampling and analysis.			
3. Operate a hand-held computer to develop a map capable of being used for soil sampling and scouting.			
4. Discuss the various electronic technologies used in gathering crop harvest information.			
5. Provide examples of remote sensing as applied to agriculture.			
6. Demonstrate the applications of Variable-rate Technology (VRT) in agriculture.			
7. Discuss how Geographic Information Systems (GIS) can be used in precision agriculture.			
8. Apply agriculture software solutions as it pertains to precision agriculture.			

### AGRI 104 - Agricultural Business Planning

You will gather relevant farm financial and agriculture market data to support development of an agricultural business plan. You will demonstrate data integrity and security.

**Credit unit(s):** 3.0  
**Prerequisites:** AGRI 100, MATH 114  
**Corequisites:** none  
**Equivalent course(s):** none

<p><b>Use a checkmark (✓) to rate yourself as follows for each learning outcome</b></p> <p><b>Competent:</b> I can apply this outcome without direction or supervision.  <b>Learning:</b> I am still learning skills and knowledge to apply this outcome.  <b>None:</b> I have no knowledge or experience related to this outcome.</p>	Competent	Learning	None
1. Gather farm financial data.			
2. Evaluate farm financial and agricultural market data.			
3. Develop a farm business plan.			
4. Analyze a comprehensive farm business plan.			
5. Calculate the cost of production and return on investment (ROI).			
6. Demonstrate secure data management techniques.			

## AGRI 201 - Beef Cattle Production

You will study an overview of beef cattle production systems in Canada. You will discuss how beef cattle are raised on rangeland, in cow-calf operations and in feedlots. You will examine ways to safely maintain herd health and learn about appropriate beef cattle nutrition required in each production application.

**Credit unit(s):** 3.0  
**Prerequisites:** none  
**Corequisites:** none  
**Equivalent course(s):** none

<p><b>Use a checkmark (✓) to rate yourself as follows for each learning outcome</b></p> <p><b>Competent:</b> I can apply this outcome without direction or supervision.  <b>Learning:</b> I am still learning skills and knowledge to apply this outcome.  <b>None:</b> I have no knowledge or experience related to this outcome.</p>	<b>Competent</b>	<b>Learning</b>	<b>None</b>
1. Describe the physiological characteristics of beef cattle in Canada.			
2. Explain rangeland beef production.			
3. Describe cow-calf production.			
4. Describe methods of maintaining herd health in various production systems.			
5. Describe feedlot safe work practices.			
6. Explain feedlot beef production.			
7. Discuss beef cattle nutrition in various production systems.			

## AGRI 202 - Rangeland Management

You will be introduced to the various types of rangeland sites, range condition and range health. You will identify the common plants that support livestock grazing. You will examine sustainable management practices to maintain natural resources and the impact of grazing on bird and wildlife habitat.

**Credit unit(s):** 2.0  
**Prerequisites:** none  
**Corequisites:** none  
**Equivalent course(s):** none

<p><b>Use a checkmark (✓) to rate yourself as follows for each learning outcome</b></p> <p><b>Competent:</b> I can apply this outcome without direction or supervision.  <b>Learning:</b> I am still learning skills and knowledge to apply this outcome.  <b>None:</b> I have no knowledge or experience related to this outcome.</p>	<b>Competent</b>	<b>Learning</b>	<b>None</b>
1. Describe the types of rangeland sites in Canada.			
2. Describe the characteristics of healthy rangeland.			
3. Identify common perennial rangeland plants that support grazing.			
4. Explain the impact of livestock grazing on water sources, bird, and wildlife habitat.			
5. Discuss sustainable management practices to maintain pasture health.			

## ECON 200 - Introduction to Agricultural Economics

You will explore the economics of the food, fibre, and fuel industries. You will analyze consumer and business behaviour under various market and regulatory conditions, as well determine changes to supply and demand curves. Both microeconomic and macroeconomic factors will be defined and discussed in relation to agricultural value chains.

**Credit unit(s):** 3.0  
**Prerequisites:** none  
**Corequisites:** none  
**Equivalent course(s):** none

<p><b>Use a checkmark (✓) to rate yourself as follows for each learning outcome</b></p> <p><b>Competent:</b> I can apply this outcome without direction or supervision.  <b>Learning:</b> I am still learning skills and knowledge to apply this outcome.  <b>None:</b> I have no knowledge or experience related to this outcome.</p>	<b>Competent</b>	<b>Learning</b>	<b>None</b>
1. Describe the scope of agriculture, food, and natural resources using economic terminology.			
2. Compare and contrast microeconomics and macroeconomics.			
3. Relate individual consumer behavior to aggregate demand.			
4. Assess how business behavior and input allocation affect aggregate supply.			
5. Demonstrate the characteristics of perfect competition using market price and quantity.			
6. Demonstrate the characteristics of imperfect competition using market price and quantity.			
7. Analyze the role of governmental policies in the food, fuel, and fibre industries.			
8. Characterize monetary policy and its impact on agriculture.			

## IOT 200 - Internet of Things: Applications in Agriculture

You will be introduced to various applications of Internet of Things (IoT) devices in the agriculture sector. You will study network options, commonly used sensors, and an overview of the primary electronic components of an IoT device. You will discuss practical applications of how collected data can be used to inform agricultural management practices.

**Credit unit(s):** 2.0  
**Prerequisites:** none  
**Corequisites:** none  
**Equivalent course(s):** none

<p><b>Use a checkmark (✓) to rate yourself as follows for each learning outcome</b></p> <p><b>Competent:</b> I can apply this outcome without direction or supervision.  <b>Learning:</b> I am still learning skills and knowledge to apply this outcome.  <b>None:</b> I have no knowledge or experience related to this outcome.</p>	<b>Competent</b>	<b>Learning</b>	<b>None</b>
1. Describe the primary networks that are used to transmit data between Internet of Things (IoT) devices.			
2. Describe the advantages and disadvantages of each major network.			
3. Identify the primary electronic components of an IoT device and their functions.			
4. Explain best safety practices to be considered while installing IoT devices.			
5. Identify sensors commonly connected to IoT devices used in field crop production.			
6. Discuss how data collected from IoT devices are used to inform agricultural management practices.			

## MKTG 204 - Commodity Marketing 2

You will explore various methods of commodity marketing of agricultural products. You will examine options on futures as well as contracts and strategies. You will also analyze market conditions and develop a marketing plan.

**Credit unit(s):** 3.0  
**Prerequisites:** MKTG 101  
**Corequisites:** none  
**Equivalent course(s):** none

<p><b>Use a checkmark (✓) to rate yourself as follows for each learning outcome</b></p> <p><b>Competent:</b> I can apply this outcome without direction or supervision.  <b>Learning:</b> I am still learning skills and knowledge to apply this outcome.  <b>None:</b> I have no knowledge or experience related to this outcome.</p>	Competent	Learning	None
1. Describe options on futures theory.			
2. Compare methods of using options on futures.			
3. Develop strategies using options on futures.			
4. Analyze market conditions utilizing fundamental and technical analysis.			
5. Compare producer hedging, forward contracting and option strategies in current market conditions.			
6. Develop a marketing plan.			



## RLAW 105 - Indigenous Resource Rights

You will describe the treaties, Natural Resources Transfer Agreement, Constitution Act 1982, and case law with respect to the special rights of Indigenous people to the resources.

**Credit unit(s):** 3.0  
**Prerequisites:** none  
**Corequisites:** none  
**Equivalent course(s):** none

<p><b>Use a checkmark (✓) to rate yourself as follows for each learning outcome</b></p> <p><b>Competent:</b> I can apply this outcome without direction or supervision.  <b>Learning:</b> I am still learning skills and knowledge to apply this outcome.  <b>None:</b> I have no knowledge or experience related to this outcome.</p>	Competent	Learning	None
1. Identify the Indigenous peoples of Canada.			
2. Describe the historical origin of Indigenous resource rights in Saskatchewan.			
3. Evaluate the constitutional evolution of Status Indian resource rights.			
4. Evaluate the constitutional evolution of Métis resource rights.			
5. Apply the Status Indian resource use rights in Saskatchewan.			
6. Apply the Métis resource use rights in Saskatchewan.			
7. Describe the duty to consult and accommodate Indigenous peoples with respect to the use of resources in Saskatchewan.			

## COOP 201 - Co-operative Work Term

Your second co-operative education term will build on the experience gained during your first work placement and provide you with additional opportunities to develop skills and techniques related to your field of studies in a real work setting.

**Credit unit(s):** 0.0  
**Prerequisites:** none  
**Corequisites:** none  
**Equivalent course(s):** none

<p><b>Use a checkmark (✓) to rate yourself as follows for each learning outcome</b></p> <p><b>Competent:</b> I can apply this outcome without direction or supervision.  <b>Learning:</b> I am still learning skills and knowledge to apply this outcome.  <b>None:</b> I have no knowledge or experience related to this outcome.</p>	<b>Competent</b>	<b>Learning</b>	<b>None</b>
1. Participate in a personal employment search.			
2. Communicate effectively in the workplace.			
3. Contribute as a member of the team.			
4. Demonstrate effective work habits.			
5. Demonstrate safe work practices.			
6. Display personal management skills.			
7. Identify roles and responsibilities of personnel in the workplace.			
8. Apply learned skills and techniques in the workplace.			
9. Apply essential skills in the workplace.			

### COOP 301 - Co-operative Work Term

Your third co-operative education work term will round out the work term experience by adding related work knowledge through the application of theories and practices relevant to your field of studies.

**Credit unit(s):** 0.0  
**Prerequisites:** none  
**Corequisites:** none  
**Equivalent course(s):** none

<p><b>Use a checkmark (✓) to rate yourself as follows for each learning outcome</b></p> <p><b>Competent:</b> I can apply this outcome without direction or supervision.  <b>Learning:</b> I am still learning skills and knowledge to apply this outcome.  <b>None:</b> I have no knowledge or experience related to this outcome.</p>	Competent	Learning	None
1. Demonstrate personal employment search skills.			
2. Display effective communication skills.			
3. Work as a member of the team.			
4. Apply effective work habits.			
5. Perform safe work practices.			
6. Master personal management skills.			
7. Understand roles and responsibilities of personnel in the workplace.			
8. Apply relevant theories and techniques.			
9. Perform effectively in the workplace.			

### AGRI 300 - Agricultural Intelligence

You will study the computer technology used with agricultural machinery. You will become familiar with the programs used to monitor, assess, and diagnose field and crop conditions. You will also learn about intellectual property and data security strategies.

**Credit unit(s):** 3.0  
**Prerequisites:** none  
**Corequisites:** none  
**Equivalent course(s):** none

<p><b>Use a checkmark (✓) to rate yourself as follows for each learning outcome</b></p> <p><b>Competent:</b> I can apply this outcome without direction or supervision.  <b>Learning:</b> I am still learning skills and knowledge to apply this outcome.  <b>None:</b> I have no knowledge or experience related to this outcome.</p>	Competent	Learning	None
1. Discuss the role of technology in agriculture.			
2. Identify the hardware components that support agriculture technology.			
3. Describe the application of the hardware components that support agriculture technology.			
4. Discuss the role of software, cloud technology and data security.			
5. Examine strategies to protect intellectual property in agriculture.			
6. Describe the societal and economic impacts of technology in agriculture.			

### AGRI 301 - Grain Handling, Storage and Conveyance

You will explore topics in harvesting, storage and quality evaluation of crops, types of conveyance systems and intellectual property. You will also examine maintaining the quality of crops while in storage, traceability and food supply chain safety, and the collection and protection of intellectual property.

**Credit unit(s):** 3.0  
**Prerequisites:** GIS 101  
**Corequisites:** none  
**Equivalent course(s):** none

<p><b>Use a checkmark (✓) to rate yourself as follows for each learning outcome</b></p> <p><b>Competent:</b> I can apply this outcome without direction or supervision.  <b>Learning:</b> I am still learning skills and knowledge to apply this outcome.  <b>None:</b> I have no knowledge or experience related to this outcome.</p>	<b>Competent</b>	<b>Learning</b>	<b>None</b>
1. Describe the factors that affect crop quality.			
2. Identify strategies to maintain quality crops at the site of collection.			
3. Describe strategies for gathering crop data at the site of collection.			
4. Identify methods for maintaining quality crops while in storage.			
5. Describe the purpose of conveying systems.			
6. Describe the purpose of conveying systems.			
7. Discuss the significance of traceability and safety in the food supply chain.			
8. Discuss the correlation between crop data and intellectual property.			
9. Discuss best practices for storing and retrieving crop data while protecting intellectual property.			

**AGRI 302 - Post-Harvest Food Production**

You will examine the post-harvest system activities and operations extending from harvest to consumption. You will also explore the technical and economic activities including storage, processing, transporting and quality control.

**Credit unit(s):** 3.0  
**Prerequisites:** ECON 200  
**Corequisites:** none  
**Equivalent course(s):** none

<p><b>Use a checkmark (✓) to rate yourself as follows for each learning outcome</b></p> <p><b>Competent:</b> I can apply this outcome without direction or supervision.  <b>Learning:</b> I am still learning skills and knowledge to apply this outcome.  <b>None:</b> I have no knowledge or experience related to this outcome.</p>	<b>Competent</b>	<b>Learning</b>	<b>None</b>
1. Define post-harvest food production.			
2. Explain the types of post-harvest losses of common Saskatchewan crops.			
3. Discuss the economic aspects of post-harvest losses.			
4. Describe primary processing activities.			
5. Discuss secondary processing activities.			
6. Discuss regulation.			
7. Explore product quality.			
8. Examine product marketing.			

## ANLT 301 - Globalization

You will examine the many elements that must be analyzed when considering the global business environment. You will be introduced to global and national business environments, international trade and investment, the international financial system and international business management.

**Credit unit(s):** 3.0  
**Prerequisites:** none  
**Corequisites:** none  
**Equivalent course(s):** none

<p><b>Use a checkmark (✓) to rate yourself as follows for each learning outcome</b></p> <p><b>Competent:</b> I can apply this outcome without direction or supervision.  <b>Learning:</b> I am still learning skills and knowledge to apply this outcome.  <b>None:</b> I have no knowledge or experience related to this outcome.</p>	<b>Competent</b>	<b>Learning</b>	<b>None</b>
1. Discuss the global business environment.			
2. Describe how culture differences between countries impact international business activities.			
3. Describe the role of politics and law in international business.			
4. Explain the effect that economics has on international business.			
5. Explain the significance of international trade and investment.			
6. Describe the significance of international financial markets and the international monetary system.			
7. Explain how companies analyze potential new international markets.			
8. Explain factors contributing to the selection and management of international entry modes.			
9. Explain how differences in national business environments have an impact on the development of marketing strategies.			

**BLAW 281 - Business Law**

You will acquire an introduction to business law. Your studies will include systems of courts, torts, contracts, form of business organization, employer/employee relationships, intellectual property, agency, negotiable instruments, and consumer protection.

**Credit unit(s):** 2.0  
**Prerequisites:** none  
**Corequisites:** none  
**Equivalent course(s):** none

<p><b>Use a checkmark (✓) to rate yourself as follows for each learning outcome</b></p> <p><b>Competent:</b> I can apply this outcome without direction or supervision.  <b>Learning:</b> I am still learning skills and knowledge to apply this outcome.  <b>None:</b> I have no knowledge or experience related to this outcome.</p>	<b>Competent</b>	<b>Learning</b>	<b>None</b>
1. Describe the Canadian legal system.			
2. Describe the law of torts.			
3. Describe the law of contracts.			
4. Explain various forms of business ownership.			
5. Describe special contractual relationships.			



## CLIM 200 - Meteorology

You will study properties of the atmosphere and the conditions that produce and modify weather. Through practical exercises, you will interpret and forecast weather conditions.

**Credit unit(s):** 3.0  
**Prerequisites:** none  
**Corequisites:** none  
**Equivalent course(s):** none

<p><b>Use a checkmark (✓) to rate yourself as follows for each learning outcome</b></p> <p><b>Competent:</b> I can apply this outcome without direction or supervision.  <b>Learning:</b> I am still learning skills and knowledge to apply this outcome.  <b>None:</b> I have no knowledge or experience related to this outcome.</p>	Competent	Learning	None
1. Discuss the significance of meteorology to agriculture.			
2. Discuss historic global weather patterns.			
3. Discuss the impact global weather patterns have on agriculture in Canada.			
4. Describe the significance of the atmosphere and the oceans to the weather.			
5. Discuss upper air and air masses.			
6. Explain the effects of wind, precipitation, and heat on agricultural crops.			
7. Analyze pressure systems and wind.			
8. Interpret existing and forecast weather conditions.			

### LEAD 301 - Innovation and Leadership

You will gain a strategic perspective on the emerging role of innovation. You will explore effective methods and practices to promote innovation. The role of the leaders and stakeholders, as well as change management and communication in the innovation and decision-making process will be examined.

**Credit unit(s):** 3.0  
**Prerequisites:** none  
**Corequisites:** none  
**Equivalent course(s):** none

<p><b>Use a checkmark (✓) to rate yourself as follows for each learning outcome</b></p> <p><b>Competent:</b> I can apply this outcome without direction or supervision.  <b>Learning:</b> I am still learning skills and knowledge to apply this outcome.  <b>None:</b> I have no knowledge or experience related to this outcome.</p>	Competent	Learning	None
1. Define innovation and its requirements.			
2. Demonstrate the application of creativity tools and techniques.			
3. Describe how to foster creativity in problem solving.			
4. Evaluate decision-making methods.			
5. Examine the role of leaders.			
6. Explore effective change management methods and practices.			
7. Identify the importance of developing and maintaining trust among group members.			
8. Describe how to manage controversy and conflict.			
9. Evaluate the innovative nature of products, services, processes, and organizations.			

## PROJ 206 - Capstone Project

You will apply the engineering concepts and principles to develop a significant initiative or project. Working individually or in small groups, you will use interpersonal, problem solving, and project management skills to propose, conceptualize, design, and demonstrate an engineering project that is both significant and relevant to your field of practice. You will manage and schedule the project with minimal direction. You will develop a presentation appropriate for an industry client and demonstrate the communication skills necessary to defend the technical specifications and the relevance of project in relation to the initial engineering problem.

**Credit unit(s):** 2.0  
**Prerequisites:** none  
**Corequisites:** none  
**Equivalent course(s):** none

<p><b>Use a checkmark (✓) to rate yourself as follows for each learning outcome</b></p> <p><b>Competent:</b> I can apply this outcome without direction or supervision.  <b>Learning:</b> I am still learning skills and knowledge to apply this outcome.  <b>None:</b> I have no knowledge or experience related to this outcome.</p>	Competent	Learning	None
1. Propose a project and research the technical and design aspects required to complete the project.			
2. Manage scheduling to ensure timely completion of the project.			
3. Collect data required per the project proposal.			
4. Analyze the project and provide solutions to project design.			
5. Prepare a final report.			
6. Defend project conclusions in a technical presentation.			

### TCOM 103 - Technical Communication

You will use research skills to find technical information and cite it correctly. You will conduct effective meetings and produce supporting documents. As well, you will discuss technical report purposes and formats, write short technical reports and present technical information.

**Credit unit(s):** 3.0  
**Prerequisites:** TCOM 102, COM 170  
**Corequisites:** none  
**Equivalent course(s):** none

<p><b>Use a checkmark (✓) to rate yourself as follows for each learning outcome</b></p> <p><b>Competent:</b> I can apply this outcome without direction or supervision.  <b>Learning:</b> I am still learning skills and knowledge to apply this outcome.  <b>None:</b> I have no knowledge or experience related to this outcome.</p>	<b>Competent</b>	<b>Learning</b>	<b>None</b>
1. Conduct research for a technical report.			
2. Use correct grammar and technical style.			
3. Create technical reports.			
4. Conduct meetings.			
5. Present technical information.			