

Agricultural Management - Production Major Diploma



Description

The Olds College Agricultural Management Diploma prepares graduates for entry into careers managing agricultural production, service and value-adding enterprises.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

1. Communicate professionally with stakeholders.
2. Develop enterprise goals and plans.
3. Apply problem solving strategies throughout the agri-value chain.
4. Apply project management principles to achieve defined project outcomes.
5. Appraise the performance of self and others.
6. Apply business principles to achieve organization goals.
7. Assess local and global market opportunities.
8. Assess animal and plant production and processing systems.
9. Assess the use of technology in the production and processing of food and non-food agricultural products.
10. Develop business plans.
11. Solve problems relating to production and management.
12. Manage financial information and physical records for decision making.
13. Apply principles and practices of livestock production.
14. Apply principles and practices of crop production.
15. Implement marketing strategies.
16. Comply with regulatory requirements associated with production and management.
17. Practice land and water resource stewardship.
18. Manage ecological, economic, and social issues of production decisions and processes.
19. Manage agricultural development using appropriate technology.
20. Manage agricultural equipment.
21. Develop strategies to address production variability.
22. Implement risk management strategies.
23. Utilize technology associated with production and management.

Requirements:

TERM 1

			Course Credits
			(Total Credits:15)
AGN	1240	Principles of Crop Production (3-3-0 hrs)	3
This course takes a systems approach to Western Canadian agricultural crop production. Topics in land preparation, crop selection, crop establishment, and harvesting will be discussed in conjunction with basic soil characteristics and plant morphology. Identification of major Canadian crops and their product end use will also prepare the student for further studies in Agronomy.			
AMT	1035	Agricultural Business Management Principles (3-0-0 hrs)	3
The learner develops fundamental concepts of business management within the context of agriculture. These basic tools will provide the foundation for sound business decisions as they relate to all aspects and functional areas of the organization. Micro and Macro economic theory will be learned and applied as they relate to the agricultural industry.			
AMT	1040	Survey of Agribusiness (3-0-0 hrs)	3

This is an introductory course on the nature of agricultural business from both a local and an international perspective. The learner explores the global policy framework as well as national laws and programs which support agricultural enterprise. Selected sectors of the industry are then investigated with these perspectives in mind.

AMT 1335 Agribusiness Accounting (3-3-0 hrs) 3

The learner generates financial records and statements using Canadian accounting standards for agribusinesses. Industry software is used and attention to unique industry issues is emphasized.

LVS 1370 Principles of Animal Agriculture (3-3-0 hrs) 3

In this introductory course, students examine fundamental principles of anatomy, physiology, nutrition and animal health as well as participating in "hands-on" labs. This course also studies global production demographics, production trends and current issues affecting livestock industries.

TERM 2

Course Credits
(Total Credits:12)

AMT 1360 Agribusiness Technology Applications (0-4.5-0 hrs) 3

This course is an overview of selected agri-business technological tools and software. Students apply and evaluate selected business technology and software applications.

COM 1020 Workplace Communication (3-0-0 hrs) 3

In this course students develop writing and presentation skills. Students will apply rules of grammar, spelling, punctuation and mechanics in the development of letters, email and short reports as well as other documents relevant to their industry. Students will demonstrate strategies and techniques for creating informative and persuasive presentations.

MEC 1050 Machinery and Technology (3-3-0 hrs) 3

This course is a general overview of the farm machinery and technology used in Western Canada. Students will become familiar with the uses and purposes of tractors and combines as well as tillage, seeding, spraying and forage equipment. Precision Farming principles and components will also be studied.

MKG 1021 Marketing Principles (3-0-0 hrs) 3

This course develops an understanding of marketing concepts, principles and practices. Topics examined include the influence of environment factors on the marketing process, marketing strategy development, marketing mix formulation and adjustment for pricing, promoting and distributing appropriate products and services to selected markets.

ELECTIVE: Choose 1 course from Term 2 Approved electives list below.

TERM 2 Approved Electives:

Course Credits
(Total Credits:3)

AGN 1540 Introductory Pest Management (3-2-0 hrs) 3

Students will study the principles of pest management in agricultural cropping systems. They will learn the basic concepts of integrated pest management and principles guiding the safe use of pesticides. Learners will also focus on the identification of selected weeds, diseases and insects of field crops in western Canada.

Pre-requisite : AGN - 1240 :or

Pre-requisite : PLS - 1010 :and

Pre-requisite : SOI - 1000 :

LVS 2370 Livestock Nutrition (3-3-0 hrs) 3

This course applies the principles of nutrition to livestock. It includes a discussion of nutrients, nutrient requirements, sources of nutrients and their cost. It also includes meeting the nutrient requirements of various livestock species through ration balancing.

Pre-requisite : LVS - 1370 :

TERM 3Course Credits
(Total Credits:9)**AGN 2540 Range and Forage Crop Management (3-3-0 hrs) 3**

This course focusses on the multifaceted forage crop and range management industry; identification, use and management of native and agronomic species in perennial ecosystems will be emphasized. Practical skills including utilizing plant keys, plant inventories, assessment of plant health, habitat and herbivore management are reviewed. A collection of native and agronomic plant species will be compiled into a manual for future reference.

Pre-requisite : AGN - 1240 :

AMT 2020 Advanced Product Marketing (3-0-0 hrs) 3

This is an advanced course on marketing as it relates to profitable pricing decisions using breakeven information. There will be an opportunity to focus on a commodity of choice as it relates to the Canadian Grading System, strategic commodity sales and the creation of promotional materials. The development and presentation of an in depth marketing plan will demonstrate the importance of strategically pricing both inputs and outputs within an agricultural business.

Pre-requisite : AMT - 1035 :and

Pre-requisite : AMT - 1360 :

AMT 2035 Agribusiness Financial Management (3-0-0 hrs) 3

This is a course on business management practices and processes for decision making in agribusiness. The impact of financial management on agribusiness performance is examined through the application of selected budgeting and financial processes, as well as through agribusiness risk assessments.

Pre-requisite : AMT - 1335 :

ELECTIVE(S): Course 2 courses from Term 3 Approved electives list below.

TERM 3 Approved Electives:Course Credits
(Total Credits:6)**AGN 2640 Principles of Soils and Crop Nutrition (3-2-0 hrs) 3**

This course provides the learner with the principles of soil characteristics, soil fertility and fertilizer application. The learner will study chemical and physical soil properties, essential plant nutrients, soil testing, fertilizer types and application methods. Soil sampling techniques, interpretation of soil test reports, and development of fertilizer blends will be performed.

Pre-requisite : AGN - 1240 :

LVS 2470 Livestock Health and Disease (3-3-0 hrs) 3

Students are instructed regarding basic concepts of livestock diseases including their causes, clinical signs, treatment and prevention. This course is intended for the Agricultural Management program.

Pre-requisite : LVS - 1370 :

LVS 2570 Livestock Breeding Strategies (3-1.5-0 hrs) 3

This hands-on course will emphasize reproduction and genetic strategies with the objective to successfully artificially inseminate cattle. Students will be required to submit a breeding plan on a species of personal interest. Participation in activities on the Olds College farm and trips to local livestock enterprises will be expected.

Pre-requisite : LVS - 1370 :

MEC 2060 Precision Cropping Systems (3-0-0 hrs) 3

In this course selected electronic monitors and controllers used on tractors, seeders, sprayers and combines will be studied. Students will also become more familiar with equipment and software used in Precision Farming practices.

Pre-requisite : MEC - 1050 :

TERM 4

Course Credits
(Total Credits:12)

AGN 2740 Environmental Farm Management (3-1.5-0 hrs) 3

Agricultural production is held to increasingly high environmental standards. The challenges and opportunities for agriculture will be examined, particularly those management practices that relate to soil, water, air quality, and wildlife. A term project requires students to make an assessment of a farm operation and develop a practical management plan to improve farm sustainability.

Pre-requisite : AGN - 1240 :

AMT 2630 Agribusiness Planning and Management (3-2-0 hrs) 3

This course allows the learner to integrate concepts from other agricultural management courses in the preparation and presentation of a business plan related to an agri-business or agri-value venture.

Pre-requisite : AMT - 1035 :and

Pre-requisite : AMT - 1335 :and

Pre-requisite : MKG - 1021 :

COM 1030 Workplace Professionalism (3-0-0 hrs) 3

This course introduces students to strategies and techniques for managing self, interacting with others, advancing careers and making ethical decisions. Students develop action plans for professional success, create career documents to demonstrate strengths, skills and abilities and utilize an industry-specific case study to examine ethical issues.

MEC 1490 Farmstead Management (3-3-0 hrs) 3

This course is a general overview of farmstead planning, structures and utility systems. Students study floor planning, building materials, foundations, framing types, technical drawings, environmental controls, electrical and gas, water and sewage systems. On-farm safety, maintenance, relevant codes, environmental planning issues and alternative energy sources are also studied.

ELECTIVE: Choose 1 course from Term 4 Approved electives list below.

TERM 4 Approved Electives:

Course Credits
(Total Credits:3)

AGN 1540 Introductory Pest Management (3-2-0 hrs) 3

Students will study the principles of pest management in agricultural cropping systems. They will learn the basic concepts of integrated pest management and principles guiding the safe use of pesticides. Learners will also focus on the identification of selected weeds, diseases and insects of field crops in western Canada.

Pre-requisite : AGN - 1240 :or

Pre-requisite : PLS - 1010 :and

Pre-requisite : SOI - 1000 :

AGN 2240 Field Crop Management (3-3-0 hrs) 3

Students will explore advanced topics in field crop management. These will include plant growth and development under various environmental conditions, crop genetic improvement through plant breeding, Canadian agricultural production systems, harvesting, storage and quality evaluation of crops, and processing of crops for food and industrial by-products. Identification of Western Canadian field crops will be emphasized.

Pre-requisite : AGN - 1540 :

LVS 2070 Beef Cattle Management (3-2-0 hrs) 3

This course deals with beef production from the birth to slaughter. The objective will be to prepare students to manage a cow/calf herd throughout the yearly cycle. Various options for marketing their

calves including retained ownership will be investigated. Feedlot management principles will also be evaluated so participants will have an understanding of the whole value chain. Students will participate in calving rotations and feeding rotations.

It is recommended students take the following elective courses before or while taking LVS 2070:

- LVS 2470 Livestock Health and Disease
- LVS 2370 Livestock Nutrition

Advisory : LVS - 2470 :and

Advisory : LVS - 2370 :

LVS 2370 Livestock Nutrition (3-3-0 hrs) 3

This course applies the principles of nutrition to livestock. It includes a discussion of nutrients, nutrient requirements, sources of nutrients and their cost. It also includes meeting the nutrient requirements of various livestock species through ration balancing.

Pre-requisite : LVS - 1370 :

Graduation Requirements

- Completion of 60 credits
- Completion of all required courses and credits as per Program of Study
- Cumulative program G.P.A. of 2.00 or better
- Satisfactory completion of occupational experience and/or assignment, if required

Changes to this Program

Every effort has been made to ensure that information in this program is accurate at the time of publication. The College reserves the right to change programs if it becomes necessary so that program content remains relevant. In such cases, Olds College will provide clear and timely notice of the changes.

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