ORIGINAL COURSE IMPLEMENTATION DATE:	September 2009
REVISED COURSE IMPLEMENTATION DATE:	September 2023
COURSE TO BE REVIEWED (six years after UEC approval)**:**	February 2029

Course outline form version: 09/08/2021

OFFICIAL UNDERGRADUATE COURSE OUTLINE FORM

Note: The University reserves the right to amend course outlines as needed without notice.

Course Code and Number: AGRI 331	**Number of Credits:** 3 Course credit policy (105)
Course Full Title: Dairy Herd Management: Science & Practice **Course Short Title:** Dairy Herd Management	
Faculty: Faculty of Science	**Department (or program if no department):** Agriculture Technology

Calendar Description:

Overview of the principles of dairy animal reproductive physiology, nutrition, and herd health. The science and economics of milk production from farm to shelf will also be taught. Theory will be combined with hands-on animal care in the on-campus CEP Demonstration Barn, both during and outside scheduled class time.

Note: Field trips outside of class time will be required. Please check with the department for details.

Prerequisites (or NONE):	AGRI 237 or 30 university-level credits.
Corequisites (if applicable, or NONE):	
Pre/corequisites (if applicable, or NONE):	AGRI 254.

Antirequisite Courses *(Cannot be taken for additional credit.)*

Former course code/number: **AGRI 231**

Cross-listed with:

Equivalent course(s):

(If offered in the previous five years, antirequisite course(s) will be included in the calendar description as a note that students with credit for the antirequisite course(s) cannot take this course for further credit.)

Typical Structure of Instructional Hours

Lecture/seminar	25
Experiential (cultural/elder learning or participation)	20
Total hours	**45**

Scheduled Laboratory Hours

Labs to be scheduled independent of lecture hours: ☒ No Yes

Course Details

Special Topics course: **No**

(If yes, the course will be offered under different letter designations representing different topics.)

Directed Study course: **Yes; no limit on repeats**

(See policy 207 for more information.)

Grading System: **Letter grades**

Delivery Mode: **Face-to-face only**

Expected frequency: **Annually**

Maximum enrolment (for information only)**: 25**

Prior Learning Assessment and Recognition (PLAR)

PLAR is available for this course.

Examination(s)

Transfer Credit *(See **bctransferguide.ca**.)*

Transfer credit already exists: **No**

Submit outline for (re)articulation: **Yes**

(If yes, fill in transfer credit form.)

Department approval	**Date of meeting:**	September 2022
Faculty Council approval	**Date of meeting:**	October 7, 2022
Undergraduate Education Committee (UEC) approval	**Date of meeting:**	February 24, 2023

Learning Outcomes *(These should contribute to students' ability to meet program outcomes and thus Institutional Learning Outcomes.)*

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

1. Describe the reproductive cycle of a cow.
2. Interpret an artificial insemination (AI) sire's profile.
3. Design a feeding program for a dairy cow, based on micro and macronutrient requirements.
4. Assess a commercial dairy farm in terms of global herd health and biosecurity.
5. Describe the biosynthesis of milk in a cow.
6. Milk a cow using a milking claw in a milking parlour.
7. Explain the steps that occur in milk processing.
8. Discuss the role of supply management and marketing boards on pricing of milk in Canada.
9. Write Standard Operating Procedures that would be used in a commercial dairy barn.
10. Access scientific studies and information on evidence-based practices for the commercial dairy sector.
11. Apply animal welfare principles to develop safe animal handling at all stages of life and care.
12. identify the clinical signs of common diseases of dairy cows and their respective control methods.
13. Describe manure management beneficial management practices (BMPs) as per the BC Environmental Farm Plan.

Recommended Evaluation Methods and Weighting *(Evaluation should align to learning outcomes.)*

Assignments:	40%	Final exam:	40%	Quizzes/tests:	20%
	%		%		%

Details:

One of the assignment is an Animal Care Log - Students will develop a reflective log documenting their days and hours spent doing animal care and barn chores in the UFV Demonstration Barn (worth 20%).

NOTE: The following sections may vary by instructor. Please see course syllabus available from the instructor.

Texts and Resource Materials *(Include online resources and Indigenous knowledge sources. Open Educational Resources (OER) should be included whenever possible. If more space is required, use the Supplemental Texts and Resource Materials form.)*

	Type	Author or description	Title and publication/access details	Year
1.	OER book	John Webster	Dairy Herd Management and Welfare	2017
2.	[click to select] ebook	Blowey, Roger W.	The Veterinary Book for Dairy Farmers, 4th edition	2016
3.	[click to select]			
4.	[click to select]			
5.	[click to select]			

Required Additional Supplies and Materials *(Software, hardware, tools, specialized clothing, etc.)*

Coveralls, boots, transportation to field trips, notebook, calculator, small fee to cover Dairy Short course.

Course Content and Topics

- Dairy cow udder and anatomy and function
- In-barn introduction to principles of calf care and welfare including global and Indigenous perspectives on care – e.g., European standards of welfare versus Canadian, and Indigenous concepts of Animal Personhood, and Animals as Ancestors.
- Milk cell biology and milk synthesis
- Milk synthesis and quality milk production
- Quality milk production
- Milking equipment and food hygiene principles
- Field trip to review dairy herd management and feeding practices UBC Dairy Farm
- Quality milk production and management practices
- Dairy cow reproductive physiology
- Dairy genetics and breeding evaluation
- Dairy sire and dam genetic evaluation
- Milk recording and data analysis
- Calf rearing, disbudding, and castration hands-on opportunity
- Dairy cow nutritional requirements