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 328	**Number of Credits:** 3 Course credit policy (105)
Course Full Title: Forage Crop Production: Science and Practice **Course Short Title:** Forage Crop Production	
Faculty: Faculty of Science	**Department (or program if no department):** Agriculture Technology

Calendar Description:

Focuses on common production techniques and use of commonly grown forage crops, with both theory and hands-on practice in the CEP on-campus greenhouse. Emphasis on maximizing the use of homegrown forages to meet the nutritional requirements of livestock.

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):	

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

Former course code/number: **AGRI 228**

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	35
Experiential (cultural/elder learning or participation)	10
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: **No**
(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), portfolio assessment, interview(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 physiology and nutritional value of different forages (specifically, legumes and grasses).
2. Identify different forages commonly grown in the Fraser Valley.
3. Develop a forage production plan for a site-based soil nutrient analysis and field history.
4. Collect and interpret a forage sample for analysis.
5. Describe the fermentation process needed to make silage.
6. Explain practices during production, harvest, and storage that impact hay or silage quality.
7. Critically examine opportunities for alternative sources of feed for commercial livestock.
8. Develop a manure application plan for a Fraser Valley forage grass field using growing degree-day calculators.
9. Explain practices to reduce the environmental footprint of forage production, including integrated pest management, fertilizer management, and use of cover crops.

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

Assignments:	45%	Final exam:	35%	Quizzes/tests:	20%
	%		%		%

Details:

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.	Textbook	Bittman, S. and Hunt, D.	Cool Forages: Advanced Management of Temperate Forages	2013
2.	Textbook	Pond, Wilson G., Church, David B, Pond, Kevin R., Schoknecht, Patricia A.	Basic Animal Nutrition and Feeding, 5th Edition	2004
3.				
4.				
5.				

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

Forage samples brought from different farms, coveralls, field notebook, calculator, transportation to field trips

Course Content and Topics

- Feed analysis
- Types of forages, grasses, and legumes
- Forage harvesting
- Field trip to UBC Dairy with guest speaker: forage nutrition specialist
- Introduction to silage preservation
- Guest speaker on dairy crop nutrition
- Field trip to dairy farm
- Crop establishment and growth
- Guest lecturer from BC Forage Council
- Crop establishment
- Guest lecturer: nutritionist on forage balancing
- Pest management