

AN280
Food Safety and Meat Science
3 Credits

Instructor: Amy Stanley
Original Developer: Arif Sheena
Current Developer: Amy Stanley
Reviewer: Bevin Hamilton
Created: 13/03/2019
Revised:
Approval: 28/11/2019

The Implementation Date for this Outline is 01/09/2019

Copyright©LAKELAND COLLEGE. Email: admissions@lakelandcollege.ca
2602 - 59 Avenue, Lloydminster, Alberta, Canada T9V 3N7. Ph: 780 871 5700
5707 College Drive, Vermilion, Alberta, Canada T9X 1K5. Ph: 780 853 8400
Toll-free in Canada: 1 800 661 6490



AN280 Version: 1



Food Safety and Meat Science

Calendar Description

This course covers the two general topics of food safety and meat science. The food safety topics include basic microbiology, safe food handling practices, and the principles of HACCP; while the meat science topics focuses on the basic biochemistry with the conversion of muscle to meat and follow the carcass through to the retail product.

Rationale

This is a required course for the Beef Science and the Livestock Science major of the Animal Science Technology program for second year students.

Graduates of the Animal Science Technology program may be employed in the food production and processing industries. Knowledge of animal slaughter and processing practices, grading and certification standards, meat retailing practices, and how production and handling practices affect food safety provide the background necessary for successful involvement in these industries.

Prerequisites

None

Co-Requisites

None

Course Learning Outcomes

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

1. assess the importance of the Canadian consumer as it relates to food purchasing decisions.
2. explain basic microbiology and parasitology regarding food safety.
3. assess a few different live evaluation tools that can be used by producers to influence end product.
4. determine the best animal production practices that are beneficial to the quality and value of meat and meat animals.

5. describe the process involved in the conversion of muscle to meat.
6. scrutinize and distinguish the different slaughter practices that are acceptable throughout Canada.
7. list the common retail cuts and grading system for beef, swine, and sheep.
8. identify the components required of both religious slaughters and organic meat production.

Resource Materials

Required Text:

There is no assigned text. Required readings are supplied by the instructor. Internet-based resources will be used and referenced.

Reference Materials:

The instructor will refer students to appropriate reference materials during the course.

Conduct of Course

This course includes lectures, guest speakers, and a field trip to an abattoir. The course will utilize a traditional in-class environment and supporting lab structure. The course comprises approximately 34 hours of lectures and learning activities, plus up to 8 hours of laboratory field trips.

Evaluation Procedures

Students' learning progress in this course will be evaluated as follows:

Exams (2 x 15%)	30%
Lab Work/Assignments (6 x 5)	30%
Project	15%
Final Exam (comprehensive)	25%

Grade Equivalents and Course Pass Requirements

A minimum grade of D (50%) (1.00) is required to pass this course.

Letter	F	D	D+	C-	C	C+	B-	B	B+	A-	A	A+
Percent Range	0-49	50-52	53-56	57-59	60-64	65-69	70-74	75-79	80-84	85-89	90-94	95-100
Points	0.00	1.00	1.30	1.70	2.00	2.30	2.70	3.00	3.30	3.70	4.00	4.00

Students must maintain a cumulative grade of C (GPA - Grade Point Average of 2.00) in order to qualify to graduate.

Attendance

Classroom and laboratory attendance is considered vital to the learning process and as significant to the students' evaluation as examinations and reports.

- a. Students having a combination of excused and/or unexcused absence of 20 percent or higher for the scheduled course hours will be required to withdraw and will automatically receive a "RW" (required withdrawal) for the course, regardless of any other evaluation results. (RW is a failing grade.)
- b. An excused absence is one that is verified with your Instructor. Verification should be prior to the absence or the next class day following the absence. Verification of the absence may take the form of a note from your doctor/College nurse regarding illness, or a note from another Instructor regarding a field trip or other activity, or authorization by your Instructor. An unexcused absence is anything NOT verified by the instructor prior to the absence or the next class day following the absence.

NOTE: Any exceptions to the above attendance policy (e.g. timetable conflicts, work-related issues) must be approved in writing by the Department Chair prior to the beginning of the course.

It is the students' responsibility to know their own absentee record.

Normal hours are 8:30 a.m. to 6:30 p.m., with potential for evening courses, exams or extended field trips. Students are expected to be available for classes during these times.

Course Units/Topics

1. Why Meat and Food Science?
2. Food Safety and Pathology
3. Production Practices that Influence Meat Quality - Live Evaluation Tools - Visual/Physical, Ultrasound, Genomics
4. Livestock Slaughter Process - Animal Welfare, Food Safety and Meat Quality
5. Muscle to Meat - Muscle Function and the Biochemical Processes Involved
6. Inspection, Grading and Disassembly - Carcass Fabrication and Wholesale and Retail Cuts
7. Organic Regulations and Religious Slaughter



Copyright©LAKELAND COLLEGE.
2602 - 59 Avenue, Lloydminster, Alberta, Canada T9V 3N7. Ph: 780 871 5700
5707 College Drive, Vermilion, Alberta, Canada T9X 1K5. Ph: 780 853 8400
Toll-free in Canada: 1 800 661 6490 E-mail: admissions@lakelandcollege.ca