

**AN102**

**Introduction to Diseases and Treatments**

**3 Credits**

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## AN102 Version: 2



### Introduction to Diseases and Treatments

#### Calendar Description

This course introduces the causes of disease in farm animals, including infectious disease transmission, clinical signs, and control. The fundamentals of immunology, vaccination, and general maintenance of health are emphasized. Basic pharmacological principles, drug administration, and selected pharmaceuticals are covered. Emphasis is placed on the correct handling and administration of drugs including drug safety and withdrawal times. This course is intended to provide students with current information regarding the recognition and prevention of common diseases of farm livestock with a major emphasis on cattle (beef and dairy) and lesser emphasis on sheep, horses and bison. Common farm animal diseases are examined including their initiating causes, clinical signs, treatment and prevention.

#### Rationale

This is a required course for students in the Animal Science Technology program. The basic concepts of disease, disease agents, transmission, treatment, and control are fundamental to successfully managing a productive livestock operation. Utilizing livestock pharmaceuticals in the production of safe and wholesome food for our consumer public is a desirable goal for all livestock producers. Animal Science Technology graduates should be very familiar with health maintenance and prevention of disease in farm livestock.

#### Prerequisites

None

#### Co-Requisites

None

#### Course Learning Outcomes

Upon successful completion of this course, the student will be able to

1. discuss rational drug use as related to food safety, consumer confidence and public health.
2. describe correct routes for drug administration and when to use each route.

3. describe how drugs travel in the body before elimination and changes in metabolism of drugs with regards to dosing.
4. differentiate common antibiotics and their use in farm animals.
5. describe common parasites in livestock and their treatments.
6. differentiate between the available drugs to treat gastrointestinal conditions.
7. describe the immune system and how a vaccines works.
8. differentiate the presenting signs and discuss treatment and prevention of the most common livestock diseases.
9. be competent with drug administration and health evaluation of cattle and sheep.

## Resource Materials

### ***Required Text:***

No text required

### ***Reference Text:***

Blowey, R. W. (2016). *The veterinary book for dairy farmers* (4<sup>th</sup> ed.). 5M Publishing.

## Conduct of Course

This is a 42 hour lecture course and one hour of lab per week.

## Evaluation Procedures

This course is graded as follows:

Laboratory	25%
Assignments, Projects, & Quizzes	25%
Midterm Exam	20%
Final Exam	30%

\*A minimum mark of 50% is required in the laboratory portion of this course.

\*The lab portion includes competencies at each lab that are marked as a pass or fail. You must pass every single competency to be able to pass the lab portion of the course.

## 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. Rational Drug Use
2. Drug Administration
3. Drug Distribution, Elimination and Dosing
4. Antibiotics
5. Antiparasitic Drugs
6. Steroids and Hormones
7. Gastrointestinal Drugs
8. Vaccines
9. Livestock Diseases
10. Competency-Based Labs



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