



DEPARTMENT OF ANIMAL SCIENCES

COURSE OUTLINE – WINTER 2015

BK133 INTRODUCTION TO BEE DISEASES & MANAGEMENT – 1(1.5-0-1) 22.5 HOURS

INSTRUCTOR: Eric Stromgren

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OFFICE HOURS: As posted

PREREQUISITE(S)/COREQUISITE:

Admission to the beekeeping program

REQUIRED TEXT/RESOURCE MATERIALS:

Canadian Association of Professional Apiculturists. *Honey Bee Diseases and Pests*

Canadian Association of Professional Apiculturists. *Beekeeping in Western Canada*

CALENDAR DESCRIPTION:

This is an introduction to microbiology, honey bee diseases and the integrated pest management approach to disease management.

CREDIT/CONTACT HOURS:

This course consists of 3 hours of lecture per week and 2 hour of lab per week for 4.5 weeks; total of 22.5 course hours.

DELIVERY MODES:

Course work includes lectures, labs, discussions, assigned readings, a midterm, and a final exam.

OBJECTIVES:

1. Identify common bee diseases and pests
2. Understand control and prevention measures against diseases and pests
3. Understand the integrated pest management approach to treatment

GRADING CRITERIA:

GRANDE PRAIRIE REGIONAL COLLEGE			
GRADING CONVERSION CHART			
Alpha Grade	4-point Equivalent	Percentage Guidelines	Designation
A⁺	4.0	90 – 100	EXCELLENT
A	4.0	85 – 89	
A⁻	3.7	80 – 84	FIRST CLASS STANDING
B⁺	3.3	77 – 79	
B	3.0	73 – 76	GOOD
B⁻	2.7	70 – 72	
C⁺	2.3	67 – 69	SATISFACTORY
C	2.0	63 – 66	
C⁻	1.7	60 – 62	
D⁺	1.3	55 – 59	MINIMAL PASS
D	1.0	50 – 54	
F	0.0	0 – 49	FAIL
WF	0.0	0	FAIL, withdrawal after the deadline

EVALUATIONS:

Participation	20%
Assignments/Quizzes	20%
IPM report	20%
Final Exam	40%

STUDENT RESPONSIBILITIES:

Students are expected to be on-time and present to complete this course. Requests to reschedule assignments or assessments will only be granted under extraordinary circumstances.

Students must follow all safety guidelines and procedures.

Assignments must be submitted on time in order to be eligible for grading. Late submission due to illness must be documented with a doctor's note.

STATEMENT ON PLAGIARISM AND CHEATING:

Refer to the Student Conduct section of the College Admission Guide at

<http://www.gprc.ab.ca/programs/calendar/> or the College Policy on Student Misconduct: Plagiarism and Cheating at www.gprc.ab.ca/about/administration/policies/**

**Note: all Academic and Administrative policies are available on the same page.

COURSE SCHEDULE/TENTATIVE TIMELINE:

- Field trip tentatively scheduled to Edmonton IPM seminar January 29 – Feb 1, in association with BK134/BK199.
- Daily Quizzes
- IPM report due Week 9 of first term
- Final exam Week 5
- Details for assignments/lab exercises will be announced in class

COURSE CONTENT

1. Biology and Management of Organisms Causing Disease in Honey Bee Colonies

- American foulbrood
- European foulbrood
- Chalkbrood
- Sac brood
- Chilled brood
- Nosema disease
- Honey bee tracheal mites
- *Varroa* mites
- Small hive beetles
- Bee viruses
- Africanized honey bees
- Wax moths
- Other hive and stored products pests

2. Lab Work

- Identification of honey bee diseases and pests
- Use a microscope to assess severity of nosema (*apis* and *ceranae*)
- Use a microscope to determine presence of tracheal mite

3. Pests of the Apiary

- Rodents and big animals
- Other pests

4. Introduction to Integrated Pest Management

- Concept, philosophy and implementation
- Introduction to common treatment strategies