



**DEPARTMENT OF ANIMAL SCIENCES**

**COURSE OUTLINE – WINTER/SPRING 2015**

**BK135 – QUEEN REARING-3.5 (16-0-16)**

**INSTRUCTOR:** Eric Stromgren                      **PHONE:** 780.835.6610  
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**OFFICE HOURS:** As posted

**PREREQUISITE(S)/COREQUISITE:**

Admission to the beekeeping program

**REQUIRED TEXT/RESOURCE MATERIALS:**

Lawrence John Connor, *Queen Rearing Essentials*

**CALENDAR DESCRIPTION:**

This course examines the theory behind queen rearing, management practices involved in producing queens on a commercial scale, and a substantial field experience component.

**CREDIT/CONTACT HOURS:**

This course consist of 16 hours of lecture and 16 hours of lab time in 1 week; in addition students will complete a 32 hour per week field experience for 2 weeks; a total of 96 hours.

**DELIVERY MODES:**

Course includes lectures, lab work, and field experience.

**OBJECTIVES:**

1. To introduce students to the management involved in producing queen bees.
2. By the completion of this course the student should have a sound understanding of the process of selecting stock, raising and evaluating queen honey bees.

**GRADING CRITERIA:**

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

**EVALUATIONS:**

Exam	35%
Class Participation (including field trips)	65%

## **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/\\*\\*](http://www.gprc.ab.ca/about/administration/policies/**)

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

## **COURSE SCHEDULE/TENTATIVE TIMELINE:**

- 1 week Classroom/Lab March 5 - 9
- 2 Weeks Practical June 16 – 27 *tentative*

## **COURSE CONTENT**

### **Lecture material**

- Queen and Drone physiology and anatomy
- Caste differentiation
- Genetics and selection
- Development of open and closed breeding programs
- Nutrition requirements
- Options for rearing (starter/finisher, queenless vs queenrite, queen production vs nuc production, breeders, builders, evaluating queens)
- Instrumental insemination (tentative)

### **Practical**

- Managing Cell Builders
- Selection criteria, Hygenic/SMR assay, stability, gentleness, etc.
- Cell cups, wax/plastic
- Creating cell starter nucs
- Managing cell starter/finisher colonies
- Grafting
- Installing cells
- Catching, marking, caging queens