DEPARTMENT OF WELDING, INSTRUMENTATION, AND BEEKEEPING

COURSE OUTLINE – FALL 2012

BK361: INTEGRATED PEST MANAGEMENT – 1.5(3-0-2) 35 HOURS

INSTRUCTOR: Eric Stromgren **PHONE:** 780.835.6610
OFFICE: PS104A **E-MAIL:** estromgren@gprc.ab.ca

OFFICE HOURS: As posted

PREREQUISITE(S)/COREQUISITE:

BK200

REQUIRED TEXT/RESOURCE MATERIALS:

TBA

CALENDAR DESCRIPTION:

Focus on the integrated approach to manage pests, diseases, parasites and other threats to bees/colonies and an in-depth study of monitoring, control strategies, and the safe use and handling of chemicals used to maintain hive health.

CREDIT/CONTACT HOURS:

Course consists of 3 lecture hours and 2 lab hours per week for 7 weeks; total of 35 hours

DELIVERY MODES:

Course includes lectures, guest presentations, seminars, class discussions, readings, assignments, quizzes and a comprehensive final exam.

OBJECTIVES:

1. Understand integrated pest management approach as used in commercial beekeeping
2. Understand specific pesticides, organic acids, and other products used to manage pests, diseases, parasites, and other threats to colonies

3. Coordinate control strategies to prolong product efficacy while maintaining hive health
4. Understand hive hygiene, non-chemical approaches, cultural controls and genetic controls for hive health
5. Monitor mite levels, assess economic threshold, and treat as necessary using appropriate application methods
6. Understand the importance of research and ongoing learning at the individual beekeeper level to maintain current knowledge of pests, threats, options and trends.

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:

Class Participation	10%
Quizzes	30%
Assignments	30%
Final Exam	30%

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.

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:

Schedule of topics to be announced in class

1. Integrate Pest Management (IPM)
    - Concept & approach
    - Broader strategies to manage pests, diseases, parasites and other threats
    - Non-chemical approaches
2. Varroa Mites
    - Monitoring methods
    - Assessment
    - Treatment options and application methods
3. Nosema disease
    - *N. apis* vs. *N. ceranae*
    - Prevalence
    - Detection
    - Treatment
4. Pesticides in beekeeping
    - Pesticide Rating

- Labels
- Mode of Action, Half-life, LD_{50}, Toxicity.
- Storage
- Resistance/Testing
- Safety Equipment.
- Calculations and application

5. Pesticide Exposure
    - Typical pesticide poisoning
    - Sublethal effects
    - Systemic insecticides
6. Colony Collapse Disorder
    - Multi-factor maladies
    - Identifying causal agents
    - Modifying management strategies