SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ONTARIO

Sault College

COURSE OUTLINE

COURSE TITLE:	**Forest Entomology**		
CODE NO. :	**NRT207**	**SEMESTER:**	**III**
PROGRAM:	**Aboriginal Resource Technician**		
AUTHOR:	**Jerry A. Zuchlinski. M.Sc.**		
DATE:	**Jan 2001**	**PREVIOUS OUTLINE DATED:**	**None**

APPROVED: _____ _____

DEAN **DATE**

TOTAL CREDITS:	**3**		
PREREQUISITE(S):	**None**		
LENGTH OF COURSE:	**3 hours/week x 16 weeks**	**TOTAL CREDIT HOURS:**	**48**

I. COURSE DESCRIPTION:

This course provides the student with an introduction to the biology of insects, their ecology in relation to forest environments, their impact on the timber harvesting industry and methods for minimizing their damage. Emphasis is placed on insect species associated with commercial tree species in eastern Canada.

II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:

Upon successful completion of this course, the student will demonstrate the ability to:

1. Characterize insects from an ecological and human perspective.

   Potential Elements of the Performance:
   - Provide examples of various ecological roles of insects.
   - Characterize general categories of pests.
   - Describe the significant historical events that have led to current integrated pest management strategies.

2. Recognize by genus and/or species selected harmful and beneficial insects associated with commercial tree species

   Potential Elements of the Performance:
   - Identify selected Hymenoptera
   - Identify selected Lepidoptera
   - Identify selected Coleoptera
   - Identify selected Hemiptera/Homoptera
   - Identify selected Diptera

3. Describe the biology and ecology of insects in general and selected harmful and beneficial species.

   Potential Elements of the Performance:
   - Identify and describe the function of external structures of insects.
   - Describe the significant anatomical features that distinguish insects from other arthropods.
   - Describe the significant anatomical features which distinguish insect Orders
   - Describe insect metamorphosis and the role of each life stage.
   - Demonstrate correct use of entomological terminology presented in the course
   - For selected species; research and describe their life cycle, the type of damage caused and general importance to the harvesting industry.
   - Categorize and recognize different types of damage caused by insects.
   - Describe biological and ecological characteristics of insect pests and their hosts that contribute to pest management decision -making.

4. Describe procedures used in the monitoring and control of pest species

   Potential Elements of the Performance:
   - Describe the objectives of the Forest Disease and Insect Survey and pest monitoring in general
   - Describe monitoring procedures for select forest pest species
   - Describe various methodologies for pest management including; cultural, chemical and biological treatments
   - Describe integrated control strategies for select forest pest species

III. TOPICS:

1. Insects in Perspective
2. Characteristics of the Arthropoda
3. Insect Life Cycles
4. Morphological Characteristics of Adult Insects

5. Morphological Characteristics of Larval Insects
6. Biological and Ecological Considerations in Insect Management
7. Select Species Associated with Forest Trees
8. Pest Management Tactics and A\gents

IV. REQUIRED RESOURCES/TEXTS/MATERIALS:

Forest Entomology Study Guide.

V. EVALUATION PROCESS/GRADING SYSTEM:

1.Mid-Term Test	15%
2. Final Test	15%
3. On-line Identification Test	20%
4. College Identification Test	10%
5. Microscope assignment	10%
6. Work Placement Evaluation	10%
7. Assignment (Module 7)	20%
TOTAL	100%

The value of lab assignments and reports will be reduced at a rate of 10% per day for late submissions for a period of 5 days after the due date. After 5 days the lab assignment/report value be zero. All labs, assignments and reports must be submitted regardless of lateness to pass the course.

No rewrites will be made available at semester end.

The following semester grades will be assigned to students in post-secondary courses:

Grade	Definition	Grade Point Equivalent
A+	90 - 100%	4.00
A	80 - 89%	3.75
B	70 - 79%	3.00
C	60 - 69%	2.00
R (Repeat)	59% or below	0.00
CR (Credit)	Credit for diploma requirements has been awarded.	
S	Satisfactory achievement in field placement or non-graded subject areas.	
X	A temporary grade. This is used in limited situations with extenuating circumstances giving a student additional time to complete the requirements for a course (see *Policies & Procedures Manual - Deferred Grades and Make-up*).	
NR	Grade not reported to Registrar's office. This is used to facilitate transcript preparation when, for extenuating circumstances, it has been impossible for the faculty member to report grades.	

VI. SPECIAL NOTES:

Special Needs:
If you are a student with special needs (e.g. physical limitations, visual impairments, hearing impairments, or learning disabilities), you are encouraged to discuss required accommodations with your instructor and/or the Special Needs office. Visit Room E1204 or call Extension 493, 717, or 491 so that support services can be arranged for you.

Retention of course outlines:
It is the responsibility of the student to retain all course outlines for possible future use in acquiring advanced standing at other postsecondary institutions.

The Professor reserves the right to change the information contained in this course outline depending on the needs of the learner and the availability of resources.

Substitute course information is available in the Registrar's office.

VII. PRIOR LEARNING ASSESSMENT:

Students who wish to apply for advanced credit in the course should consult the instructor. Credit for prior learning will be given upon successful completion of the following:

VIII. DIRECT CREDIT TRANSFERS:

Students who wish to apply for direct credit transfer (advanced standing) should obtain a direct credit transfer form from the Dean’s secretary. Students will be required to provide a transcript and course outline related to the course in question.