SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ONTARIO

Sault College

COURSE OUTLINE

COURSE TITLE:	Forest Pathology		
CODE NO. :	NRT 206	SEMESTER:	IV
PROGRAM:	Forestry Technician		
AUTHOR:	Bob Currell		
DATE:	Jan. 2004	PREVIOUS OUTLINE DATED:	Dec. 2002
APPROVED:			

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DEAN DATE

TOTAL CREDITS:	2
PREREQUISITE(S):	None
HOURS/WEEK:	2 hr/week x 16 weeks

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For additional information, please contact C. Kirkwood, Dean
School of Technology, Skilled Trades & Natural Resources
(705) 759-2554, Ext.688

I. COURSE DESCRIPTION:

This course provides the student with an understanding of disorders of forest trees. In the course, the types of stresses, both biotic and abiotic, which can cause forests and trees to become unhealthy, will be introduced. Emphasis will be placed on identifying and describing the most commonly occurring Ontario infectious forest pathogens. The ecological and economic impacts of introduced exotic tree diseases will be introduced.

II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:

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

1. Describe the scope and importance of forest pathology

   Potential Elements of the Performance:

   - define forest pathology and describe why it is important to study
   - list the types of pathological stresses trees may experience
   - describe the ecological and economic impact of pathological damage

   This Learning outcome will constitute 10% of the course's mark.

2. List and describe abiotic stress factors affecting forests

   Potential Elements of the Performance:

   - list abiotic factors which affect forests
   - describe the damage and impacts of abiotic stresses on forests
   - suggest management techniques to minimize abiotic stress impacts

   This learning outcome will constitute 10% of the course's mark

3. Identify and important tree diseases

   Potential Elements of the Performance:

   - identify tree pathogens from pictures
   - identify tree disease from field or lab specimens
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   This learning outcome will constitute 10% of the course's mark

4. Describe important forest tree diseases

   Potential Elements of the Performance

   - list the causal agents of tree diseases
   - describe 6 categories or groups of tree diseases
   - describe the life cycle, damage caused, and significance of important Ontario tree diseases
   - suggest management to minimize disease impacts

   This learning outcome will constitute 30% of the course's mark

5. Present technical information describing a specific tree disese, using current technology

   Potential Elements of the Performance:

   - prepare 2 group presentations describing a tree dsease
   - deliver 2, ten to fifteen minute oral presentations supported by audio visual resources

   This learning outcome will constitute 20% of the course's mark

6. Properly use a dissecting microscope to examine forest pathology specimens

   Potential Elements of the Performance:

   - draw fruiting bodies and other important structures seen on lab fungi specimens
   - explain how to prepare a fungal culture

   This learning outcome will constitute 10% of the course's mark

7. Discuss current issues in the field of forest pathology

Potential Elements of the Performance:

- explain the particular stresses and pathogens impacting urban trees
- describe several types of exotic tree diseases which are affecting Ontario's forests

This learning outcome will constitute 10% of the course's mark

III. TOPICS:

1. An introduction to Ontario forest pathology
2. Abiotic forest stresses
3. Symptomology and an introduction to fungal pylogeny
4. Classes of tree diseases
   - Diseases of needles and leaves
   - Stem decay of conifers
   - Stem decay of hardwoods
   - Wilts
   - Root and butt rot
   - Rusts
5. Urban pathology
6. Exotic forest pathogens

IV. REQUIRED RESOURCES/TEXTS/MATERIALS:

Forest Pathology Study Guide

Field Guide to Tree Diseases of Ontario; Davis and Meyer
(A class set of this field guide will be provided)

Note: This publication is available on-line:
http://www.glfc.cfs.nrcan.gc.ca/treedisease/index_e.html

Other internet resources will be provided during the course.

A hand lens would be useful in many labs.

V. EVALUATION PROCESS/GRADING SYSTEM:

Tests (2)	- 40%
Quizzes	- 15%
Presentations(2)	- 20%
Identification Test(s)	- 10%
Lab, assignments	- 15%

The following semester grades will be assigned to students:

Grade	**Definition**	*Grade Point Equivalent*
A+	90 – 100%	4.00
A	80 – 89%	
B	70 - 79%	3.00
C	60 - 69%	2.00
D	50 – 59%	1.00
F (Fail)	49% and below	0.00

CR (Credit)	Credit for diploma requirements has been awarded.
S	Satisfactory achievement in field /clinical placement or non-graded subject area.
U	Unsatisfactory achievement in field/clinical placement or non-graded subject area.
X	A temporary grade limited to situations with extenuating circumstances giving a student additional time to complete the requirements for a course.
NR	Grade not reported to Registrar's office.
W	Student has withdrawn from the course without academic penalty.

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 professor and/or the Special Needs office. Visit Room E1101 or call Extension 703 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.

Plagiarism:
Students should refer to the definition of "academic dishonesty" in *Student Rights and Responsibilities*. Students who engage in "academic dishonesty" will receive an automatic failure for that submission and/or such other penalty, up to and including expulsion from the course/program, as may be decided by the professor/dean. In order to protect students from inadvertent plagiarism, to protect the copyright of the material referenced, and to credit the author of the material, it is the policy of the department to employ a documentation format for referencing source material.

Course Outline Amendments:
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.

Assignments are due at 4 pm on the due date. Late assignments will receive a deduction of 10% per day late.

VII. PRIOR LEARNING ASSESSMENT:

Students who wish to apply for advanced credit in the course should consult the professor. Credit for prior learning will be given upon successful completion of a challenge exam or portfolio.

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.