SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ONTARIO

Sault College

COURSE OUTLINE

COURSE TITLE:	Surveys and Assessments		
CODE NO. :	NRT 202	**SEMESTER:**	3
PROGRAM:	Forestry Technician		
AUTHOR:	Bob Currell		
DATE:	June 2007 **PREVIOUS OUTLINE DATED:**		Aug 2006
APPROVED:			
	_____		_____
	DEAN		**DATE**
TOTAL CREDITS:	4		
PREREQUISITE(S):	None		
HOURS/WEEK:	3		

I.   COURSE DESCRIPTION:

Surveys and Assessments play an important role in monitoring the status of forest resources as well as evaluating the success of silvicultural projects. The procedures for carrying out many types of commonly used forestry surveys and assessments will be explained in this course.   Many of the surveys explained indoors will then be carried out under field conditions to demonstrate their practical application.

II.   LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:

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

1. Explain why accurate forest surveys are critically important to the practice of Sustainable Forestry in Ontario

   Potential Elements of the Performance:
   -   outline legislation
   -   describe responsibilities for Compliance Monitoring and Silviculture Effectiveness Monitering in forest management and outline the process involved in its implementation
   -   describe basic statistical concepts important when designing, carrying out and evaluating data collected in forest surveys and assessments

   This learning outcome will represent 15% of the course grade.

2. Carry out forest surveys to evaluate the quality of silvicultural treatments

   Potential Elements of the Performance
   -   Evaluate tree planting quality using planting quality surveys
   -   Be able to identify planting quality faults
   -   Lay out a tree plant-sampling pattern to evaluate planting quality
   -   Calculate payment rates to contractors based on planting quality
   -   Carry out a plantation thinning survey to evaluate the need for a thinning treatment

   This learning outcome will represent 10% of the course grade.

3. Determine how successfully an area is regenerating to suitable tree
    Species (Silviculture Effectiveness Monitering)

    Potential Elements of the Performance:
    -   describe the features of a regeneration survey and a Free to Grow
        survey
    -   carry out and compile a regeneration survey using Well-spaced
        Free-growing Regeneration Assessment procedures

    This learning outcome will represent 15% of the course grade.

4. Explain how to minimize site disturbance on sensitive sites in the
    Great Lakes St. Lawrence (GLSL) forest region.

    Potential Elements of the Performance:
    -   describe the characteristics of six main types of of sensitive sites in
    the GLSL.

    -   describe legislation, procedures and guidelines that apply to the
        protection of sensitive sites
    -   recognise signs of the 5 main types of site disturbance in the GLSL
        region
    -   explain the factors which affect the sensitivity of sites
    -   explain strategies, techniques and equipment which can be used to
        minimize and mitigate site disturbance
    -   assess the level of site damage on an area of recently harvested
        forest

    This learning outcome will represent 20% of the course grade.

5. Demonstrate the ability to carry out forest surveys and assessments
    using Electronic Data Recorders

    Potential Elements of the Performance:
    -   demonstrate the ability to input and retrieve data using handheld
        PDAs and/or other Electronic Data Recorders
    -   collect Permanent Sample Plot data using IPAQ type hand held
        PDAs
    -   assess Well-spaced Free-growing Regeneration success using
        hand held data recorders

    This learning outcome will represent 10% of the course grade.

6. Complete a Pre-harvest Silvicultural Prescription to evaluate the characteristics of any area and to recommend ways it should be harvested and regenerated

    Potential Elements of the Performance:
    For an area which you have been assigned:
        -complete a site evaluation
        -complete a harvesting plan
        -prepare a forest renewal prescription

    This learning outcome will represent 15% of the course grade.

7. Carry out inventories of forest lands to the standards of accuracy required for a variety of natural resource research projects

    Potential Elements of the Performance:
    -   describe a Ontario Living Legacy project (NEBIE) to survey lands managed under a range of intensities
    -   remeasure permanent sample plots, established to evaluate forest growth

    This learning outcome will represent 10% of the course grade.

III. Topics:

1. Introduction to compliance monitoring, surveys and assessments

2. Tree Planting quality assessments

3. Plantation thinning surveys

4. Silviculture Effectiveness Monitering

5. Measuring Permanent Sample Plots

6. Evaluating Site Disturbance

7. Pre-Harvest Silvicultural Prescriptions

8. The NEBIE project

V. EVALUATION PROCESS/GRADING SYSTEM:

Assignments
- surveys carried out in the field   35%
- lab assignments and quizzes   15%

Tests (3)   50%

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.

V.   EVALUATION PROCESS/GRADING SYSTEM:

<give breakdown of tests/assignments and their weights relative to calculating the final grade for the course>

The following semester grades will be assigned to students:

Grade	Definition	*Grade Point Equivalent*
A+	90 – 100%	
A	80 – 89%	4.00
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 2703 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.

Communication:
The College considers **WebCT/LMS** as the primary channel of communication for each course. Regularly checking this software platform is critical as it will keep you directly connected with faculty and current course information. Success in this course may be directly related to your willingness to take advantage of the **Learning Management System** communication tool.

Plagiarism:
Students should refer to the definition of "academic dishonesty" in *Student Code of Conduct.* 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.

A province wide site disturbance training program has been developed by the OMNR in conjunction with Forest Industries in Ontario to develop the knowledge and skills needed by forest planners, operators and compliance staff in a consistent way province wide. Your professor is certified to teach, evaluate and certify students who demonstrate sufficient knowledge of the material. Forest Practice Competency Partnership site disturbance training participation certificates, issued by the OMNR, will be given to students who pass this segment of the course.

Several field exercises will be carried out in this course, representing a majority of assignment marks. You will be informed, in class, 1 week ahead of time when field work is scheduled and are expected to attend. You will receive a 0 grade for any assignment associated with a field trip which you miss.

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.