

SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ONTARIO



Sault College

COURSE OUTLINE

COURSE TITLE:	FOREST RENEWAL		
CODE NO. :	NRT 241	SEMESTER:	4
PROGRAM:	FOREST TECHNICIAN		
AUTHOR:	MARK HARVEY		
DATE:	DEC 2008	PREVIOUS OUTLINE DATED:	DEC 2007
APPROVED:	"B. Punch"		
	_____	_____	_____
	CHAIR		DATE
TOTAL CREDITS:	3		
PREREQUISITE(S):	NONE		
HOURS/WEEK	3		

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*For additional information, please contact Brian Punch, Chair
Natural Environment/Outdoor Studies and Technology Programs
(705) 759-2554, Ext. 2661*

I. COURSE DESCRIPTION:

This course is a companion course to silviculture NRT 200. Units covered in this course are forest tending , forest nursery production, forest tree planting and tree improvement. Through –out the course the provincially mandated policy of sound forest stewardship and sustainability are stressed .

II.

LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:

- 1, Be able to participate effectively in carrying out silvicultural operations in Ontario
- 2, Assist in the planning of silvicultural operations
- 3, Be able to identify some legislated, and operational constraints imposed on the practice of silviculture in Ontario
- 4, Be respectful of the environment when conducting silvicultural operations.
- 5, implement components of intensive and elite forest management in compliance with the Crown Forest Sustainability Act.

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

1.
 - 1, Plan and conduct tending operations

Potential Elements of the Performance:

- Plan juvenile spacing operations
- Plan pre commercial and commercial thinning and spacing operations
- Write crop plans for jack pine and white spruce
- Calculate optimal live crown ratios for pruning operations
- List factors to consider when determining the feasibility of conducting pruning ,thinning operations_

2. This learning outcome will constitute 20% of the course grade
2. Apply pesticides and conduct pest management activities in a safe, efficient, responsible manner and in compliance with all laws

Potential Elements of the Performance:

- Apply forest pest management techniques and pesticides in a safe , effective and environmentally acceptable manner and in accordance with all relevant legislation List and identify economically important forest weed species
- List economically important forest insects
- List economically important fungal pests and animal pests in the forest
- Write prescriptions for pest management activities in the forest
- Clearly understand the MOE Pesticides Act and Reg. 914
- List properties and characteristics of pesticides registered for forest use in Canada
- Relate components of the Pest Control Products Act to pest management activities in forestry
- Demonstrate knowledge in the application of forest pesticides using ground application equipment
- Calibrate selected pieces of ground application equipment used in forestry
- Successfully complete pesticide application mixing problems
- Select pesticide application methods and pesticides for specified applications in forestry
- Demonstrate a complete understanding of pesticide hazards, storage and handling provisions, emergency measures and first aid
- Relate forest pesticides to chemical properties including relative toxicity, mode of action , residual activity, chemical groupings ,
- Classify selected forest pesticides by Registered use and limitations, species susceptibility, method of application, product formulations
- Fully comprehend pesticide container labels

This learning objective will constitute 15 % of the course grade

3. Demonstrate ability to grow tree seedlings and conduct business with the private sector for tree seedling production.

Potential Elements of the Performance:

- List production techniques used in barefoot production
 - List production techniques used in container production
 - Assess seedling quality and use statistically sound sampling procedures
 - Grow 4-8 species of containerized tree seedlings in a greenhouse approximately 750 seedlings
 - List key elements of a seedling grower contract
 - Visit a local tree seedling production center and complete a survey
 - Assist in the Operation of the college tree production greenhouse
- This learning outcome will constitute 30% of the course grade

4. Demonstrate the ability to successfully conduct and administrate an operational tree plant

Potential Elements of the Performance:

- Select planting stock to meet specified forest regeneration objectives
- Develop contracts for the production of planting stock and tree planting
- Integrate tree planting with other forest management activities
- Demonstrate the proper care and handling of planting stock
- Demonstrate the proper care and use of planting equipment
- List planting operational strategies including microsite selection, planting technique, selection of tools and planting faults.
- Describe a minimum of 2 tree planting assessment procedures

This learning outcome will constitute 20% of the course grade

5. List and define selected principles and practices used in tree improvement

Potential Elements of the Performance:

- Identify tree seed zones and the effects of provenance
- Identify plus tree characteristics
- Collect scions
- Graft conifer trees using the side veneer graft
- Define the reasons for setting up a seed orchard
- Briefly describe the theoretical basis for tree improvement
- List the characteristics of a minimum of 2 significantly different types of seed orchards
- Define the design of and the purpose of a family test

This learning outcome will constitute 15% of the course grade

IV. REQUIRED RESOURCES/TEXTS/MATERIALS:
NRT 241 course study guide and lab manual

V. EVALUATION PROCESS/GRADING SYSTEM:

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

Tree crop	15%
Greenhouse work term	5%
Seed and cone test	10%
Test	20%
Labs, reports and field trips 5% @	30%
crop plan	5%
grafting lab	5%
plant moisture stress report	5%
tree planting assignment	5%
insects in seed orchards	5%
field trip report	5%
Guest speaker summaries 3@5	15%
Total	100%

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

<u>Grade</u>	<u>Definition</u>	<u>Grade Point Equivalent</u>
Grade	Definition	Grade Point Equivalent
A+	90 – 100%	4.00
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. .

VI. SPECIAL NOTES:

Disability Services:

If you are a student with a disability (e.g. physical limitations, visual impairments, hearing impairments, or learning disabilities), you are encouraged to discuss required accommodations with your professor and/or the Disability Services 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.

Tuition Default:

Students who have defaulted on the payment of tuition (tuition has not been paid in full, payments were not deferred or payment plan not honoured) as of the first week of *March* will be removed from placement and clinical activities. This may result in loss of mandatory hours or incomplete course work. Sault College will not be responsible for incomplete hours or outcomes that are not achieved or any other academic requirement not met as of the result of tuition default. Students are encouraged to communicate with Financial Services with regard to the status of their tuition prior to this deadline to ensure that their financial status does not interfere with academic progress.

PRIOR LEARNING ASSESSMENT:

Students who wish to apply for advance credit transfer (advanced standing) should obtain an Application for Advance Credit from the program coordinator (or the course coordinator regarding a general education transfer request) or academic assistant. Students will be required to provide an unofficial transcript and course outline related to the course in question.

Credit for prior learning will also be given upon successful completion of a challenge exam or portfolio.