SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ONTARIO

Sault College

COURSE OUTLINE

COURSE TITLE: PROTECTING PARK VALUES

CODE NO. : NRT 139 **SEMESTER:** 1,3

PROGRAM: Park Operation Skills, Adventure Recreation & Parks

AUTHOR:

DATE: Sept. 2009 **PREVIOUS OUTLINE DATED:** Sept 08

APPROVED: B. Punch

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Chair DATE

TOTAL CREDITS: 4

PREREQUISITE(S): None

HOURS/WEEK: 3

COURSE DESCRIPTION:

I.   **I.**   The student will examine tree health, abiotic and biotic forest pathogens, forest insects, forest fires, and the impacts of recreation as they relate to the protection of ecological health objectives and safety in parks, recreational areas and protected areas. Numerous readings on Park Protection issues will be examined and discussed. Individual tree health will be assessed. Life cycles of major native and introduced forest insects and diseases are examined. Integrated pest management, control and ecological impacts as they relate to park ecosystem health objectives will be studied. Fire ecology, fire suppression, fire protection, fire use (prescribed burning) and fire weather index are introduced. Other park protection issues include; assessing the impacts of recreational activities on parks, invasive plant / animal species, restoration concepts, the concept of ecological carrying capacity will be discussed.

II.   **LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:**

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

1.   Describe identification features and life cycles of six orders of forest insects including Lepidoptera, Coleoptera, Hymenoptera, Diptera, Hemiptera, and Homoptera found in park areas.

     Potential Elements of the Performance:
     -Recognize and label diagrams of various insect body parts and body regions.
     -Describe how forest insects are classified according to taxonomy, feeding location and host species.
     -Draw diagrams of the life cycles for the six orders.
     These outcomes will constitute approximately 10% of the course.

2.   Describe the ecological role and management of, forest insects in park areas.
     Potential Elements of the Performance:
     -Recognize and identify signs and symptoms of insect damage.
     -Explain natural control methods including virus, bacteria, and introduced pests.
     -Explain environmental impacts on insect populations including temperature, humidity, wind, precipitation, and fire.
     -Describe elements of integrated pest management

-Discuss the limitations and environmental implications of each type of control method.
These outcomes will constitute approximately 10% of the course.

3. Describe and identify biotic and abiotic stressors of forest trees in park areas.

   Potential Elements of the Performance:
   -Classify forest tree diseases by taxonomic, biotic, abiotic, decline, host, part of   tree, parasitic / saprobic, and necrotic / atrophic / hypertrophic methods.
   -Recognize and identify signs and symptoms of forest disease.
   -Identify and describe abiotic stress factors that affect tree health.
   -Identify and describe biotic stress factors as agents of tree disease including fungi, bacteria, viruses and parasitic plants.
   -Collect and identify hard body fungus types for interpretive purposes.
   -Describe life cycles of mycorrhizae, fungi, rusts and decline diseases.
   These outcomes will constitute approximately 10% of the course

4. Describe the ecological role and management of, biotic and abiotic stressors of forest trees in park areas.

   Potential Elements of the Performance:
   -Recognize and identify signs and symptoms of forest tree diseases.-Explain environmental influences on forest tree diseases temperature, cultural damage, construction damage, humidity, wind, precipitation, and fire.
   -Complete a hazard tree assessment in a park development zone setting.
   -Describe park management strategies to protect tree health.
   These outcomes will constitute approximately 20% of the course

5. Describe the ecological role and management of, forest fires in park areas.

   Potential Elements of the Performance:
   -Describe the Canadian Forest Fire Weather Index.
   -Explain the role of forest fire in fire dependant ecosystems.
   -Operate forest fire suppression equipment (pumps, hand tools, etc.).
   -Describe fire use (prescribed burn) objectives and planning

procedures.
-Discuss the environmental implications of forest fire suppression vs. fire management in park areas.
These outcomes will constitute approximately 20% of the course

6.   Describe commemorative protection measures and other park protection issues.

Potential Elements of the Performance:
-Name various park system plans, which guide park managers efforts with respect to natural disturbances (The "Grey" Book, National Parks Act, State of the Park reports, etc.)
-Recognize 5 invasive plant species and describe impacts in park management .
-Define the concept of ecological integrity.
-Discuss the rationale for, and principles of, restoration activities.
These outcomes will constitute approximately 30% of the course

III.   TOPICS:

1.   Forest Entomology
2.   Forest Pathology.
3.   Forest Fire Management
4.   Park Protection Issues
5.   Commemorative Protection.

IV.   REQUIRED RESOURCES/TEXTS/MATERIALS:
Readings in Park Protection. Sault College of Applied Arts and Technology

Barron, G. L., 1999. Mushrooms of Ontario and Eastern Canada. Lone Pine Publishing, Vancouver.

V.   EVALUATION PROCESS/GRADING SYSTEM:

Insect ID Test	10%
Entomology Test	10%
Pathology Test	10%
Hard Body Fungus Collection	10%
Forest Fire Weather Ex.	10%
Forest Fire Test	10%
Park Protection Issues Assignment/ Presentation	20%
Commemorative Group Assignment	10%
Final Exam	10%
	Total100%

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

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:

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.

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.

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. Please refer to the Student Academic Calendar of Events for the deadline date by which application must be made for advance standing.

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

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

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.

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*. A professor/instructor may assign a sanction as defined below, or make recommendations to the Academic Chair for disposition of the matter. The professor/instructor may (i) issue a verbal reprimand, (ii) make an assignment of a lower grade with explanation, (iii) require additional academic assignments and issue a lower grade upon completion to the maximum grade "C", (iv) make an automatic assignment of a failing grade, (v) recommend to the Chair dismissal from the course with the assignment of a failing grade. 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.

Student Portal:
The Sault College portal allows you to view all your student information in one place. **mysaultcollege** gives you personalized access to online resources seven days a week from your home or school computer. Single log-in access allows you to see your personal and financial information, timetable, grades, records of achievement, unofficial transcript, and outstanding obligations, in addition to announcements, news, academic calendar of events, class cancellations, your learning management system (LMS), and much more. Go to https://my.saultcollege.ca.

Electronic Devices in the Classroom:
Students who wish to use electronic devices in the classroom will seek permission of the faculty member before proceeding to record instruction. With the exception of issues related to accommodations of disability, the decision to approve or refuse the request is the responsibility of the faculty member. Recorded classroom instruction will be used only for personal use and will not be used for any other purpose. Recorded classroom instruction will be destroyed at the end of the course. To ensure this, the student is required to return all copies of recorded material to the faculty member by the last day of class in the semester. Where the use of an electronic device has been approved, the student agrees that materials recorded are for his/her use only, are not for distribution, and are the sole property of the College.

Attendance:
Sault College is committed to student success. There is a direct correlation between academic performance and class attendance; therefore, for the benefit of all its constituents, all students are encouraged to attend all of their scheduled learning and evaluation sessions. This implies arriving on time and remaining for the duration of the scheduled session. *<Optional: It is the departmental policy that once the classroom door has been closed, the learning process has begun. Late arrivers will not be granted admission to the room.>*

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 *<choose November, March, or June>* 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.

<include any other special notes appropriate to your course>