

SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ONTARIO



**SAULT
COLLEGE**

COURSE OUTLINE

COURSE TITLE: INVASIVE SPECIES MANAGEMENT

CODE NO. : NET 302 **SEMESTER:** 6

PROGRAM: NATURAL ENVIRONMENT TECHNOLOGIST

AUTHOR: RYAN NAMESPETRA

DATE: DEC 2013 **PREVIOUS OUTLINE** Jan 2013

DATED:

APPROVED:

“C.Kirkwood”

DEAN

DATE

TOTAL CREDITS: 3

PREREQUISITE(S):

HOURS/WEEK: 3

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I. COURSE DESCRIPTION:

This course is designed to give students an understanding of the management of invasive species in Canada. In this course students will learn to identify common invasive species in Ontario and Canada, along with each species' native range, preferred habitat, introduced range, vector for introduction and impacts on its new home. This course also introduces students to the positive and negative effects of species introductions, along with the reasons for those introductions. Students will learn of measures used to mitigate the spread of invasive species to new areas, along with techniques, such as Integrated Pest Management, developed to control invasive species after their arrival. As part of this course students will be required to plan and participate in field activities or surveys related to invasive species.

II. LEARNING OUTCOMES AND ELEMENTS OF PERFORMANCE:

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

1. **Explain and distinguish between alien and native invasive species. Also discuss modes of introduction for invasive species.**

Potential Elements of the Performance:

- Discuss common terminology related to Invasive Species Management
- Understand differences between invasive species and exotic species
- Understand life history and behavioural characteristics which allow species to successfully establish in new locations
- Outline potential vectors used by species to invade new areas

2. **Demonstrate knowledge of impacts imposed by invasive species on native species, communities, and biodiversity.**

Potential Elements of the Performance:

- Discuss general impacts of invasive species
- Understand changes in complex communities and ecosystems caused by invasive species
- Understand changes in general ecology and habitat of invaded areas

- Discuss how biodiversity is negatively impacted by invasive species
3. **Demonstrate knowledge of preventative measures to mitigate transfer of invasive species. Along with selected programs, legislation and policies for the prevention and control of alien species introductions**

Potential Elements of the Performance:

- Discuss methods used to mitigate the spread of invasive species
 - Discuss governmental and non-governmental programs used to educate the public about the control of invasive species
 - Review general policies created by federal and provincial agencies to mitigate the initial introduction and spread of invasive species in Ontario and Canada
4. **Research and explain control and eradication methodologies for designated invasive species.**

Potential Elements of the Performance:

- Discuss specific invasive species in Canada that currently have management protocols / strategies in place
 - Research agencies involved and general methodologies used to control / eradicate the above species
 - Discuss reasons why it is difficult to totally eradicate an undesirable species from a given location
 - Discuss the use of Integrated Pest Management as a useful tool in managing invasive species
5. **Research and discuss habitat rehabilitation methodologies following eradication of invasive species.**

Potential Elements of the Performance:

- Understand how habitats can be rehabilitated after the control of an invasive species
- Discuss negative impacts of some control methodologies on habitat health
- Discuss governmental, private and public agencies committed to habitat rehabilitation

6. **Participate in a field survey related to invasive species.**

Potential Elements of the Performance:

- Each student will be required to participate in field studies.
- Students will organize and gather all required equipment for the chosen field survey.
- Sault College Technologists will assist students in the preparation and gathering of required resources.
- A final report outlining the field survey will be completed.

III. TOPICS:

Note: These topics sometimes overlap several areas of skill development and are not necessarily intended to be explored in isolated units or in the order below

1. Introduction to Invasive Species
2. Impacts of Invasive Species
3. Mitigation of invasive species transfers/transportation
4. Management methodologies used for invasive species
5. Habitat rehabilitation following control efforts.
6. Programs and legislation related to invasive species.

IV. REQUIRED RESOURCES/TEXTS/MATERIALS:

NONE

V. EVALUATION PROCESS/GRADING SYSTEM:

Tests & Assignments	70%
Participation	<u>30%</u>
	100%

The following semester grades will be assigned to students:

Grade	<u>Definition</u>	<i>Grade Point Equivalent</i>
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: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.

VII. COURSE OUTLINE ADDENDUM:

The provisions contained in the addendum located on the portal form part of this course outline