SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ONTARIO

COURSE OUTLINE

COURSE TITLE: **FISH CULTURE & MANAGEMENT**

CODE NO. : **NRT 253** **SEMESTER:** **4**

PROGRAM: **FISH & WILDLIFE TECHNICIAN**

AUTHOR: **VALERIE WALKER**

DATE: **JAN 2006** **PREVIOUS OUTLINE DATED:** **JAN 2005**

APPROVED:

_____ _____

DEAN **DATE**

TOTAL CREDITS: **3**

PREREQUISITE(S): **NONE**

HOURS/WEEK: **2**

I. COURSE DESCRIPTION:

This course concentrates on management strategies for important sports and commercial species of fishes of the Great Lakes Region. Emphasis will be placed on harvest control, habitat manipulation and fish stocking as management tools. In addition, hatchery requirements and operation for the culture of cold-water fish such as trout and salmon will be featured. There will be onsite visits to an area hatchery.

II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:

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

1. **Outline the history and importance of Canada's / Ontario's fisheries resource**

   Potential Elements of the Performance:

   - discuss the state of Canada's commercial seafishery, freshwater fishery and aquaculture production
   - summarizes the commercial fishing industry in the Great Lakes since the early 1900's
   - detail the importance of Ontario's fishing resource
   - discuss the economics of recreational fishing in Ontario

   This learning outcome will constitute approximately 15% of the course

2. **Discuss the factors threatening Ontario's fisheries resource**

   Potential Elements of the Performance:

   - list and describe the factors resulting in declining aquatic ecosystem health
   - outline issues regarding the loss of fish habitat
   - detail the history of fisheries exploitation in the Great lakes
   - describe the various shareholders in the fisheries resource and their conflicts
   - list the various exotic species which have invaded the Great lakes and their impact on indigenous fish stocks

   This learning outcome will constitute approximately 15% of the

course.

3. **Outline the various strategies for the management of Ontario's fisheries**

Potential Elements of the Performance:

- state the goals and strategic management actions to resolve Ontario's important fisheries management issues (SPOF II)
- outline and discuss the three (3) general approaches to fisheries management
- list and briefly discuss five methods of fisheries habitat enhancement
- argue the pro's and con's of fish stocking as a management tool
- list and explain various management prescriptions to reduce the harvest of a given fishery
- outline the quota system for the management for the commercial fishery in the Great Lakes

This learning outcome will constitute approximately 30% of the course.

4. **Describe various methods used in Ontario to assess the status of a fish population**

Potential Elements of the Performance:

- discuss the indicators of over exploitation
- describe Ontario's three provincial index netting standards (Spring Littoral Index Netting, Fall Walleye Index Netting and Nearshore Community Index Netting) to assess relative abundance
- discuss the role of fisheries as a reflection of the health of the environment

This learning outcome will constitute approximately 15% of the course.

5. **Discuss fish culture as a fisheries management tool**

   Potential Elements of the Performance:

   - basic concepts of aquaculture
   - extensive/intensive systems
   - hatchery operations
   - guidelines for stocking fish
   - environmental impacts of fish culture

   This learning outcome will constitute approximately 25% of the course.

III. TOPICS:

1. The Importance of Ontario's fisheries
2. Factors Threatening Ontario's fisheries
3. Fisheries Management
4. Fisheries Assessment
5. Fish Culture

IV. REQUIRED RESOURCES/TEXTS/MATERIALS:

Ontario Ministry of Natural Resources. 2002. Guidelines for stocking fish in inland waters of Ontario. Fisheries Section, Fish and Wildlife Branch. Peterborough, Ontario. 44 p.

V. EVALUATION PROCESS/GRADING SYSTEM:

Tests	**50%**
Assignments	**40%**
Presentation	**10%**
	100%

Lab assignments and report values will be reduced at a rate of 10% per day for late submissions for a period of 5 days after the due date. After 5 days lab assignment/report value will be zero.

All labs and assignments must be submitted regardless of lateness to pass the course. Labs and/or tests missed without documented health or personal reasons will be valued at zero.

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 493 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.

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.