

**SAULT COLLEGE OF APPLIED ARTS & TECHNOLOGY
SAULT STE MARIE, ON**



COURSE OUTLINE


Course Title: FISHERIES TECHNIQUES

Code No.: FOR316 Semester: 5

**Program: INTEGRATED RESOURCE MANAGEMENT
TECHNOLOGY**

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Date: SEPT 1997 Previous Outline Date: OCT. 96

Approved:  October 6/97.
Dean, Natural Resources Date

Total Credits: 3 Prerequisite(s):

Length of Course: 3 hrs/week X 16 weeks

Total Credit Hours: 48

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For additional information, please contact Brian Punch, Dean, School of Natural Resources,
(705) 759-2554, Ext. 687)

FISHERIES TECHNIQUES

FOR316-3

COURSE NAME

CODE NO.**I. COURSE DESCRIPTION:**

A practical course designed to provide the opportunity for students to collect fisheries data under field conditions. Students will learn a variety of fisheries techniques such as population assessment, fecundity studies, stomach content analysis, tagging and marking, sampling the commercial catch, egg collection and underwater biotelemetry.

Placements with federal (US and Canada), provincial and state agencies will form the basis of the course evaluation.

II. LEARNING OUTCOMES AND ELEMENTS OF PERFORMANCE:**A. Learning Outcomes**

1. List and discuss programming details of local federal, provincial, state and private fisheries agencies.
2. Demonstrate proficiency in the use of various fisheries gear and equipment as well as the performing of various procedures to collect fisheries data as utilized by local fisheries agencies.
3. Document field activities and data collected concisely in the form of technical reports.

B. Learning Outcomes with Elements of Performance:

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

1. List and discuss programming details of local federal, provincial, state and private fisheries agencies.

Elements of the performance:

- Research and summarize local fisheries placement opportunities, basic initiatives employed by the local federal, provincial , state and private agencies in collecting fisheries data

This learning outcome will constitute 10% of the course's grade.

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2. Demonstrate proficiency in the use of various fishing gear as well as the performing of various fisheries procedures as utilized by local fisheries agencies

Elements of the performance:

- demonstrate in the field passive and active fish capture techniques such as gill nets, trap nets and seine nets to specifications
- assess larval lamprey (ammocoete) habitat and population densities
- effectively operate an electrofishing unit to specifications and document data collected
- effectively anesthetize fish and extract reproductive products of males and females to specifications
- demonstrate proficiency in fertilizing, disinfecting and handling of fish eggs
- effectively process fish with regards to species identification, length, weight, sex, state of sex organs, fin clips, marks or tags and general health
- remove scales, otoliths spines or fins for aging purposes and document information on a scale sample envelope
- accurately quantify and qualify stomach and ovary contents of fish
- identify and enumerate fish species in commercial catches or experimental weirs
- identify to species and determine length frequency distribution of larval lamprey

Employer assessment of proficiency and attitude will constitute 30% of the course's grade

3. Document details of field activities and data collected for each placement (6) concisely in the form of technical reports.

Elements of the performance

- research the mandate of the agency for each placement completed

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- record field data concisely and accurately on appropriate forms
- take photographs where ever possible to document field technique and gear used
- record field activities concisely in field diary
- organize details of placement as outlined in the form of a technical report
- present tables, figures and graphs from field data using appropriate software

Technical reports will constitute 60% of the course's grade

III. TOPICS TO BE COVERED

Topics will be in the form of on-site placements with various local agencies. They may be 6 of the following:

1. Seine hauls for YOY walleye
2. Sea lamprey larval assessment
3. Fish stomach analysis
4. Commercial catch sampling
5. Commercial fishing operation
6. Whitefish fecundity study
7. Salmon weir processing
8. Spawning-taking operation

IV. REQUIRED STUDENT RESOURCES (OPTIONAL)

1. Nielsen L.A. and David L. Johnson (editors). 1983. Fisheries Techniques American Fisheries Society. Bethesda, Maryland.

V. EVALUATION PROCESS/GRADING SYSTEM:

Evaluation in this course will be based on the students' ability to demonstrate proficiency in each of the four defined outcomes in Section II.

1. Supervisor Evaluation (30%)

For each on-site location where a fisheries technique is performed for an agency, the student's immediate supervisor will complete an evaluation of the student's competence and attitude

Each student must have a **minimum of 6 evaluations**.

It is the student's responsibility to ensure the assessment of his/her performance is documented by the employer/supervisor and is submitted to the instructor using the form provided

2. Technical Reports (60%)

The student is expected to document the details of each of the 6 fisheries techniques placements performed. Technical reports will include:

- date/time/location (include map)
- supervisor/overseer and titles
- overview of program under which work was performed
- objective(s) of the work performed
- theory behind procedure performed (research required)
- details of procedure including gear used (include PHOTOS where possible)
- blank copies of data forms to include in Appendix (if applicable)
- results for the day (tables, figures)
- brief summary of results

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- critique of procedure/methodology (cont'd from Page 5)
 - references
3. Fisheries Agency Research Assignment (10%)

Each student will research and summarize local fisheries placement opportunities.

SUMMARY OF STUDENT EVALUATION

1.	Supervisors Evaluation	30%
2.	Technical Reports (6)	60%
3.	Research Assignment	10%
		100%

Course Grading Scheme

A+	90% - 100%	outstanding achievement
A	80% - 89%	above average achievement
B	70% - 79%	average achievement
C	60% - 69%	satisfactory achievement
R	repeat	
X		a temporary grade that is limited to instances where special circumstances have prevented the student from completing objectives by the end of the semester. An "X" grade must have the Dean's approval and has a maximum time limit of 120 days

VI. SPECIAL NOTES:Special Needs

If you are a student with special needs (e.g. Physical limitations, visual impairments, hearing impairments, learning disabilities), you are encouraged to discuss required accommodations with the instructor and/or contact the Special Needs Office, Room E1204, Ext. 493, 717 or 491 so that support services can be arranged for you.

Plagiarism

Students should refer to the definition of “academic dishonesty” in the “Statement of Students 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, as may be decided by the professor.

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.

Advanced Standing

Students who have completed an equivalent post-secondary course should bring relevant documents to the Coordinator, Natural Resources Programs.

Retention of Course Outlines

It is the responsibility of the student to retain all course outlines for possible future use in gaining advanced standing at other post-secondary institutions.

Substitute course information is available at the Registrar’s Office.

VII. PRIOR LEARNING ASSESSMENT:

Please contact the Prior Learning Assessment Office (E2203) for further information.