

SAULT COLLEGE OF APPLIED ARTS & TECHNOLOGY

SAULT STE. MARIE, ONTARIO

COURSE OUTLINE

COURSE TITLE: WILDLIFE MANAGEMENT

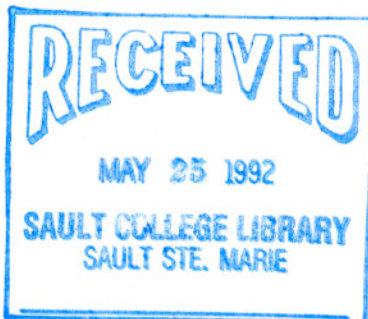
CODE NO.: FOR 338-6 SEMESTER: 6

PROGRAM: FISH AND WILDLIFE TECHNOLOGY

AUTHOR: H. A. COOPER

DATE: MAY 1992 PREVIOUS OUTLINE DATED: MAY 1991

APPROVED: *[Signature]* DEAN DATE *May 15 1992*



WILDLIFE MANAGEMENT

FOR 338-6

COURSE NAME

CODE NUMBER

TOTAL CREDIT HOURS: 96

PREREQUISITES(S): Nil

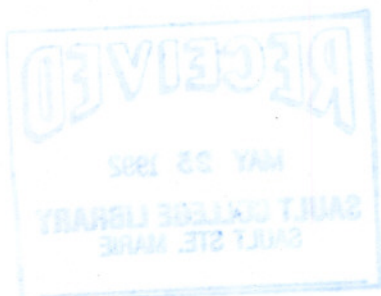
I. PHILOSOPHY/GOALS:

An advanced level course combining theoretical and practical aspects of wildlife management tools. Topics include biology of important wildlife species; the role of harvesting fish and game; habitat requirements and improvement for upland game birds, small game and big game mammals, furbearers and waterfowl; population manipulation; management of protected areas; predator and nuisance species control; and the role of effective public relations in resource management.

II. STUDENT PERFORMANCE OBJECTIVES:

Upon successful completion of this course the student will be able to:

1. State the major management tools used for wildlife, and discuss how these tools may affect future wildlife management.
2. Describe the role of harvesting wildlife populations.
3. Discuss the biological requirements and management practices used for major wildlife species of Canada.
4. Describe how habitat improvement practices may increase wildlife numbers.
5. Discuss population manipulation techniques, and the role of protected areas.
6. Describe various predator control and nuisance species control techniques, and their effectiveness.
7. Discuss the importances of an effective public relations program in resource management.



COURSE NAME-----
CODE NUMBER**III. TOPICS TO BE COVERED:**

1. Introduction and Scope of Course.
2. The Role of Harvesting Fish and Game.
3. Biology and Requirements of Game Species.
4. Habitat Improvement.
5. Population Manipulation.
6. Establishing Protected Areas.
7. Predator and Nuisance Species Control.
8. Public Relations as a Management Tool.
9. Non-Game Wildlife Management.

IV. LEARNING ACTIVITIES:**TOPIC 1: INTRODUCTION**

At the completion of this unit, the student will be able to:

- 1.0 State and explain:
 - 8 principles of game management
 - 7 major management tools
 - 8 factors that future resource planners must consider

TOPIC 2: ROLE OF HARVESTING

At the completion of this unit, the student will be able to:

- 2.0 State the objectives and rationale for harvesting resources.
- 2.1 Describe how harvest numbers may be regulated for sustained yield management.
- 2.2 State the arguments that the many persons opposed to hunting, trapping or fishing use.

TOPIC 3: BIOLOGY AND RELATED MANAGEMENT OF GAME

At the completion of this unit, the student will be able to:

WILDLIFE MANAGEMENT

FOR 338-6

COURSE NAME

CODE NUMBER

IV. LEARNING ACTIVITIES: (Cont'd)

TOPIC 4: HABITAT IMPROVEMENT

At the completion of this unit, the student will be able to:

- 4.0 Describe the methods and rules for planting of game food or cover plant species.
- 4.1 State objectives of water level control, and design a control device for a given water course to achieve these objectives.
- 4.2 Describe four types of improvements to protective cover and five methods of improving nesting cover.
- 4.3 Demonstrate on a sketch six methods of improving the habitat of any wetland area for fur-bearers or waterfowl.
- 4.4 Differentiate between rejuvenation and release operations, giving benefits, drawbacks and examples of each.
- 4.5 State five advantages and five disadvantages of the artificial feeding of any game species.
- 4.6 Describe the habitat requirements and guidelines for habitat improvement for moose, deer, bear, hare and grouse spp., as well as other game and fur bearer spp. as assigned.

TOPIC 5: POPULATION MANIPULATION

At the completion of this unit, the student will be able to:

- 5.0 Describe the use of population manipulation as a management tool.
- 5.1 Describe the reasons and methods for translocating game spp.
- 5.2 Describe the seven major potential problems and benefits of exotic game spp.

WILDLIFE MANAGEMENT

FOR 338-6

COURSE NAME

CODE NUMBER

IV. LEARNING ACTIVITIES: (Cont'd)

TOPIC 6: ESTABLISHING PROTECTED AREAS

At the completion of this unit, the student will be able to:

- 6.0 Describe the role and shortcomings of the protected areas listed in the course outline.

TOPIC 7: PREDATOR AND NUISANCE SPECIES CONTROL

At the completion of this unit, the student will be able to:

- 7.0 State eight principles of predator-prey relationships, and apply these principles to the ecological role of predators in the ecosystem.
- 7.1 State the major methods of humane predator and nuisance species control, and state the advantages and disadvantages of each.

TOPIC 8: PUBLIC RELATIONS AND RESOURCE MANAGEMENT

At the completion of this unit, the student will be able to:

- 8.0 Outline the features of an effective public relations program.
- 8.1 Submit an acceptable position paper on a topic dealing with a contentious issue related to resource management, ensuring that the principles of a good public relation program are met, in a technical style.

TOPIC 9: NON-GAME WILDLIFE MANAGEMENT.

At the completion of this unit, the student will be able to:

- 9.0 Discuss the special management considerations required for endangered and threatened species.
- 9.1 Describe the role of non-game wildlife in Ontario.

WILDLIFE MANAGEMENT

FOR 338-6

COURSE NAME

CODE NUMBER

V. METHODS OF EVALUATION:

Students will be assessed on the basis of the following:

Term tests (3)	45%
Practical tests approximately every second week in labs	40%
<ul style="list-style-type: none"> -Habitat improvement -Mammal and bird anatomy -Waterfowl whole specimens, wings and in flight -Bird, amphibia, and reptilia i.d. 	<ul style="list-style-type: none"> -Parasites and diseases -Firearm anatomy & handling -Mammals, skull & fur i.d.
<ul style="list-style-type: none"> Reports - 3 technical style reports - position paper - species biology and management 	15%
	<u>100%</u>

GRADING:

For practical tests:

For all else:

- A+ = 95%+ consistently
- A = 90 - 94%
- B = 85 - 89%
- C = 80 - 84%

- A+ = 85%+ consistently
- A = 80 - 84%
- B = 70 - 80%
- C = 60 - 69%

** Students must achieve 100% competence in furbearers, game animals and birds, waterfowl and waterfowl wing identification.

V. EVALUATION METHODS: (Cont'd)

LABORATORY COMPETENCY

In addition to the above objectives, the student must be able to achieve an accumulated grade of 80% in the following laboratory-related material:

1. Mammal and bird anatomy.
2. Mammalian and bird identification and classification.
3. Waterfowl identification from whole specimens or wings.
4. Reptile and amphibian identification.
5. Parasite and disease diagnosis.
6. Mammal skull and fur identification.
7. Firearm anatomy and handling.
8. 100% competency is required for identification of common game, fur-bearer and waterfowl species.

Written Assignments:

A. Species Biology paper: Each student will select or have assigned an important avian or mammalian wildlife species (or more than one species with similar life histories.) For this (these) species, they will summarize the biological life history and habitats. This may be done in chart form for this report. Maximum length of the report is 3 to 4 pages. The material collected here will be presented to the class for study purposes.

Due Date: after about 3 weeks from the beginning of the semester. The exact date will be announced.

See the attached summary sheet for materials that must be covered.

WILDLIFE MANAGEMENT

FOR 338-6

COURSE NAME

CODE NUMBER

V. EVALUATION METHODS: (Cont'd)

B. Game Management Plan: For the same species, the student will prepare a more comprehensive management plan, reviewing the present state of the art in managing that particular species. Although the Ontario management picture should be emphasized, information from all provinces and other countries should also be incorporated into your report.

The following format would be acceptable for the report.

- I. Introduction
- II. Species Status and Distribution
- III. Limiting and Compensating Factors Critical to Management.
(NOTE: Do not repeat your species biology material unless it IS critical to your plan.)
- IV. Harvest Manipulation
- V. Legislation and Enforcement
- VI. Habitat Enhancement
- VII. Direct Population Manipulation
- VIII. Establishing Protected Areas
- IX. Predator/Nuisance Species Control
- X. Public Relations
- XI. Summary and Recommendations for Ontario.

For each of the management practices listed above, there should be an adequate description of how each will affect your species and how the management practice can be most effectively carried out. References must be included in a bibliography.

C. Position Paper:

The wildlife management field brings up some highly controversial issues on a regular basis, and generally a lot of press coverage and public relation funds are devoted to one side or the other of the topic.

Each student will research one of these "hot" topics and present:

- a) arguments for BOTH SIDES of the issue, based on research.
- b) an intelligent summation with the student's position on the issue. This report will be in correct technical style, and submitted to the instructor before March 1. Approximate length: 4 to 5 typed pages.

COURSE NAME

CODE NUMBER

V. EVALUATION METHODS: (Cont'd)

Suggested topics include:

1. The seal hunt.
2. Leg-hold traps for terrestrial mammals.
3. Native rights and privileges with respect to hunting/fishing.
4. The Wild Rice Harvesting Act.
5. The Ontario Hunter Safety Training Program. Is it adequate?
6. Bounty systems for nuisance spp.
7. Selective harvests for moose or deer. Should we have them?
8. The wildlife resource. Should it revert back to the landowner as in Europe?
9. The new emphasis on predator (esp. wolf) control.
10. More strict gun control. Is it justified?
11. Solutions to the bear problem in parks.
12. Should steel shot replace lead shot?
13. Should hunters require written permission to hunt private land?
14. Snowmobiles should be banned from game-inhabited areas.
15. Preserve shooting to eliminate access problem and excessive hunting pressure on crown lands.
16. Any other approved topic.

Late penalties for ALL REPORTS:

Penalty for first week: 1 mark (out of 10) per weekday.

Reports more than 1 week late will receive a "0" value, but must be submitted in a satisfactory form to complete the course.

Reports more than 3 weeks late: "R" grade on entire course.

TENTATIVE LABORATORY SCHEDULEWeek #

1. Mammal and bird dissection and anatomy.
2. Test on anatomy. Waterfowl wing I.D.
3. Test on wings. Mammal identification from slides, study skins.
4. Skull and fur identification.
5. Test on mammals, skulls and furs. Songbird identification.
6. Game bird, shore bird and raptor identification.
7. Term test #1. Finish bird identification.
8. Test on birds. Parasites and diseases of wildlife.

WILDLIFE MANAGEMENT

FOR 338-6

COURSE NAME

CODE NUMBER

V. EVALUATION METHODS: (Cont'd)

10. Parasite and disease case test. Private enterprise research.
11. Work on private enterprise assignment
12. Enforcement Laboratory
13. Review, final test
14. Field trip - Habitat evaluation/Enhancement - Wetlands

VI. REQUIRED STUDENT RESOURCES:

TOPIC 1	Introduction	
	1.0	Reference(1) - Chs. 1-5 Reference(2) - Chs. 1-2 (17) - Ch. 1
TOPIC 2	Role of Harvesting	Reference(1) - Ch. 21 Reference(2) - Ch. 10 Reference(17) - Ch. 2, 11
TOPIC 3	Biology and Related Management of Game	
	3.0	See references (7),(9),(10), (12),(16) Others as assigned. Students will complete a self- study package based on videos and readings.

WILDLIFE MANAGEMENT

FOR 338-6

COURSE NAME

CODE NUMBER

VI. REQUIRED STUDENT RESOURCES: (cont'd)

TOPIC 4	Habitat Improvement	
	4.0	Reference(1) - Ch. 20
	4.1	Reference(1), (3), (15), (16)
	4.2-4.6	Reference(17), - Ch. 5, 6
		The students will complete a self-study unit based on the above material.
TOPIC 5	Population Manipulation	
	5.0-5.1	Reference(17) - Ch. 8
		Reference(2) - Ch. 2, Ch. 18
	5.2	Assigned reading from "Harrowsmith" magazine
TOPIC 6	Establishing Protected Areas	
	6.0	Reference(2) - Ch. 16
TOPIC 7	Predator and Nuisance Species Control	
	7.0-7.1	Reference(1), Ch. 22
		Reference(1), Ch. 10
		Reference(2), Ch. 8, 9
TOPIC 8	Public Relations and Resource Management	
	8.0-8.1	Readings as selected on assigned to complete position paper - Reference(2) - Ch. 20, 21
TOPIC 9	9.0-9.1	Read O.M.N.R. publication Read Non-game Wildlife Reference(2), Ch. 16, 17 Reference(17) - Ch. 17

WILDLIFE MANAGEMENT

FOR 338-6

COURSE NAME

CODE NUMBER

VII. ADDITIONAL RESOURCE MATERIALS AVAILABLE IN THE COLLEGE LIBRARY BOOK SECTION:

- (1) Schemnitz, S. S., 1980. Wildlife Management Techniques Manual. The Wildlife Society, Washington, D.C. 686 pp.
- (2) Robinson, W. L. and E. G. Bolen, 1989. Wildlife Ecology and Management. Collier MacMillan Canada Inc. 579 pp.
- (3) U.S. Forest Service. 1969. Wildlife Habitat Improvement Handbook. U.S.D.A. Washington. 200 p.
- (4) Assorted Acts and Regulations
- (5) The Journal of Wildlife Management - 1966-1989. LRC.
- (6) Transactions of N. A. Wildlife and Resources Conf. - 1971-1989. LRC.
- (7) O.M.N.R. publications on Wildlife spp.
- (8) Giles, R.H., Jr. 1978. Wildlife Management. Freeman & Co. San Francisco. 416 pp.
- (9) Kortright, F. H., 1967. Ducks, Geese and Swans of N.A. Stackpole, Penn. 476 pp.
- (10) Rue, L.L. III, 1980. Fur-Bearing Animals of North America. Crown publ., N.Y. 343 pp.
- (11) Ibid, 1978. The Deer of North America. Crown publishers, N.Y. 463 pp.
- (12) Schmidt, J. L., and D. L. Gilbert. 1978. Big Game of North America. W.M.I. Stockpole, Penn. 494 pp.
- (13) Readings in Wildlife Conservation. 1974. The Wildlife Society, 722 pp.
- (14) Linde, A.F., 1969. Techniques for Wetland Management. Department of Natural Resources, Madison, Wisconsin. 156 pp.
- (15) O.M.N.R., 1985. Enforcement Training Manual, Toronto.
- (16) O.M.N.R., 1987. Comm. Wildlife Involvement Program Manual, Toronto.

WILDLIFE MANAGEMENT

FOR 338-6

COURSE NAME

CODE NUMBER

VIII. SPECIAL NOTES:

Students with special needs (e.g. physical limitations, visual impairments, hearing impairments, learning disabilities) are encouraged to discuss required accommodations confidentially with the instructor.

Your instructor reserves the right to modify the course as he/she deems necessary to meet the needs of students.

TENTATIVE LABORATORY SCHEDULE

WEEK NO.

- 1 Mammal and bird dissection and anatomy.
2. Test on anatomy. Waterfowl wing I.D.
3. Test on wings. Mammal identification from slides, study skins.
4. Skull and fur identification.
5. Test on mammals, skulls and furs. Songbird identification.
6. Game bird, shore bird and raptor identification.
7. Term test #1. Finish bird identification.
8. BREAK WEEK.
9. Test on birds. Parasites and diseases of wildlife.
10. Complete diseases of wildlife.
11. Parasite and disease case test. Private enterprise research
12. Work on private enterprise assignment
13. Reptile and amphibia identification.
14. Review, final test.