

SAULT COLLEGE OF APPLIED ARTS & TECHNOLOGY

SAULT STE. MARIE, ONTARIO

COURSE OUTLINE

Course Title: APPLIED PHOTOINTERPRETATION

Code No.: FOR 350-4

Program: FOREST MANAGEMENT

Semester: V

Date: FEBRUARY, 1987

Author: ERWIN GOERTZ

New:  X  Revision:

APPROVED:

  
Chairperson

Nov 5 1987  
Date

CALENDAR DESCRIPTION

APPLIED PHOTOINTERPRETATION

FOR 350-4

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COURSE NAME

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COURSE NUMBER

PHILOSOPHY/GOALS:

The student will acquire fundamental knowledge and skills in identifying forest tree species, delineating forest stands, identifying site types through glacial landform recognition and identifying forest damage. Conventional aerial photography (OMNR standards), large-scale aerial photography, and satellite imagery will be involved. In addition the student will acquire the skills needed to plan an aerial photograph mission and will master the transferring of information on aerial photographs to produce or update line maps.

METHOD OF ASSESSMENT (GRADING METHOD):

Evaluation will be based on in-class lab assignments as well as written tests after each unit covered. Lab assignments will make up 60% of the final grade, with tests making up 40%.

GRADES	A - 80%
	B - 70%
	C - 60%

EQUIPMENT REQUIRED:

Pocket stereoscope

TEXTBOOK(S):

Pain, D.P. 1981. Aerial Photography And Image Interpretation For Resource Management. Forest Management Department, Oregon State University, Corvallis, Oregon.

REFERENCES:

Lillesand, T.M., and R.W. Kiefer. 1979. Remote Sensing And Image Interpretation. John Wiley and Sons Inc.

Avery, T.E. and G.L. Berlin. 1985. Interpretation Of Aerial Photographs, 4th edition. Burgess Publishing Co.

Curran, P.J. 1985. Principles Of Remote Sensing. Longman Group Ltd.

Ontario Centre of Remote Sensing. 1982. An Introduction Manual On The Assessment Of Regeneration Success By Aerial Survey. Forest Resources Group. OMNR.

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TOPIC NO.	PERIODS	TOPIC OF DESCRIPTION
<b>UNIT I</b>		
1	1	.History of remote sensing .Importance of remote sensing to forestry .Introduction to the electromagnetic spectrum (Chapters 1,12)
2	1	.Testing for stereo vision (Chapter 3)
3	2	.Review of the geometry, scale, horizontal measurements, distances, bearings and areas on vertical aerial photographs (Chapters 2,4,5)
4	3	.Acquisition and flight planning for aerial photo missions with emphasis on applications of supplementary aerial photography in forest management (Chapter 6)
	1	<b>TEST</b>
<b>UNIT II</b>		
5	2	.Principles and techniques of aerial photo interpretation (Chapter 13)
6	2	.Tree species identification (Chapter 17)
7	3	.Forest stand delineation (Chapter 17)
8	1	.Identification of forest damage
9	2	.Identification of glacial landforms and drainage patterns (Chapter 14,15)
	1	<b>TEST</b>

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TOPIC NO.	PERIODS	TOPIC OF DESCRIPTION
<b>UNIT III</b>		
10	5	.Transferring of information from aerial photos to produce and update line maps (Chapter 10)
11	3	.Geographic Information Systems and computer mapping
12	1	.Orthophotos and triangulation (Chapter 8,9,11)
	1	<b>TEST</b>
<b>UNIT IV</b>		
13	2	.Large-scale aerial photography as applied to forest inventories, residue surveys, regeneration assessments and forest damage assessment (Chapter 20)
14	2	.Satellite imagery usefulness in forest management (Chapter 25)
15	1	.Infrared photography as applied to forest damage assessment and regeneration surveys
16	1	.Airborne scanners (Chapter 23) .Radar (Chapter 24)
	1	<b>TEST</b>

FOR 350-4

COURSE OBJECTIVES (COMPETENCY BASED)

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BENCHMARK NO.	DESCRIPTION
2967.01	<ul style="list-style-type: none"><li>.draw standard FRI and NTS map symbols, lines &amp; lettering</li><li>.determine and use map scale, principles of ratio and proportion and similar triangles</li><li>.use and maintain drawing and lettering equipment</li><li>.identify and delineate features on aerial photos</li><li>.measure height, area, distance and direction on aerial photographs</li><li>.employ field verification methods</li><li>.transfer photo detail to a map</li><li>.measure area, distance and direction on a map</li><li>.plan supplemental aerial photographs</li><li>.order aerial photographs and maps</li></ul>
2968.01	<ul style="list-style-type: none"><li>.determine and use procedures for identification of field location</li><li>.read maps and photographs</li></ul>
2968.09 & 2969.02	<ul style="list-style-type: none"><li>.determine factors influencing route selection</li><li>.recognize and interpret geological features from aerial photos</li><li>.specify relationship between timber type, land-form and soil</li></ul>
2969.03	<ul style="list-style-type: none"><li>.recognize sources of materials for road construction from the relationship between timber types, landform and soil types</li></ul>