

Geog 101

NAME & NUMBER OF COURSE

SYNONYMOUS COURSES:

(a) replaces N/A
 (course #)

(b) cannot take N/A for further credit
 (course #)

SUPPLIES/MATERIALS:

TEXTBOOKS, REFERENCES, MATERIALS (List reading resources elsewhere)

OBJECTIVES:

General: This course is designed to introduce the student to the fundamental principles of meteorology and climatology to permit a basic understanding of weather and climatic phenomena we experience in our environment. Emphasis will be placed on Canadian and British Columbian examples although illustrations will be drawn from many parts of the world. The interaction between man and the atmospheric environment will receive special attention.

Instructional:

- to understand the processes operating in the atmosphere which are responsible for the various weather patterns found on the earth, and particularly across Canada.
- to be able to read and interpret weather maps
- to be aware of the complex interactions between climate, soils, vegetation and man
- to be acquainted with the findings and objectives of some contemporary research topics in climatology

METHODS:

The format of the course includes lectures, assigned readings, discussion groups, laboratory exercises, field trips and guest speakers. A number of audio-visual techniques and materials will be employed throughout the course. These include slides, films and overhead transparencies and up-to-date weather map information.

Laboratory exercises are designed to supplement the lecture and discussion materials. These will deal with the more practical aspects of the course, specifically weather and climate observation, measurement and interpretation.

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STUDENT EVALUATION PROCEDURE:

The mark for this course is made up as follows:

Laboratory exercises	35%
Term Paper	15%
Mid Term Exam(s)	20%
Final Exam	30%

Late assignments: Labs for marking are due one week after handout. Lateness should be discussed with the instructor before the date due, and a new finishing time agreed upon.

Incomplete Grades: Incomplete grades will be considered if requested, and must be discussed with the instructor at least one week before the end of class.

COURSE CONTENT

A full lecture, lab, and reading outline will be distributed early in the term. The following list of topics is a general guideline only.

<u>WEEK</u>	<u>TOPIC</u>
1.	Introduction The fields of Meteorology and Climatology
2.	Atmosphere Energy I: The Composition and Physical Structure of the Atmosphere
3.	Atmosphere Energy II: The Atmospheric Heat Balance
4.	Atmosphere Moisture I: Humidity, Condensation, Precipitation
5.	Atmosphere Moisture II: Adiabatic Processes Stability and Instability
6.	Atmosphere Motion I: Horizontal Movement Local Winds
7.	Atmosphere Motion II: Altitudinal Variations Mid-Term

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COURSE CONTENT: (contd.)

8. Atmosphere Motion III:
Global Wind Belts
The General Circulation
9. Air Masses:
Source Areas
Modification
10. Frontogenesis
11. Weather Forecasting
12. Weather and Climate in North America
13. Tropical Weather and Climate
14. Urban, Rural and Forest Climates
15. Climatic Change
Weather Modification
Pollution
16. Final Examination