

A: Division: ACADEMIC DATE: JUNE 17, 1986

 B: Department: SOCIAL SCIENCES New Course: _____

 Revision of Course
 information form: X

 DATED: NOVEMBER, 1991

 C: GEOGRAPHY 210 D: CLIMATOLOGY E: 3
 Subject & Course No. Descriptive Title Semester Credit

F: Calendar Description:
 A study of physical and dynamic climatologic processes and principles. Atmospheric energy, moisture and momentum constitute the framework in which observed elements such as temperature, humidity and wind are employed to exemplify climatologic principles.

Summary of Revision:
 (Enter date & section)
 Ex: Section C, E, F, & R

C, H, M, N

G: Type of Instruction: Hours Per Week/

Lecture	<u>4</u>	Hrs.
Laboratory	_____	Hrs.
Seminar	_____	Hrs.
Clinical Experience	_____	Hrs.
Field Experience	_____	Hrs.
Practicum	_____	Hrs.
Shop	_____	Hrs.
Studio	_____	Hrs.
Student Directed Learning	_____	Hrs.
Other	_____	Hrs.

 TOTAL 4 HOURS

H: Course Prerequisites:
 GEOG 110

I: Course Corequisites:
 NIL

**J: Course for which this course
 is a pre-requisite**
 NIL

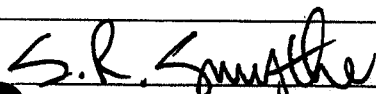
K: Maximum Class Size:
 35

M: Transfer Credit:
 Requested _____
 Granted X
 Specify Course Equivalents or
 Unassigned Credit as Appropriate

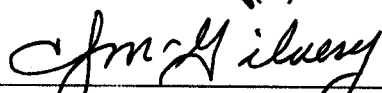
 U.B.C. GEOG 200 (1.5 units)
 S.F.U. GEOG 214 (3 credits)
 U. Vic. 1-1/2 UNITS (200 LEVEL)
 UNASSIGNED IN GEOGRAPHY

L: College Credit Transfer X

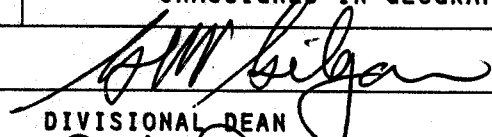
College Credit Non-Transfer _____



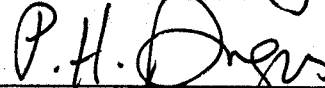
COURSE DESIGNER(S)



DIRECTOR/CHAIRPERSON



DIVISIONAL DEAN



REGISTRAR

N: Textbooks and materials to be Purchased by Students
(Use Bibliographic Form):

Ahrens, C.D., Meteorology Today. An Introduction to Weather, Climate and the Environment, 4th ed. 1991. St. Paul; West.

or a similar text chosen by the instructor subject to approval by the discipline.

The text will be updated periodically.

Complete Form with Entries Under the Following Headings:

O. Course Objectives; P. Course Content; Q. Method of Instruction;

R. Course Evaluation

O. COURSE OBJECTIVES

The student will be able to:

1. Describe the forms and exchanges of radiation and heat energy and discuss the laws applicable to the development of a radiation balance for the earth and its atmosphere.
2. Illustrate heat and moisture budgets for different environmental conditions.
3. Compute adiabatic lapse rates and evaluate conditions of stability and instability in the atmosphere.
4. Describe the forces controlling air motion and the resultant types of wind patterns.
5. Describe atmospheric conditions contributing to air pollution and the effects of air pollution on the atmosphere.
6. Discuss applications of climatology to water resource and agricultural contexts.
7. Describe methods employed to measure climatologic elements.

P. COURSE CONTENT

1. Course introduction
2. Energy principles and concepts
3. Radiation- the radiation balance
4. Heat transfers and exchanges
5. The energy balance - energy budgets
6. Atmospheric humidities - condensation processes
7. Adiabatic processes
8. Stability and instability - adiabatic lapse rates
9. Clouds and fog
10. Precipitation formation and measurement
11. Storm types and characteristics
12. The water balance - water budgets

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P. COURSE CONTENT - cont'd

13. Forces affecting air motion
14. Surface and upper air circulation
15. Local winds - wind systems and measurements
16. Climatic classification and indices
17. Climatic controls - climatic patterns
18. Hydrometeorology
19. Agroclimatology
20. Human comfort indices
21. Urban climates
22. Air pollution

Q. METHOD OF INSTRUCTION

Lectures, labs, workshops and class projects constitute the main methods of presentation.

Readings will be assigned to supplement lectures. Audio visual aids will be used when and where appropriate.

Field work and field trips may be organized in class time.

R . COURSE EVALUATION

The evaluation will be carried out in accordance with Douglas College policy and will include a suitable combination of the following factors.

Lab exercises with a combined value of up to 60%.

Tests and exams with a combined value of up to 50%.

Field work with a value of up to 15%.

A term project or paper with a value of up to 25%.

An individual or group presentation on an assigned topic with a value of up to 15%.

At the beginning of the semester the instructor will present the students with the evaluation procedure to be used.