

GEOG 4331 / 5331

Mountain Climatology

Spring 2008

Tuesdays & Thursdays, 2:00-3:15 p.m., Educ 134

Roger G. Barry

CIRES/Geography

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Structure

The course will survey research on altitudinal and topographic effects on weather and climate in mountain areas and discuss mountain climate characteristics in several different regions. A basic weather/climate college background course is required.

Grading

4331 : Mid-terms I & II 25%, Final 50%

5331: Mid-terms I & II 20%, Final 30%, Paper 30%.

Text

R.G. Barry, 1992 Mountain Weather and Climate, (2nd edn. Paperback) Routledge

Dates

Major Topics

15 January 2008	Introduction: Scale considerations; physical characteristics of mountains.
17 January 2008	Climatic Observations
22-31 January 2008	Climate Factors and Altitude Effects: Pressure, water vapor, radiation components, temperature, wind.
5 February 2008	Western Precipitation / Snow (M. Serreze)
7-21 February 2008	Orographic Effects: Airflow-lee waves and larger-scale effects, dynamically-forced winds, thermal wind systems
26 February 2008	Review
28 February 2008	Mid-term Exam I (5331 Project paper abstracts due)
4-6 March 2008	Topoclimate & Microclimate
11-18 March 2008	Climatic Characteristics: Energy budgets and temperature, cloud regimes, precipitation, moisture budget
20 March 2008	Bioclimatology: Altitude and Cold
24- 28 March 2008	Spring break
1 April 2008	Bioclimatology
3-10 April 2008	Regional Case Studies
15 April 2008	Review
17 April 2008	Mid-term Exam II
22 April 2008	Regional
26 April 2008	Climate Change
29 April 2008	5331 Project Reports
1 May 2008	Course Review
Saturday, 3 May 2008	Final Exam