GEOG/ENST 2331 Climatology Fall 2015 Course Outline

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Course Objectives:

This course gives a general introduction to meteorology and climatology. Meteorology topics include energy balance, moisture and cloud development in the atmosphere, atmospheric dynamics, small and large scale circulations, storms and cyclones, and weather forecasting. Climatology topics include the interaction between the atmosphere and oceans over long time periods, climate classification, and the potential for climatic change.

Text: Ahrens, Jackson and Jackson, 2012.
Meteorology Today, 1st Canadian Edition (Nelson Education).

Manual: Cornwell, Freeburn, Saunders 2015. *Climatology Manual*.

Lecture Times and Place: Monday and Wednesday: 8:30 – 9:30 (RC 1002)

Lab Times and Place: Tuesday: 10:30 – 12:30 / Wednesday: 2:30 – 4:30 (RC 2003)
*Lab 6 sessions will be in ATAC 3009

Evaluation Scheme and Schedule:

Lab 0	Sep. 22/23	0
Lab 1	Sep. 29/30	4
Lab 2	Oct. 13/14	4
Lab 3	Oct. 20/21	4
Lab 4	Oct. 27/28	4
Midterm	Oct. 28	15
Lab 5 – Lab Quiz	Nov. 3/4	7
Lab 6 – Group Project*	Nov. 10/11 & 17/18	8
Lab 7	Dec 1/2	4
Final Examination	TBA	50

***Lab 6 sessions will be in ATAC 3009**

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Lecture Schedule (*subject to revisions)*:

Dates	Monday	Wednesday
Sept 14 & 16	Introduction Chapter 1	The Atmosphere Chapter 1
Sept 21& 23	Radiation and Energy Chapter 2	Global Energy Balance Chapter 2 and Lab 1
Sept 28 & 30	Temperature and Time Chapters 2 & 3	Temperature and Geography Chapter 3
Oct 5 & 7	Pressure Gradients Chapter 8 and Lab 2	Forces and Winds Chapter 8 and Lab 3
Oct 14	Moisture in the Atmosphere Chapter 4	Atmospheric Stability Chapter 6 and Labs 4 & 5
Oct 19 & 21	Cloud Formation Chapters 5 & 6	Precipitation Chapter 7
Oct 26 & 28	Midterm Review	MIDTERM
Nov 2 & 4	Atmospheric Circulation Chapter 9 and Lab 6	Global Circulations Chapter 10 and Lab 6
Nov 9 & 11	Air Masses and Fronts Chapter 11 and Lab 6	Midlatitude Cyclones Chapter 12 and Lab 6
Nov 16 & 18	Thunderstorms and Tornadoes Chapter 14	Hurricanes Chapter 15
Nov 23 & 25	Hurricane Forecasts and Polar Lows Chapters 15 & 12	Climate Classification Chapter 17 and Lab 7
Nov 30 & Dec 2	Global Climatic Change Chapter 16	Characteristics of Global Warming Chapter 16