

EESB03 Principles of Climatology

Instructor Information

Instructor: Jerry Y. Jien

Email: tanzina.mohsin@utoronto.ca

Office: EV350

Office Hours: Wednesday 11am – 1 pm in EV350 or by appointment

I will answer emails related to course matters within 48 hours (excluding weekends), with “EESB03” provided in the subject.

Teaching Assistants:

Slawomir Kowal

Peter Ng

Daniel Lane-Coplen

Course Description:

This is an overview of the physical and dynamic nature of meteorology, climatology and related aspects of oceanography. Major topics include: atmospheric composition, nature of atmospheric radiation, atmospheric moisture and cloud development, atmospheric motion including air masses, front formation and upper air circulation, weather forecasting, ocean circulation, climate classification, climate change theory and global warming.

Prerequisite: [EESA06H3](#) or [EESA09H3](#)

Exclusion: GGR203H, GGR312H

Course Meeting Information

Lectures:

Wednesday 10-11 am, SW128

Wednesdays 1-3 pm, SW128

Special Topics (10-11am):

January 6	Introduction
January 13	(Regular lecture)
January 20	Frost quakes
January 27	Climate of Toronto I
February 3	Toronto's Developing Heat Island
February 10	
February 17	Reading Week
February 24	Midterm
March 2	Atlantic Hurricanes
March 9	Thunderstorms
March 16	Large-scale Natural Oscillation
March 23	
March 30	

Course Content (1-3pm):

Date	Topic	Readings
January 6	Introduction + Radiation I	Chapter 1, 2
January 13	Radiation II and III	Chapters 2, 5
January 20	Vertical Structure/Stability	Chapters 4, 5, 6
January 27	Atmospheric Dynamics	Chapters 8, 9
February 3	Global Circulation	Chapter 10
February 10	Meteorological Variables	Chapter 13
February 17	Reading Week	
February 24	MIDTERM	
March 2	Mid-latitude Cyclones	Chapter 11,12
March 9	Tropical Climatology (Hurricanes)	Chapter 15
March 16	Storms (Thunderstorms & Tornadoes)	Chapter 14
March 23	Global Warming	Chapter 16
March 30	Climate of the Arctic / Review	

Tutorials

Tutorials (1 hour):

Wednesday 9 am (2 sections)

Wednesday 11 am (1 section)

Wednesday 4 pm (2 sections)

Teaching Assistants:

Slawomir Kowal

Peter Ng
Daniel Lane-Coplen

Quizzes and assignments will be administered by your TA. You will complete the quizzes, at the beginning of your registered tutorial. An assignment on the topic of hurricane will be formally introduced and discussed in the tutorial. Please see below for the Tutorial Schedule on the dates for quizzes and the due date for Hurricane assignment.

Tutorial Schedule:

Jan 6	
Jan 13	T1 review of Radiation 1
Jan 20	T2 (Quiz 1 on Radiation I)
Jan 27	T3 (Quiz 2 on Radiation II)
Feb 3	T4 (Quiz 3 on Stability)
Feb 10	T5 (Quiz 4 on Dynamics)
Feb 17	Reading Week
Feb 24	Midterm
Mar 2	T6 Hurricane assignment
Mar 9	T7 Weather Maps & PRL
Mar 16	T8 (Quiz 5 on PRL)
Mar 23	T9 Review; Hurricane Assignment due (Hard Copy)
Mar 30	

Marking Scheme

Quizzes (5): 20%
Assignment: 10%
Midterm: 20%
Final Exam: 40%
Participation: 10%

Medical documentation is needed if you miss the quiz, midterm test or final exam. If you legitimately miss the midterm the final will be worth more correspondingly (no make up midterm).

Text Book

Meteorology Today: An Introduction to Weather, Climate and the Environment,
2nd Canadian Edition

A copy of the textbook is placed on course reserve at the UTSC library and is available to be borrowed on a short-term basis.

*You are welcome to use 1st Canadian Edition of Meteorology Today. Be mindful that the content and page numbers may have been shifted.

Caution

Be wary of the fine line between working together and plagiarizing

No electronic devices other than UTSC approved calculators

http://www.utsc.utoronto.ca/~vpdean/academic_integrity.html

Course communication

Blackboard

Other Academic Resources

Academic Advising & Career Centre

<http://www.utsc.utoronto.ca/aacc/>

AccessAbility

<http://www.utsc.utoronto.ca/~ability/>

UTSC Library

<https://utsc.library.utoronto.ca>

The Writing Centre

<http://www.utsc.utoronto.ca/twc/welcome>