

WEATHER, CLIMATE AND IMPACTS OF CLIMATE CHANGE

Below is a list of seminar/discussion topics along with approximate timeline. Interactive conversations and Q & A will be encouraged in this course.

| DATE | TOPIC |
|--------|---|
| Week 1 | Overview of Weather, Climate & Climate Change |
| Week 2 | Air Temperature (Extremes, Heat Transfer, Seasons, Greenhouse Effect, Climate Change) |
| Week 3 | Moisture, a key Atmospheric Component - Clouds and Precipitation |
| Week 4 | Large-Scale Circulation features including: El Nino/Southern Oscillation & Jet Stream/Extra-Tropical Cyclones |
| Week 5 | Weather/Climate Prediction and factors affecting Predictability |
| Week 6 | Thunderstorms: Lightning; Tornadoes |
| Week 7 | Hurricanes (Tropical Cyclones) & Impact of Global Warming |
| Week 8 | Atmospheric Optics |

Supplemental References (Not necessary for the course)

Some class topics excerpted from:

Essentials of Meteorology: An Invitation to the Atmosphere. 8th edition. C. Donald Ahrens and Robert Henson. Cengage Learning - Pub.

Earlier edition of reference available online at:

www.meteoclub.gr/proo1/Essentials.of.Meteorology.pdf

To explore more about the scientific basis of climate change:

<https://www.ipcc.ch/working-group/wg1>

Leader: Bill Stern has been involved with atmosphere and ocean research at the Geophysical Fluid Dynamics Laboratory since 1973 and has been fascinated with weather events since the age of 13. Bill has a BS in meteorology and oceanography from NYU, a MS in meteorology from MIT, and is an adjunct professor in the department of environmental science at Rutgers University.

Tuesdays: 10:00 a.m. to noon, 8 weeks: February 23 through April 13

Maximum: unlimited