ATM102/EST102 WEATHER AND CLIMATE

Spring 2014 (Jan 19, 2014)

Tuesday and Thursday:  5:30p - 6:50p
Room: JAVITS 102

ATM 102 / EST 102 - Weather and Climate
3 Credits

This course is approved as a core curriculum course and may be used to satisfy the Natural Sciences E requirement.

Teaching Staff:

- **Lecturer:**
  - Jeffrey Tongue, Lecturer, School of Marine and Atmospheric Sciences.
  - [jeffrey.tongue@stonybrook.edu](mailto:jeffrey.tongue@stonybrook.edu)
  - Office Hours: None

- **Teaching Assistants:**
  - Haiyang Yu, PhD student in Atmospheric Sciences,
    - [haiyang.yu@stonybrook.edu](mailto:haiyang.yu@stonybrook.edu)
    - Office Hours: Tuesday 3-5 PM
  - Wendy Kilthau, MS student in Marine Sciences
    - [wendy.kilthau@stonybrook.edu](mailto:wendy.kilthau@stonybrook.edu)
    - Office Hours: Thursday 3-5 PM

Please contact a TA by e-mail to make an appointment.

**TA office hours are held in ESS Rm. 104**

Course Description:

- Introduces the nature and causes of common meteorological phenomena, severe weather occurrences, and climatic patterns. Topics include formation and movement of air masses and large-scale storms; techniques for weather prediction; weather satellites; hurricanes, tornadoes, and thunderstorms; cloud and precipitation types; the climatic history of the earth; and actual and potential effect of human activities on weather and climate, and of weather and climate on humans.

- Course Pre/co-requisites: None
Course Objectives:

- Understand the basic structure of the atmosphere.
- Understand the importance of the Energy Balance between the Earth and Sun.
- Describe the daily and seasonal changes in temperature patterns.
- Describe the importance of moisture in the atmosphere including precipitation processes.
- Understand the causes of horizontal atmospheric motions that drive the Earth's weather.
- Explain various types of air masses and frontal theory.
- Appreciate the various forms of severe weather including Tornadoes and Hurricanes.
- Understand how to interpret and utilize basic weather forecasts based on current meteorological data sets available on the Internet.
- Understand the weather patterns and phenomena common to Long Island.
- Appreciation climate change and its implications.

Course Requirements:

- Attendance and Exam Make Up Policy:
  
  o Class attendance is required and described in the grading section. Echo recordings of lectures “should” be available on Blackboard.
  
  o Make up exams are only granted for exceptional reasons. Contact the instructor or one of the TAs within 3 days of the scheduled exam and brings documentary evidence for the emergency.
  
  o Quizzes cannot be made up. See fellow student for copies of any missed quiz.

  *Athletes need to supply the TA’s with documentation for missed classes.*

- Description and schedule of Required Readings and/or Assignments:

  Read Chapters in accordance with the course schedule.

This textbook is available with many different forms. There is a traditional hardcover text, a loose-leaf version and an electronic text from publisher. I have selected the loose-leaf version as the preferred version, but ANY form of the text is fine.

I have requested the Bookstore order the loose-leaf version. Cost is $100.60 verses $154.75 (these prices may have changed) for the traditional hardcover version.

Here are the details on the three versions:

- “Preferred” loose-leaf version - $100.60 (in bookstore)
- “alternative” Hardcover version - $154.75 (the bookstore is not stocking this version)
- “alternative” e-text version is available from the publisher - Cost is $66.00

Important – ensure the version you purchase has the code for MyMeteorologyLab access. If you rent or purchase a version that does not have an access code, if can be purchased for $37.50 from the publisher – without the e-text.
MyMeteorologyLab

1. Go to: https://registration.mypearson.com/
2. Enter the course ID: tongue16206
3. Create (or enter your) Pearson Account. Make sure you’re registering for ATM102 / EST102 !!

4. Enter or Purchase the Access code.

You must register for MyMeteorologyLab to complete the homework assignments.
Grading:

- **Quizzes (20%)**: A ten question quiz is given at the start of each new chapter (on the previous chapter’s material – see course schedule for dates).
  
  o The quiz focuses on the material highlighted in the “Concept Checks” provided in the textbook.
  
  o Lowest two (2) quiz grades are dropped of the 12 quizzes.
  
  o There is no quiz for the chapter preceding the Mid Term or Final Exam.
  
  o Quizzes are given at **5:30 PM** on the day stated.
  
  o There is no make up for missed quizzes **unless** you have written documentation. If you have a valid excuse; you’ll need to make up the quiz before the next one during the TA’s office hours.

- **Mid-Term (25%)**

- **Final (Comprehensive) (35%)**

- **Class Attendance (10%)** – Collected during each class via clicker questions during lecture. (There are 26 classes where attendance is collected)
  
  o 3 “Free passes” – 10 Points
  
  o 4 Absences: 9 pts
  
  o 5 Absences: 8 pts
  
  o 6 Absences: 7 pts
  
  ...So on and so forth...
  
  o 13 or more: 0 pts
  
  *Excused absences: Athletes (as required), others…probably not.*

  **Note**: We will take a photograph of the class during a clicker question. Clicking in with someone else’s clicker is cheating.

- **Homework (10%)** – Completed prior to Quiz or Mid Term via MyMeteorologyLab on-line for the appropriate chapter. *(there are 14 homeworks – lowest two grades are dropped)*

  *All Exams/Quizzes consist of short answer and/or multiple choice questions. Multiple versions are used.*

- **Extra Credit**: None

- All exams are held in the classroom
Grading:

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Class Protocol:

Expectation of Students:

- Attend Class !!!
- Be on time. 5:30 PM.
- Read textbook chapters as assigned.
- Complete assigned homework.
- Reach out to TA or Instructor as appropriate.
- Turn off cell phones during class - No Texting.
- Water only in the lecture hall – No Food!
- Disruptive behavior will result in you being asked to leave.

Class Resources:

- Blackboard and MyMeteorologyLab

Academic Integrity: Each student must pursue his or her academic goals honestly and be personally accountable for all submitted work. Representing another person's work as your own is always wrong. Any suspected instance of academic dishonesty will be reported to the Academic Judiciary. For more comprehensive information on academic integrity, including categories of academic dishonesty, please refer to the academic judiciary website at http://www.stonybrook.edu/uaa/academicjudiciary/

- Don’t risk your college career by cheating!
- In Spring 2013, there were 107 accusations of academic integrity violations – 11 were in this course.
- Using someone else’s clicker is cheating!
- Read this for details: http://www.stonybrook.edu/commcms/academic_integrity/policies.html
Critical Incident Management: Stony Brook University expects students to respect the rights, privileges, and property of other people. Faculty are required to report to the Office of Judicial Affairs any disruptive behavior that interrupts their ability to teach, compromises the safety of the learning environment, or inhibits students' ability to learn. Faculty in the HSC Schools and the School of Medicine are required to follow their school-specific procedures.

Information For Students With Disabilities: If you have a physical, psychological, medical, or learning disability that may impact your course work, please contact Disability Support Services at (631) 632-6748 or http://studentaffairs.stonybrook.edu/dss/. They will determine with you what accommodations are necessary and appropriate. All information and documentation is confidential.

Students who require assistance during emergency evacuation are encouraged to discuss their needs with teaching staff and Disability Support Services. For procedures and information go to the following website:
http://www.sunysb.edu/ehs/fire/disabilities.shtml