Syllabus – Summer 2017

Excluding materials for purchase, syllabus information may be subject to change. The most up-to-date syllabus is located within the course in HuskyCT.

Course and Instructor Information

Course Title:  NRE 3145 Meteorology  
Credits:  3  
Format:  Online  
Prerequisites:  None  
Professor:  Xiusheng (Harrison) Yang  
Email:  xiusheng.yang@uconn.edu  (preferred method of contact: HuskyCT messages and email)  
Telephone:  (860) 486-2840 (emergency use only)  
Office Hours/Availability:  By appointment only

Course Materials

Note: Required course materials should be obtained before the first day of class.

Required Textbook:


Texts are available through a local or online bookstore of your choice. The UConn Bookstore carries the required text(s), which can be shipped (fees apply).

Additional course readings and media are available within HuskyCT, through either an Internet link or Library Resources.
Course Description

3145. Meteorology
(Formerly offered as NRME 3145.) Three credits. Prerequisite: Open to juniors or higher. Yang

A survey course in meteorology at the introductory level covering weather and climate processes.

This course is designed to provide you with the basics that govern the meteorological processes. Therefore, the focus of the course is the physics that helps you to better understand weather and climate, rather than analysis skills.

Learning about Meteorology

The materials taught in this course explain the meteorological phenomena around us every day. Besides learning from the textbook and online resources, you are recommended to link what you learn to what you observe in your everyday life. Pay attention to what is happening in the real world, and then try to give it an explanation. Also, you are strongly encouraged to make a complete log on a large-scale event (such as mid-latitude cyclone or a hurricane), describe the life cycle of the system, and write an essay about it with your own discussion, interpretation, and conclusions. You may get up to 10% extra credit toward the final exam grade for doing an excellent project.

Course Objectives

This course was designed for College-level students to learn and understand the elements, processes, and mechanisms that govern or affect the weather and climate surrounding us every day. The teaching materials were organized and presented to convey meteorological concepts in a visual and easy-to-follow manner, while simultaneously providing students with a comprehensive background in basic meteorology. As an introductory course, NRE 241 emphasizes the understanding and applications of meteorological principles, rather than mathematical formulations or forecasting skills.

By the end of the semester, you should be able to:

1. Recognize the elements, processes, and mechanisms that govern or affect the weather and climate.
2. Describe basic meteorology concepts.
3. Apply basic meteorological principles.
Course Outline

Module 01: Weather, Climate, and the Atmosphere (Chapter 1)
Module 02: Solar Radiation and the Seasons (Chapter 2)
Module 03: Energy and Temperature (Chapter 3)
Module 04: Pressure and Winds (Chapter 4)
Module 05: Moisture and Humidity (Chapter 5)
Module 06: Clouds and Precipitation (Chapters 6 & 7)
Module 07: Atmospheric Circulation (Chapter 8)
Module 08: Air Masses, Fronts, and Cyclones (Chapters 9 & 10)
Module 09: Thunderstorms and Tornadoes (Chapter 11)
Module 10: Hurricanes (Chapter 12)
Module 11: Weather Forecasting and Analysis (Chapter 13)

Module 12: Introduction to Air Pollution Meteorology (Chapter 14, optional for summer)
Module 13: Climate and Climate Change (Chapters 15 & 16, optional for summer)
Module 14: Atmospheric Optics (Chapter 17, optional for summer)

*See the Course Schedule and the Calendar in HuskyCT for Modules dates.

Course Requirements and Grading

Summary of Course Grading:

<table>
<thead>
<tr>
<th>Course Components</th>
<th>Weight</th>
</tr>
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<tbody>
<tr>
<td>Online discussion</td>
<td>50%</td>
</tr>
<tr>
<td>Module quizzes</td>
<td>30%</td>
</tr>
<tr>
<td>Final exam</td>
<td>20%</td>
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</tbody>
</table>
Online discussion
Online discussion is a graded activity. The critical thinking questions for discussion are designed to comprehend the principles and concepts, and therefore have a different focus from that of the quizzes. You are required firstly to post your answers, understandings, or explanations on the provided questions for discussion, and then comment on four or more postings from your fellow students. Please follow the instructions regarding online discussion.

Each discussion session runs from 12:00 am on the beginning day of the module, to 11:59 pm on the ending day of the module. No posts can be added to the forum after the session is over.

Module quizzes
There will be an online quiz for each module except for the last one in the fall semester (Module 14), as shown in course calendar & course schedule. Each quiz will be given on the day after the module is completed. You may start a quiz any time between 12:00 am and 11:59 pm. You will be allowed 30 minutes to complete each quiz. No quiz will be allowed to be taken at a different time unless a catastrophic reason is presented.

Final exam
The final exam will be given according to the university schedule, with questions similar to those of the quizzes in format. You will need a permit from the VP for Students Affairs to reschedule the final exam.

Grading Scale:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Letter Grade</th>
<th>GPA</th>
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</thead>
<tbody>
<tr>
<td>93-100</td>
<td>A</td>
<td>4.0</td>
</tr>
<tr>
<td>90-92</td>
<td>A-</td>
<td>3.7</td>
</tr>
<tr>
<td>87-89</td>
<td>B+</td>
<td>3.3</td>
</tr>
<tr>
<td>83-86</td>
<td>B</td>
<td>3.0</td>
</tr>
<tr>
<td>80-82</td>
<td>B-</td>
<td>2.7</td>
</tr>
<tr>
<td>77-79</td>
<td>C+</td>
<td>2.3</td>
</tr>
<tr>
<td>73-76</td>
<td>C</td>
<td>2.0</td>
</tr>
<tr>
<td>70-72</td>
<td>C-</td>
<td>1.7</td>
</tr>
<tr>
<td>67-69</td>
<td>D+</td>
<td>1.3</td>
</tr>
<tr>
<td>63-66</td>
<td>D</td>
<td>1.0</td>
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<tr>
<td>60-62</td>
<td>D-</td>
<td>0.7</td>
</tr>
<tr>
<td>&lt;60</td>
<td>F</td>
<td>0.0</td>
</tr>
</tbody>
</table>
Due Dates and Late Policy
All course due dates are identified in the course calendar and in the course schedule in HuskyCT. Deadlines are based on Eastern Standard Time; if you are in a different time zone, please adjust your submittal times accordingly. The instructor reserves the right to change dates accordingly as the semester progresses. All changes will be communicated in an appropriate manner.

Late work will not be taken by the system, unless an approval from respective university administration is presented.

Feedback and Grades
I will make every effort to provide feedback and grades in less than 2 days. To keep track of your performance in the course, refer to My Grades in HuskyCT.

Student Responsibilities and Resources
As a member of the University of Connecticut student community, you are held to certain standards and academic policies. In addition, there are numerous resources available to help you succeed in your academic work. Review these important standards, policies and resources, which include:

- The Student Code
  - Academic Integrity
  - Resources on Avoiding Cheating and Plagiarism
- Copyrighted Materials
- Netiquette and Communication
- Adding or Dropping a Course
- Academic Calendar
- Policy Against Discrimination, Harassment and Inappropriate Romantic Relationships
- Sexual Assault Reporting Policy

Students with Disabilities
The University of Connecticut is committed to protecting the rights of individuals with disabilities and assuring that the learning environment is accessible. If you anticipate or experience physical or academic barriers based on disability or pregnancy, please let me know immediately so that we can discuss options. Students who require accommodations should contact the Center for Students with Disabilities, Wilbur Cross Building Room 204, (860) 486-2020 or http://csd.uconn.edu/.
Software Requirements and Technical Help

The software/technical requirements for this course include:

- HuskyCT/Blackboard ([HuskyCT/ Blackboard Accessibility Statement](https://example.com), [HuskyCT/ Blackboard Privacy Policy](https://example.com))

- Adobe Acrobat Reader ([Adobe Reader Accessibility Statement](https://example.com), [Adobe Reader Privacy Policy](https://example.com))

- Microsoft Office (free to UConn students through [uconn.onthehub.com](https://example.com) or UConn [Skybox](https://example.com)) ([Microsoft Accessibility Statement](https://example.com), [Microsoft Privacy Statement](https://example.com))

- Dedicated access to high-speed internet with a minimum speed of 1.5 Mbps (4 Mbps or higher is recommended).

**NOTE:** This course has NOT been designed for use with mobile devices.

Help

[Technical and Academic Help](https://example.com) provides a guide to technical and academic assistance.

This course is completely facilitated online using the learning management platform, [HuskyCT](https://example.com). If you have difficulty accessing HuskyCT, you have access to the in person/live person support options available during regular business hours through the [Help Center](https://example.com). You also have [24x7 Course Support](https://example.com) including access to live chat, phone, and support documents.

Minimum Technical Skills

To be successful in this course, you will need the following technical skills:

- Use electronic mail with attachments.
- Save files in commonly used word processing program formats.
- Copy and paste text, graphics or hyperlinks.
• Work within two or more browser windows simultaneously.
• Open and access PDF files.

University students are expected to demonstrate competency in Computer Technology. Explore the Computer Technology Competencies page for more information.

**Evaluation of the Course**

Students will be provided an opportunity to evaluate instruction in this course using the University's standard procedures, which are administered by the Office of Institutional Research and Effectiveness (OIRE).

Additional informal formative surveys may also be administered within the course as an optional evaluation tool.