

## COURSE SYLLABUS

COURSE TITLE: Weather and Climate

TERM &amp; YEAR: Fall 2019

COURSE &amp; SECTION NUMBER: EAS 253

TIME &amp; PLACE: Online, Trine Virtual Campus

NUMBER OF CREDIT HOURS: 3

**COURSE DESCRIPTION:** Elementary description of the atmosphere: its motion systems, thermal characteristics, clouds and precipitation, weather map interpretation and analysis; climates of the United States. The course conveys meteorological concepts in a visual, practical, and non-mathematical manner.

**PREREQUISITES:** None

**REQUIRED TEXTBOOKS:** *Meteorology Today, 12th<sup>th</sup> Ed.*, by C. Donald Ahrens and Robert Henson, Brooks/Cole, 2019.

All textbooks should be purchased through the Trine University Bookstore to ensure that you purchased the correct version/edition of the textbook your instructor requires. Textbooks may be purchased online at: <http://www.bkstr.com/CategoryDisplay/10001-9604-10249-1?demoKey=d>. Purchasing your textbook through the Trine University Bookstore will also ensure that you have the opportunity to utilize financial aid for the purchase of textbooks and supplies. The cover of the current textbook is shown at the top of the course in Moodle.

**REFERENCES**

- Stull, Roland B., *Meteorology Today for Scientists and Engineers: A Technical Companion Book* (1995) West Publishing [on reserve in the library]
- Moran, J. M., Morgan, M. D., and Pauley, P. M., *Meteorology: The Atmosphere and Science of Weather*.
- Aguado, E., and Burt, J. E., *Understanding Weather and Climate*, 5<sup>th</sup> Ed., 2010, Prentice Hall/Pearson
- Carbone, G., *Exercises for Weather and Climate*, 7<sup>th</sup> Ed., 2010, Prentice Hall/Pearson
- Barry, R., and Chorley, J., *Atmosphere, Weather and Climate*, 8<sup>th</sup> Ed., Routledge, UK

**OTHER MATERIALS**

- Google Earth lets you view satellite imagery, maps, terrain, 3D buildings, from galaxies in outer space to the canyons of the ocean. You can explore rich geographical content, study geological structures, and share with others. Google Earth Download for free: <http://earth.google.com/>
- United States Geological Society (USGS) Resources:
  - Earthquake Hazards Program: <http://earthquake.usgs.gov/eqcenter/recenteqsww/index.php>
  - Science Resources for Undergraduate Education: <http://education.usgs.gov/common/undergraduate.htm>
- San Diego State University, 2004. Pat Abbott's "Written in Stone" series developed by EdCenter Staff Scientist Jeff Sale for the educational video. These animations offer visual explanations for some of the more complex processes involved in earthquake dynamics. They also include some practical mitigation procedures for securing one's home for protection during an earthquake: <http://www.edcenter.sdsu.edu/ssc/3d/ssc3dproject.html>
- Scientific American Magazine: <http://www.scientificamerican.com/search/index.cfm>

**LEARNING OUTCOMES:** Upon completion of this course, the student should be able to:

1. Describe the origin, composition, and structure of the atmosphere.
2. Explain global weather concepts, such as solar energy, air temperature, humidity, clouds, precipitation, and winds.

3. Describe air masses, fronts, and middle-latitude storms.
4. Explain current weather prediction techniques, including those used to track severe storms.
5. Identify and describe various optical phenomena in the atmosphere
6. Explain global climate classification and the role(s) that air pollution may play in climate change.
7. Demonstrate communication skills.

## COURSE REQUIREMENTS

Students are expected to have basic computer skills and sufficient experience with computer applications to use the Moodle course management/learning system for accessing and submitting assignments.

### Additionally:

- Word processing skill with capability of using Microsoft Word.
- Ability to navigate and search the World Wide Web (www).
- Ability to send and receive e-mail, and to send files and/or images as attachments.
- Ability to upload/download PDF files. Students will need *Adobe Acrobat Reader* installed on their computer.
- Students are also expected to:
  - (a) Read all Learning Modules and Textbook assignments.
  - (b) Complete any/all Moodle Training Box Assignments.
  - (c) Complete all Online Chapter Quizzes.
  - (d) Participate in Discussion Board Forums (include references with Main Posts (due Tuesdays).
  - (e) Complete Unit Tests and Research and Submit Papers (use APA Style Format)
- **All assigned work should be completed in this course.** Assignments and due dates are listed on the **Course Assignment Schedule** which is located in Moodle under Course Information. **Students are required to complete and submit assignments by the due date as listed on the Course Assignment Schedule.** The written assignments are to be submitted through **Trine University Moodle** using the designated **link**.
- **Discussion Forum posts will not be accepted after the due date because the forum counts for your participation/attendance grade for the week. Please do not post early to the Discussion Forum, post the week it is due.**
- Acceptance of late assignments without penalty will only be considered for documented medical reasons and/or emergency circumstances. **Approval of the instructor is required (in advance) for any late assignments. No assignments (approved or otherwise) will be accepted after the last Sunday of the term.**

## ATTENDANCE/PARTICIPATION

Weekly class attendance is **required**. Students must **substantively participate** in the online classroom for at least **2 out of 7 days** each week. Attendance is recorded from the dates of assignment submission, substantive participation and interaction in discussion board forums, and the completion of quizzes/exams. **Please do not post early to the Discussion Forum prior to the week it is due as this is Participation/Attendance for the current week. I do encourage working ahead, but for the Discussion Forum, prepare and save the file, and then post the week it is due.**

To be successful in the course, plan to work approximately 8-10 hours per week in the course. For a student to be counted "Present" (P) in a given week, s/he needs to complete at least one of the following three activities **in the current week** of the course **BEFORE SATURDAY**, or let the instructor know the status of when you plan to participate:

1. Complete a quiz
2. Submit an assignment
3. Post at least once to the Discussion Forum

If a student fails to complete at least one of these activities, s/he will be marked "Absent" (A). **Trine drops students automatically after three absences. Instructor requests that you complete one of these before Friday to record attendance/participation.** Fall and Spring sessions are eight weeks in length, summer sessions are six weeks in length.

## GRADING/EVALUATION

**REMEMBER, the course ends on Saturday, not Sunday – don't forget to make a note of this in your calendar.**

**Substantive participation in the Discussion Forums, reading course material, and completing assignments on time is encouraged to receive maximum points for the course grade. If an assignment deadline cannot be met on time, let the instructor know BEFORE the assignment is due.** The evaluation process described below is subject to change at the discretion of the instructor. Students will be notified of any changes in the grading/evaluation process. Assessment will include: Training Box Quiz (total 20 points); (2) Completion and submission of weekly online quizzes (20 x 10 points each), (3) Weekly substantive participation in the Discussion Forums (8 x 15 points each week), (4) Completion and submission of two Unit Tests (2 x 100 points each), and (5) Submission of two papers (MLA Style Format and submitted through Turnitin required – 2 x 100 points each. There is a total of 740 total points. Letter grades will be based on the **percentage of total points** received:

A	Excellent	90-100
B+	Very Good	88-89
B	Good	80-87
C+	Above Average	78-79
C	Average	70-77
D+	Below Average	68-69
D	Poor (lowest passing grade)	60-67
F	Failure	below 60

#### **OTHER POLICIES:**

##### **ACADEMIC MISCONDUCT**

The University prohibits all forms of academic misconduct. Academic misconduct refers to dishonesty in examinations (cheating), presenting the ideas or the writing of someone else as one's own (plagiarism) or knowingly furnishing false information to the University by forgery, alteration, or misuse of University documents, records, or identification. Academic dishonesty includes, but is not limited to, the following examples: permitting another student to plagiarize or cheat from one's own work, submitting an academic exercise (written work, printing, design, computer program) that has been prepared totally or in part by another, acquiring improper knowledge of the contents of an exam, using unauthorized material during an exam, submitting the same paper in two different courses without knowledge and consent of professors, or submitting a forged grade change slip or computer tampering. The faculty member has the authority to grant a failing grade in cases of academic misconduct as well as referring the case to Student Life.

##### **PLAGIARISM**

You are expected to submit your own work and to identify any portion of work that has been borrowed from others in any form. An ignorant act of plagiarism on final versions and minor projects, such as attributing or citing inadequately, will be considered a failure to master an essential course skill and will result in an F for that assignment. A deliberate act of plagiarism, such as having someone else do your work, or submitting someone else's work as your own (e.g., from the Internet, fraternity file, etc., including homework and in-class exercises), will at least result in an F for that assignment and could result in an F for the course.

##### **ELECTRONIC DEVICES POLICY**

Use of electronic devices including smart watches and cell phones is prohibited during exams or quizzes unless directly allowed by the instructor.

##### **TURNITIN – Used for Course Papers**

Turnitin is used to review course papers and evaluate the similarity of resources used within the report. This assists the student in learning how to be an effective writer and can be used as a tool to detect plagiarism as well. Review how to interpret a Similarity Report within Turnitin. For more information, cut and paste the link below in your browser, and search for Similarity Report, or other topic you wish to learn about: <https://guides.turnitin.com/>. **Similarity Scores must be below 33% for course papers.**

**COURSE CALENDAR/SCHEDULE: Please always keep a copy of the course Schedule with you.** The course Schedule (including any/all assignments) is subject to change by, and at the discretion of, the instructor. Please refer to the course Schedule document under the Course Information tab for further information. Please also refer daily to the "Announcements" section of Moodle for any/all updates, amendments, and/or changes.

#### **ADDITIONAL INFORMATION (for online courses):**

##### **A. Technology Tools:**

1. **Web Access:** this course is taught in asynchronous mode, using Moodle. Students will need daily access to a web-accessible computer with a minimum of 56.6k modem speed. Weekly participation, via Discussion Board

- postings, is required.
2. **Software:** Microsoft Word, PowerPoint and Adobe Reader.

#### **B. Instructor Expectations:**

1. The instructor reserves the right to require proctoring or validation of student's academic work at the instructor's discretion.
2. The instructor reserves the right to change or modify course materials or deadline in response to student feedback or unforeseen circumstances.
3. The instructor requests that students allow **24 hours** to respond to student emails or other forms of contact. **Note:** Instructor is in the **Central Standard/Daylight Time Zone**.
4. The instructor will attempt to be available during weekdays; however, as balance between family and work is important in everyone's lives, the instructor reserves the right to be unavailable on weekends.
5. The instructor requests that the students allow **48 hours** from the date the assignments are due, or if late, from the date of submission, to post a grade, or provide feedback. (**Note:** the instructor will make **every effort** to provide faster turnaround time; however, sometimes this is not possible.)
6. The instructor may sometimes be unavailable. The instructor will always attempt to email and/or post an announcement to the class about any such inconveniences.

#### **C. Student Guidelines (Expectations):**

1. Refer to the assignment **Schedule**, under course information, in Moodle for all due dates.
2. Late assignments will lose points per the assignment schedule.
3. Must know how to access their Trine University email account and will use this account for this course unless other arrangements have been made. Check your Trine University email periodically.

**Note:** If you need assistance with your Trine University email account or with Moodle please call the **Trine University Help Desk** at 260-665-4275.

4. Keep a copy of all assignments until the end of the course. Check your gradebook regularly for grades on assignments.
5. Review and refer to the Syllabus, assignment Schedule, and the course Announcements for all pertinent information.
6. Participate on a weekly basis in this course via discussion board (threaded discussion area) postings.
7. Log in on a regular access via Internet accessible capabilities for this course.
8. Assume more responsibility (than in a regular face-to-face course) for your learning.
9. Understand that there are not any "lectures" in this course and students are responsible to read ALL course materials, including emails and announcements from the instructor.

#### **D. Participation Policy (also see Other Information on page 2):**

1. Students are rewarded with substantive discussion participation with **15 points** each week.
2. The threaded discussion group activities are seen as an appropriate means to gather formal and informal feedback on class activities, assignments, grading issues, etc.
3. Option: "The Student Introduction/News Forum" threaded discussion group is provided for student issues or concerns. Please provide your comments! Comments can also be made via email.

#### **E. Discussion Board Guidelines and Tips:**

1. Participation in the discussion board is expected. Post a substantive – meaning an informed response that shows evidence of having read and drawn on course materials or other accepted resources and include all resources. When/if possible, contributing examples from your personal experiences are encouraged. This is the Main Post (due on Tuesdays). At least two, additional Response Posts are required, responding to other posts and providing value to the discussion (due by Friday).
2. A helpful **Student Guide to using the My Trine Course Discussion Board** (*this resource requires that you have Adobe Reader installed on your computer*), can be found at (cut and paste into browser): [http://www.kaltura.com/index.php/extwidget/preview/partner\\_id/1701591/uiconf\\_id/31373081/entry\\_id/1\\_ocw71x5w/embed/auto?&flashvars\[streamerType\]=auto](http://www.kaltura.com/index.php/extwidget/preview/partner_id/1701591/uiconf_id/31373081/entry_id/1_ocw71x5w/embed/auto?&flashvars[streamerType]=auto)
3. Create your discussion postings off-line in a simple text editor such as WordPad and paste your post into the Discussion Board. You can save a copy of your posting and if you lose your connection to Moodle you will not have to start over.
4. **Spell check** all postings and written assignments.