

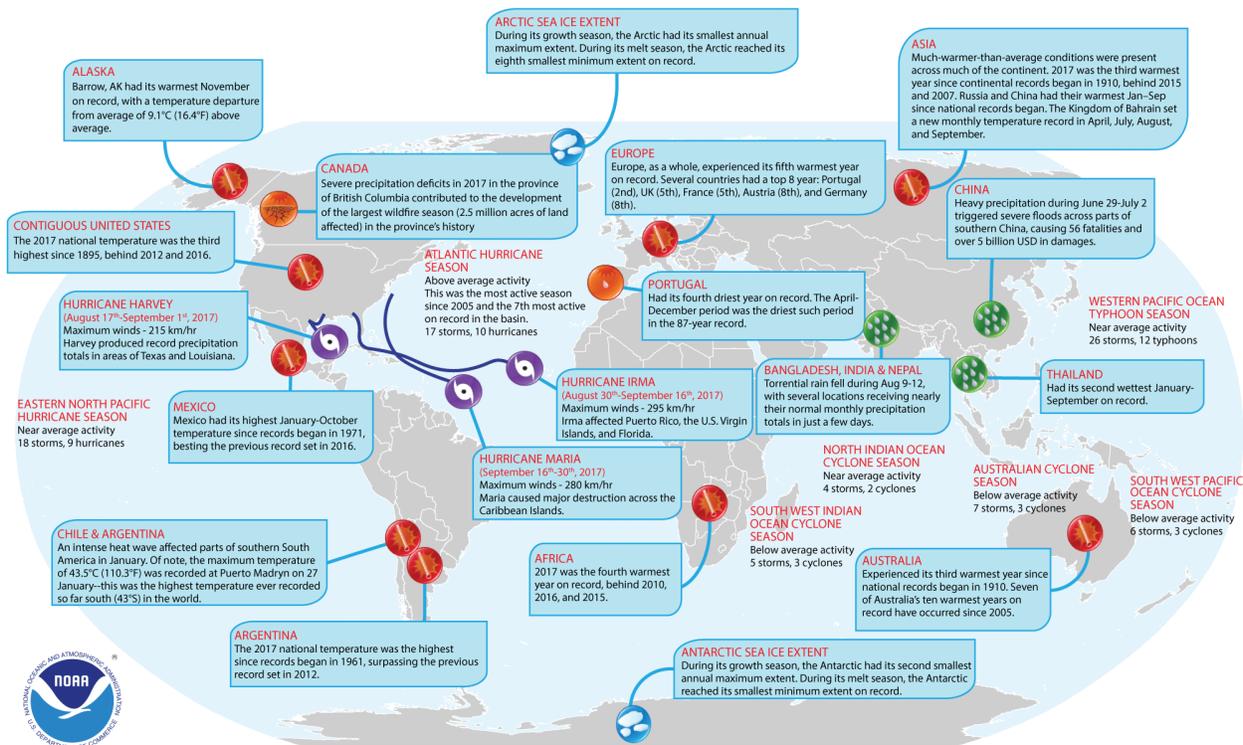
# GEOG 670: Climate & Society

Tuesday & Thursday 11:10AM - 12:30PM, N134 Kingsbury

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Office Hours: Monday 1:30-2:30PM, Tuesday & Thursday 9:00-10:30AM

## Selected Significant Climate Anomalies & Events in 2017



Please Note: Material provided in this map was compiled from NOAA's NCEI State of the Climate Reports and the WMO Provisional Status of the Climate in 2017. For more information please visit: <http://www.ncdc.noaa.gov/sotc>

NOAA National Centers for Environmental Information, State of the Climate: Global Climate Report for Annual 2017, published online January 2018, retrieved from <https://www.ncdc.noaa.gov/sotc/global/201713>.

## COURSE DESCRIPTION

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Welcome to Climate & Society!

*Climate and Society* is a 4-credit course that fulfills the University Writing requirement. Final grades are based on the weighted total of points earned on **3 exams** (50%), **9 assignments** (20%), a semester **research paper** (20%), and **class participation** (10%).

**Description:** There are few topics today that evoke as much passion and controversy as the state of earth's climate, how and why it is changing, and the impacts these changes will have on human society. This course introduces the study of earth's climate as a physical system that influences, and is influenced by, human activity. This serves as the scientific basis to evaluate and discuss:

- changes in the climate systems at a variety of scales;
- the influence of human activities on climate system processes;
- the impacts of climate variability and change on society.

The course begins with an introduction to climate science and the natural and anthropogenic drivers that cause the climate system to change over time. The scientific background on climate system processes is the used to explore the ways in which humans are especially vulnerable to variations in earth's climate.

**Objectives:** Lecture concepts are reinforced quantitatively and qualitatively through assigned readings, class discussions, take-home and in-class assignments. Homework exercises require an understanding of basic mathematical (+, -, ×, ÷), trigonometric (sine, cosine etc...), and algebraic operations including fractions and exponents. Data are analyzed graphically using graphs, tables, and maps. Upon completion of this course students should:

- Know the how the climate system is observed and quantified;
- Understand the physical mechanisms that drive system change;
- Be able to evaluate both the biophysical and socioeconomic influences of a changing climate on individuals and communities.

This is a **writing-intensive** course, which partially fulfills the university writing requirement (see <http://www.unh.edu/writing/uwr/>). The goal of writing-intensive courses is for students: 1) to use writing as a means for learning course material; 2) to learn various academic and disciplinary genres, and; 3) to gain competence with writing by focusing on the process of writing. As such, the writing assigned in this course is intended to:

- enhance understanding of quantitative work;
- cultivate comprehension and synthesis of technical and scientific literature;
- introduce technical and professional writing in the natural sciences;
- learn how to communicate technical information to a variety of audiences.

## COURSE RESOURCES

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Studies show that students who attend class regularly, avoid personal use of laptops and hand-held digital devices during lecture, and take hand-written notes perform better in class and on exams than those who do not. Students are responsible for obtaining any missed material and announcements due to an absence, tardiness, or other distractions. Participation in class activities goes hand in hand with regular class attendance.

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**Materials:** There is **no required textbook** for this course. Required background readings are assigned from the following digital reports:

- IPCC (2014) Climate Change 2014 *Synthesis Report* 5<sup>th</sup> Assessment Report. [<http://ar5-syr.ipcc.ch>]
- USGCRP (2017) *Climate Science Special Report* 4<sup>th</sup> National Climate Assessment (NCA4) Volume I. [<https://science2017.globalchange.gov>]

Supplemental readings are assigned from the following digital reports:

- U.S. EPA (2016) Climate Change Indicators in the United States [<https://www.epa.gov/climate-indicators>]
- USGCP (2016) Climate & Health Assessment [<https://health2016.globalchange.gov>]

This classroom is equipped with desktop computers to be used for course related activities only. Additionally, assignments will be hands on requiring the following:

- Battery-operated calculator with trigonometric functions (sin, cos, tan etc...)
- PDF viewing (Adobe), word & data processing (Microsoft Office) software

**Resources:** Supporting course material is distributed through the myCourses learning management system (<https://mycourses.unh.edu/>). Course content is organized by lesson (1 – 9) as follows:

- Lesson pages contain (1) a topic outline with assigned readings, (2) links to supplemental resources (vides & imagery etc...), and (3) in-class activities.
- “Assignment” pages contain lesson assignment (1) instructions, (2) required data, and (3) submission template & upload link.
- Exam pages provide details on exam requirements, review materials, and exam submission links.
- Research paper page contains guidelines, resources, and submission link.

**Comments:** The following procedures, policies, and schedules may change during the semester. Any changes will be announced in class and posted on myCourses. Announcements may also be distributed via email. It is your responsibility to check your university email account and myCourses regularly.

## GRADING PROCEDURES

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*'I do not "take off" points. You earn them ... In other words, you start with zero points and earn your way to a grade.'* - Art Carden, Contributor, Forbes

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The University of New Hampshire expects all students to adhere to its Academic Honesty Policy. The penalties for plagiarism can be stiff: from an "F" for an assignment to an "F" for a course, or, in some cases, expulsion from the University. All coursework submitted for evaluation in this class must represent each student's own, original work and must be completed individually, without collaboration, in accordance with the standards of conduct outlined in *Section 09: Academic Honesty* of the UNH Students Rights, Rules and Responsibility (<http://www.unh.edu/student-life/handbook/academic-honesty>). The UNH plagiarism tutorial provides helpful examples: <http://cola.unh.edu/plagiarism-tutorial-0>

**Exams:** There are **three take-home exams**, the first two worth 20 % of the final grade and the last 10 %. Given the comprehensive nature of the material covered in this course, exams will be comprehensive; however, they focus on the section of the course most recently presented. The exam format includes short-answer, problem solving, and essay questions.

**Assignments:** There are **nine homework assignments** together worth 20 % of the final grade. Assignments are designed to reinforce understanding of the physical basis for the assigned topic through a combination of quantitative and qualitative assessment of climate science information. Assignments are due by the beginning of class on the given due date but are accepted for half credit up to one week after the due date, after which a **grade of "0"** will be assigned.

**Participation:** Participation is evaluated based on contributions to in-class discussions as well as following along with lecture demonstrations and example problems. **Class attendance and participation** go hand in hand and are **together worth 10 %** of the final grade.

**Research Paper:** An **independent research paper** on one aspect of state/regional climate change is **worth 20 %** of the final grade. See *Research Paper Guidelines* for more details.

**Final Grade:** Final letter grades, as defined in *Section 07.1: Grades* of the UNH Students Rights, Rules and Responsibility (<https://www.unh.edu/student-life/07-grades-and-honors-2017>), are assigned based on the cumulative weighted scores from all coursework as follows:

A-	90 %	B	83 %	C+	77 %	C-	70 %	D	63 %		
A	>93%	B+	87 %	B-	80 %	C	73 %	D+	67 %	D-	60 %

Grades may be curved depending upon class performance. Objective evaluation of effort, improvement, and attendance may also be considered when determining individual final grades, however, **no individual extra credit** will be offered ... so don't ask.

## UNIVERSITY POLICIES & STUDENT RESPONSIBILITIES

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All students must understand university policies and procedures regarding academic performance outlined in the UNH Student Rights, Rules, and Responsibilities (<http://www.unh.edu/student/rights/>). Refer to *Section 04: Attendance and Class Requirements* (<https://www.unh.edu/student-life/04-attendance-and-class-requirements-2017>) for University policies on absences and classroom requirements. Links to additional resources and services are provided under “Policies” in myCourses.

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The University of New Hampshire is a public institution with a long-standing commitment to equal opportunity for all. The University does not discriminate on the basis of race, color, religion, sex, age, national origin, sexual orientation, gender identity and expression, disability, veterans’ status, or marital status, in access to, or treatment in, its programs, activities or services.

**Communication:** All forms of communication directed toward instructors and classmates must be conducted in a professional manner. Address emails appropriately, include your name, and use proper English.

**Behavior:** To ensure a climate of learning for all, disruptive or inappropriate behavior may result in exclusion (removal) from this class. Use of hand-held digital devices, including text messaging, videotaping and recording, is not permitted in class by Faculty Senate rule unless by instructor permission. The personal use of hand-held digital devices is distracting not only to the user, but those near the user and is **not permitted** in this class.

**Attendance:** Each student must receive equal opportunity to demonstrate his/her/their understanding of course material. Therefore, all students must be present for exams, quizzes, and to receive participation credit (i>clicker) for the class period. An exception may be granted for documented, **unavoidable absences** due to (1) participation in University sponsored events, (2) scheduling conflicts in which prior arrangements are made, (3) serious illness, medical emergency, or ongoing non-academic hardship verified by a letter from your College Dean’s Office.

Tardiness, leaving the classroom during lecture, and early departure is disruptive and may cause other students to miss important material. Always be aware and respectful of those around you. Do not expect, nor prepare, to leave before class is dismissed and refrain from engaging in behaviors that may distract or otherwise negatively impact other students.

**Accessibility:** According to the Americans with Disabilities Act (as amended, 2008), each student with a disability has the right to request services from UNH to accommodate his/her/their disability. If you are a student with a documented disability or believe you may have a disability requiring accommodations, contact Student Accessibility Services (SAS) at **201 Smith Hall**. Accommodation letters are created by SAS with the student but follow-up with the instructor to ensure timely implementation of the identified accommodations. Faculty are obligated to respond to an official SAS notice of a disability but are under no obligation to provide retroactive accommodations. Refer to [www.unh.edu/studentaccessibility](http://www.unh.edu/studentaccessibility) or contact Student Accessibility Services at 603-862-2607 or [sas.office@unh.edu](mailto:sas.office@unh.edu) for more information.

If emotional or mental health issues are affecting your success in this course, contact the University’s Counseling Center (<http://www.unhcc.unh.edu>; **3<sup>rd</sup> floor, Smith Hall; 603 862-2090/TTY: 7-1-1**), for counseling appointments and other mental health services.