

Syllabus for FYS 178.014 – Society, Technology, and Weather – Fall 2020

Date	Topic	Reading/Homework*
1] T 11 Aug 2020	Introduction	
R 13 Aug	Opportunities and →	Campus walk-about
2] T 18 Aug	Vilhelm's early career	Introduction & Chapter 1
R 20 Aug		J. Check
3] T 25 Aug	Why atmospheric sciences?	Chapter 2
R 27 Aug		
4] T 1 Sep	Technology of the day	Chapter 3, Paper#1
R 3 Sep		J. Check
5] T 8 Sep		
R 10 Sep	Leaving the backwaters	Chapter 4, final draft Paper#1
6] T 15 Sep		
R 17 Sep	Exam I	Chapters 1-4
7] T 22 Sep	The First Great War	Chapter 5
R 24 Sep		J. Check
8] T 29 Sep	Innovative theories	Chapter 6
R 1 Oct		
9] T 6 Oct	Post-war advancements	Chapter 7, Paper#2
R 8 Oct		J. Check
10] T 13 Oct		final draft Paper#2
R 15 Oct	Looking for immortality	Chapter 8
11] T 20 Oct		J. Check
R 22 Oct	Exam II	Chapters 5-8
12] T 27 Oct	Spreading ideas	Chapter 9
R 29 Oct		
13] T 3 Nov	Influence of industry	Chapter 10
R 5 Nov	{make-up exam}	Paper#3, J. Check
14] T 10 Nov	Further advancements	Chapter 11, Conclusion
R 12 Nov		final draft Paper#3
15] Final Exam Period	Final Project Presentations	J. Check, Final Project & final exam

*assignment shall be completed before class meets on this date

Description

This course will focus on Vilhelm Bjerknes, the so-called “Father of Modern Meteorology”, and how political conditions forced him to seek a career outside of theoretical physics and into the new applied physics field of meteorology. We will follow his career as an atmospheric scientist and focus on how the contributions of Vilhelm and those of his students to the field of meteorology were shaped by economic and political events within Norway, Europe, and the world. The “backbone” of the course will be the book, “Appropriating the Weather: Vilhelm Bjerknes and the Construction of a Modern Meteorology” written by Robert Marc Friedman. Students will be responsible for reading this book and for researching the economic conditions arising from the agricultural, industrial, and technological capabilities of the early 1900s as well as the political conditions in place that were laying the foundation for the onset of

World War I. It is hoped that the students will gain a new appreciation for the link between the conditions of a society and how society utilizes the sciences to meet its needs arising out of these conditions. From a personal standpoint, you will learn skills and develop insights that will prove useful as you embark on your career journey.

Outline

- Introduction
 - basic skill development and your career
- Appropriating the weather for Physics: A professional strategy (1892-1906)
 - text Chapters 1 & 2
- Toward realizing an atmospheric physics: The quest for authority and resources (1906-1917)
 - text Chapters 3 & 4
- Wartime exigencies: Practical forecasting in Bergen and the origins of a new cyclone model (1917-1918)
 - text Chapters 5 & 6
- Appropriating the weather for commerce: A meteorology for the postwar era (1919)
 - text Chapters 7-9
- Rationalizing the weather (1920-1925)
 - text Chapters 10 & 11

Grading

Course Notebook	5%
Quizzes	5%
Class Participation	5%
Papers [3]	20%
Exam I	15%
Exam II	15%
Final Project	15%
Final Exam	20%
Total	100%

92% < total score ≤ 100%	A
90% < total score ≤ 92%	A-
88% < total score ≤ 90%	B+
82% < total score ≤ 88%	B
80% < total score ≤ 82%	B-
78% < total score ≤ 80%	C+
72% < total score ≤ 78%	C
70% < total score ≤ 72%	C-
68% < total score ≤ 70%	D+
60% < total score ≤ 68%	D
total score ≤ 60%	F

Student Learning Outcomes

- improve basic skills such as critical analysis, writing, and library research
- gain an awareness of the various factors impacting one's career path
- learn how society utilizes the sciences to meet its basic needs
- appreciate how improved scientific understanding drives technical innovation
- recognize the unique historical events of the late 1800s and early 1900s

Course Notebook

The course journal, consisting of your answers to the weekly journal questions, and the course notes, consisting of your classroom and book notes, comprise the FYS 178 Course Notebook. I will check the notebooks on occasion (highlighted in red on the syllabus schedule above). Answers to the weekly journal questions are due *before class* on the Thursday of each week (except during exam weeks). It is ***strongly encouraged*** that your journal be in electronic form (e.g., a shared Google Doc) so I can check it whether we are in or outside of the classroom.

Class Participation

Show involvement in isolated partner (virtual) discussions in preparation for our class discussions each week as we discuss some of the challenges faced by Vilhelm in his career journey. It is important to be prepared in class by participating in the “History Bits and Weather Briefings” on the assigned day and in small group discussions of the chapter questions. On occasion, each student will be expected to report the findings of the small group to the entire group of students. You can also earn participation points by showing proof-of-attendance at one or more “Wander to Ponder” session.

Quizzes

Quizzes will be given once per chapter (except during exam weeks) throughout the semester to encourage course participation and attendance. The quizzes will be defined either as individual or group quizzes. When a quiz is designated for a *group*, each individual within the group will receive an identical grade.

Papers [3]

Three writing projects (due dates highlighted in blue font on the syllabus schedule above) will be assigned during the semester each having the following emphasis...

- (1) how society influenced inventions at the turn of the nineteenth century (1899 to 1900)
- (2) a comparison of the conditions in Norway in 1910 to another (non-U.S.) country
- (3) a report on the state of the arts, sciences, and politics around the globe in 1910

Exam I and II

The mid-term exams (I and II) will be primarily testing new material introduced since the previous exam or since the start of the semester.

Final Exam

The final exam is a *comprehensive* exam in which all the material contained in the entire course is testable.

Make-up Exam

The only time allotted for a make-up exam will be on Thursday, November 5, 2020 at a time to be determined. The make-up exam will cover all course material from August 11 – October 29, 2020.

Final Project

Final project groups will research how society today is utilizing the sciences (& engineering) to meet its basic needs in one particular field (e.g. human health & safety, transportation, preservation of ecosystems, agriculture, communications, leisure) and will also research and predict how society might steer the sciences within that field 50 years from today. Each group will be responsible for putting together a report and for making an eight minute presentation during the final exam period on November 17, 2020. Details of the project will be given during the lecture period on October 27, 2020.

Assignment/Quiz/Exam Policy

Assignments are to be handed in *before the start of lecture* on the date they are due. Assignments handed in after the start of lecture are considered late until 4:30 pm on the date they are due and will have an automatic 10% deduction from their final score. Assignments handed in after 4:30 pm on the date they are due will receive no credit.

Quizzes and Exams are written tests and will be taken on the date they are scheduled, unless circumstances (e.g. medical or loss in the family) warrant. Make-up quizzes for special circumstances will need to be completed within *one week* of the original quiz date.

The *lowest quiz score* for each individual will be dropped from the total quiz score tabulation.

Instructor

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Textbook

“Appropriating the Weather: Vilhelm Bjerknes and the Construction of a Modern Meteorology” written by Robert Marc Friedman

(continued)

Office of Academic Accessibility

UNC-Asheville values the diversity of our student body as a strength and a critical component of our dynamic community. Students with disabilities or temporary injuries/conditions may require accommodations due to barriers in the structure of facilities, course design, technology used for curricular purposes, or other campus resources.

Students who experience a barrier to full access to this class should let the professor know, and/or make an appointment to meet with the Office of Academic Accessibility as soon as possible. To make an appointment, call 828.232.5050; email academicaccess@unca.edu; use this link <https://uncaoaaintake.youcanbook.me/>; or drop by the Academic Accessibility Office, room 005 in the One Stop suite (lower level of Ramsey Library). Learn more about the process of registering, and the services available through the Office of Academic Accessibility here: <https://oaa.unca.edu/>

While students may disclose disability at any point in the semester, students who receive Letters of Accommodation are strongly encouraged to request, obtain and present these to their professors as early in the semester as possible so that accommodations can be made in a timely manner. It is the student's responsibility to follow this process each semester.

Sexual Harassment and Misconduct

All members of the University community are expected to engage in conduct that contributes to the culture of integrity and honor upon which the University of North Carolina at Asheville is grounded. Acts of sexual misconduct, sexual harassment, dating violence, domestic violence and stalking jeopardize the health and welfare of our campus community and the larger community as a whole and will not be tolerated. The University has established procedures for preventing and investigating allegations of sexual misconduct, sexual harassment, dating violence, domestic violence and stalking that are compliant with Title IX federal regulations. To learn more about these procedures or to report an incident of sexual misconduct, go to titleix.unca.edu. Students may also report incidents to an instructor, faculty or staff member, who are required by law to notify the Title IX Office.

Academic Alerts

Faculty at UNCA are encouraged to use the university's Academic Alert system to communicate with students about their progress in courses. Academic Alerts can reflect that a student's performance is satisfactory at the time the alert is submitted, or they can indicate concerns (e.g., academic difficulty, attendance problems, or other concerns). Professors use the alert system because they are invested in student success and want to encourage open conversations about how students can improve their learning, and students who respond to alerts quickly are consistently more likely to earn credit for the course. Please note, professors of 100-level courses are required to submit at least one alert about each student on or before the seventh week of classes.

When a faculty member submits an alert that expresses a concern, the student receives an email from Academic Advising notifying them of the alert and subsequent registration hold on their account. To clear the hold, the student must complete a short Google Response Form included in the alert e-mail; the results will be shared with their instructor and advising staff. Instructors may also request to meet with the student to discuss the alert.

Questions about the Academic Alert system can be directed to Anne Marie Roberts, Associate Director of Advising, (amrober1@unca.edu) whose office is found in the Academic Success Center.

University Writing Center

The University Writing Center (UWC) supports writers in one-on-one sessions lasting 10 to 45 minutes. Consultants can help writers organize ideas, document sources, and revise prose. If you visit the UWC, bring a copy of your assignment, any writing or notes you may have, and the sources you are working with. Make an appointment by visiting writingcenter.unca.edu and clicking on "Schedule an Appointment," or drop in during open hours Monday-Friday.

Academic Integrity

As a community of scholars dedicated to learning and the pursuit of knowledge, UNC Asheville relies on the honesty and academic integrity of all the members of its community. Any act of plagiarism, cheating, or use of unauthorized materials or assistance is academic dishonesty. A person who knowingly assists another in academic dishonesty is likewise guilty of dishonesty. A student committing a first offense of dishonesty will receive a failing grade or a grade of zero for the assignment or test. A student committing a second offense of dishonesty will receive a failing grade in the course and be reported to the Senior Director of Student Success.

In all situations where a student has been disciplined for academic dishonesty, the instructor must submit a brief statement of the case to the Senior Director of Student Success with a copy to the student. The Senior Director maintains records of academic dishonesty incidents and notifies the instructor when a student is found to have multiple offenses. Depending upon the severity and/or repetition of the offense, the Senior Director and/or instructor may recommend that the Provost impose an additional penalty, such as cancellation of graduation with honors, cancellation of scholarships, or dismissal from the university. If the Provost decides that additional penalties are warranted, the student will be notified in writing.

If a student feels that he or she has been unjustly accused of academic dishonesty, the student has ten (10) class days from the date of the instructor's written notification to the student to respond in writing. This response is to be sent to both the instructor and the Senior Director of Student Success. The instructor should then meet with the student to discuss the charges within five (5) class days. If needed, the student may then contact the Senior Director for assistance in identifying options for possible resolution. If needed, the Faculty Conciliator will be contacted to mediate and/or convene the Academic Appeals Board.