

## Syllabus for ATMS 178 – Society, Technology, and Weather – Fall 2017

Date	Topic	Reading/Homework*
1] T 22 Aug 2017	Introduction	
R 24 Aug	Opportunities and →	Campus walk-about
2] T 29 Aug	Vilhelm's early career	Introduction & Chapter 1
R 31 Aug		<b>J. Check</b>
3] T 5 Sep	Why atmospheric sciences?	Chapter 2
R 7 Sep		
4] T 12 Sep	Technology of the day	Chapter 3, <a href="#">Paper#1</a>
R 14 Sep		
5] T 19 Sep		<b>J. Check</b>
R 21 Sep	Leaving the backwaters	Chapter 4, <a href="#">final draft Paper#1</a>
6] T 26 Sep		
R 28 Sep	<b>Exam I</b>	<b>Chapters 1-4</b>
7] T 3 Oct	The First Great War	Chapter 5
R 5 Oct		<b>J. Check</b>
8] R 12 Oct	Innovative theories	Chapter 6
9] T 17 Oct		
R 19 Oct	Post-war advancements	Chapter 7, <a href="#">Paper#2</a>
10] T 24 Oct		<b>J. Check</b>
R 26 Oct		<a href="#">final draft Paper#2</a>
11] T 31 Oct	Looking for immortality	Chapter 8
R 2 Nov		<b>J. Check</b>
12] T 7 Nov	<b>Exam II</b>	<b>Chapters 5-8</b>
R 9 Nov	Spreading ideas	Chapter 9
13] T 14 Nov		
R 16 Nov	Influence of industry	Chapter 10
14] T 21 Nov	<b>Make-up Exam</b>	<a href="#">Paper#3</a> , <b>J. Check</b>
15] T 28 Nov	Further advancements	Chapter 11, Conclusion
R 30 Nov		<a href="#">final draft Paper#3</a>
Final Exam Period	Final Project Presentations	<b>J. Check</b> , 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.

### 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%
<b>Total</b>	<b>100%</b>

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 ATMS 178 Course Notebook. Notebooks will be checked by your course partner on occasion. I will check the notebooks at the end of each month (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).

### **Quizzes**

Quizzes will be given unannounced, one per week (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 European 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 Tuesday, November 21, 2017 at a time to be determined. The make-up exam will cover all course material from August 22 – November 16, 2017.

### **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 December 7, 2017. Details of the project will be given during the lecture period on November 9, 2017.

### **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.

### **Class Participation**

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.

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### **Instructor**

Doug Miller  
232-5158

<http://www.atms.unca.edu/dmiller/courses/index.htm>  
[dmiller@unca.edu](mailto:dmiller@unca.edu)

### **Textbook**

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

### **Accommodating Students with Disabilities**

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 make an appointment to meet with the Office of Academic Accessibility as soon as possible. You can make an appointment by calling [828.232.5050](tel:828.232.5050); by emailing [academicaccess@unca.edu](mailto:academicaccess@unca.edu); by clicking on <https://uncaoaa intake.youcanbook.me/>; or by dropping by the Academic Accessibility Office, room 005 in the One Stop suite (lower level of Ramsey Library). You can access further information here: <https://oaa.unca.edu/>

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.

### **Preventing Sexual Harassment**

Title IX of the Education Amendments of 1972 prohibits sex discrimination against any participant in an educational program or activity that receives federal funds. The act is intended to eliminate sex discrimination in education. Title IX covers discrimination in programs, admissions, activities, and student-to-student sexual harassment. UNC Asheville’s policy against sexual harassment extends not only to employees of the University but to students as well. If you encounter unlawful sexual harassment or gender based discrimination, please talk to any University Responsible Employee – which includes most faculty and staff -- who will report the incident; contact Dr. Jill Moffitt, UNC Asheville’s Title IX Administrator, at (828) 232-5658; or report anonymously at <https://police.unca.edu/anonymous-report>. For more information regarding Title IX and resources concerning sexual harassment and its prevention please visit <https://police.unca.edu/title-ix>

### **Understanding 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 fifth 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 ([amrober1@unca.edu](mailto:amrober1@unca.edu)) in OneStop Advising and Learning Support.

### **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.