



ATM OCN 100 / 101: Weather and Climate, Fall 2022

University of Wisconsin – Madison

Credits: 3 (100 – Lecture only) or 4 (101 – 3 credits Lecture plus 1 credit Discussion)

Course designations and attributes:

Physical Sci. Counts toward the Natural Sci req
Counts as Liberal Arts and Science credit in L&S
Elementary

Course Description:

(100 and 101 Lecture): Nature and variability of wind, temperature, clouds and precipitation, storm systems, fronts, thunderstorms, tornadoes and their prediction, air composition and pollution, global winds, seasonal changes, climate and climatic change.

(101 Only): Discussion session will include map analyses and basic quantitative lab exercises.

Requisites:

Open to Freshmen
Students may not receive credit for both ATM OCN 100 & 101

Meeting Time and Location:

Lecture: MoWeFr 11:00AM – 11:50AM, BIOCHEM 1125
Discussion Sections (101 Only): AO&SS Bldg. Rm. 823
Disc 301: Mo 2:25pm – 3:15pm, AO&SS 823 (Yingshun Sun)
Disc 302: Tu 2:30pm – 3:20pm, AO&SS 823 (Yingshun Sun)
Disc 303: We 1:20pm – 2:10pm, AO&SS 823 (Meghan Tracy)
Disc 304: Th 9:55am – 10:45am, AO&SS 1411 (Meghan Tracy)

Instructional Mode: In person

Credit Hours Met: Credit hours will be met by three hours of classroom instruction and approximately six hours of class work per week.

Regular and Substantive Student-Instructor Interaction: This class includes direct instruction during lecture, instructor feedback and interaction via weekly office hours, regular feedback and interaction via Top Hat Teaching Platform, and regular posting of academic aspects of the class via the Canvas Learning Management System.

INSTRUCTORS AND TEACHING ASSISTANTS

Instructor: Prof. Daniel J. Vimont

Office Hours: (Additional off-site Off. Hrs. TBD)

W: 1:00pm – 2:30pm (AO&SS Bldg. Rm. 1155)

W: 8:30pm – 9:30pm (Canvas Discussion Board)

Email: dvimont@wisc.edu

TA: Yingshun Sun

Office Hours: (AO&SS 849E)

W: 2:30pm – 3:30pm

Th: 11:00am – 12:00pm

Email: yingshun.sun@wisc.edu

TA: Quinn Bowman

Office Hours: (AO&SS 805)

T: 11:00am – 12:00pm

Th: 3:30pm – 4:30pm

Email: qbowman@wisc.edu

TA: Meghan Tracy

Office Hours: (AO&SS 805)

W: 6:30am – 8:30pm, Virtual

Email: mctracy@wisc.edu



LEARNING OUTCOMES

Course Objectives and Learning Goals:

The objective of this course is as follows: (i) to develop an understanding of fundamental physical, chemical, and biological processes relevant to atmospheric and oceanic phenomena, (ii) to apply those concepts to understand specific weather and climatic phenomena, and (iii) to appreciate how those phenomena operate in our daily lives. By the end of the course, students should be able to explain weather and climatic phenomena using fundamental concepts from a variety of scientific disciplines.

GRADING

The lecture-based course is graded on a letter basis, and is based on the following elements:

	Method 1	Method 2	Method 3
Homework (11 homework assignments):	45%	55%	55%
Quizzes (3 Quizzes):	30%	20%	30%
Cumulative Final Exam:	15%	15%	0%
Top Hat Questions:	12.5%	12.5%	12.5%

Letter grades for the course will follow the following grade scheme: A: $\geq 93\%$; AB: 88-93%; B: 83-88%; BC: 78-83%; C: 70-78%; D: 60-70%; F: $< 60\%$. All grades in the class may be curved.

Dropped Grades:

While I certainly hope that everyone has a healthy and hassle-free semester, it is a reality that sometimes “life gets in the way”. To account for those situations, **grades will be calculated via ONE of the following methods:**

- Method 1: your lowest two homework grades are dropped
- Method 2: your lowest quiz grade is dropped
- Method 3: your final exam grade is dropped

We will automatically calculate your grade all three ways and give you the highest result. So, there is no need to inform us of which method you wish to use.

Homework: (11 homework sets, 5% each)

Homework will be assigned weekly *except for weeks when a quiz is scheduled*. Homework is due at the beginning of class on Friday of each week. Homework is due electronically via the Canvas website. *No late homework will be accepted*. See “Dropped Grades” above for grading.

Quizzes: (3 quizzes, 10% each)

Every three weeks a quiz will be assigned *instead* of homework. Quizzes are cumulative over each three-week period. Quiz format will vary, and will be announced in class. Quiz dates are posted on the course schedule.

Final Exam: (15%)

One cumulative final exam (format to be determined) is scheduled for Saturday, December 16 from 7:45 – 9:45am, and is worth 15% of the total final grade.

Top Hat Questions: (12.5%)

During class we will use the Top Hat system to post questions that are often very similar to questions you will see on the quizzes. Also, each chapter in the book has a series of questions you will need to answer as you read (due dates listed on the schedule; you must complete chapter questions by the assigned due date to receive credit).

You will typically receive 1 point for answering a “Top Hat” question, and an additional point for a correct answer if applicable (not all questions will have correct answers). At the end of the semester, the 12.5% “Top Hat Questions” grade will be based on the total number of points possible via:

$$\text{Top Hat In-Class Points} = 12.5\% * (\text{Your Total}) / (\text{Total Possible})$$

Note: If you score correct for all possible points, you will receive a full 12.5% for your Top Hat grade, which equates to 2.5% extra credit. This extra also accounts for other issues (e.g. connectivity problems, single absences) that will inevitably arise for each of us during the semester, so don't worry if you miss a day or two of Top Hat questions during the semester. And as a result, there is no opportunity to make up missed Top Hat questions during the semester.

ATM OCN 101 Grading:

If you are signed up for ATM OCN 101 instead of ATM OCN 100, then you also have a 1hr discussion section that you will attend weekly, with additional material. The lecture portion of the course will be worth 75% of your final grade and is calculated as outlined above. The discussion section will be worth 25% of your grade; grading for the discussion section will be explained in the discussion section.

COURSE WEBSITE AND LEARNING MANAGEMENT SYSTEM

We will use Canvas for the course website and learning management system: <https://canvas.wisc.edu/>

REQUIRED TEXTBOOK & RESOURCES

Top Hat “Clicker” System

We will be using Top Hat (www.tophat.com) for class participation (UW-Madison has a site license, so you should only have to pay for the book; see below). You will be able to submit answers to in-class questions using Apple or Android smartphones and tablets, laptops, or through text message. For instructions on how to create a Top Hat account and enroll in our Top Hat course, please refer to the UW-Madison Knowledge Base article here: <https://kb.wisc.edu/luwmad/page.php?id=59937>. If needed, our Top Hat course number is 155513. Here is how to access Top Hat the first time:

1. Set up a Top Hat account at www.tophat.com
2. Now, navigate to the ATM OCN 100 Canvas website, scroll down the left side of the page, and access our course page by clicking on the Top Hat link.

IMPORTANT: You need to access Top Hat via the Canvas website (step 2), or it may not record your participation correctly.

Text (Required): You will also use Top Hat to purchase and access the digital interactive textbook that we will be using in this class. The book is: Ackerman, Steven A. and John A. Knox. [Meteorology: An Interactive Understanding of the Atmosphere](#). Version 5.

Should you require assistance with Top Hat Pro at any time please contact their Support Team directly by way of email (support@tophat.com), the in-app support button, or by calling 1-888-663-5491. Specific user information may be required by their technical support team when troubleshooting issues.

Teaching & Learning Data Transparency Statement

The privacy and security of faculty, staff and students' personal information is a top priority for UW-Madison. The university carefully evaluates and vets all campus-supported digital tools used to support teaching and learning, to help support success through [learning analytics](#), and to enable proctoring capabilities. View the university's full [teaching and learning data transparency statement](#).

Privacy of Student Records & the Use of Audio Recorded Lectures Statement

View [more information about FERPA](#).

Lecture materials and recordings for this course are protected intellectual property at UW-Madison. Students in this course may use the materials and recordings for their personal use related to participation in this class. Students may also take notes solely for their personal use. If a lecture is not already recorded, you are not authorized to record my lectures without my permission unless you are considered by the university to be a qualified student with a disability requiring accommodation. [Regent Policy Document 4-1] Students may not copy or have lecture materials and recordings outside of class, including posting on internet sites or selling to commercial entities. Students are also prohibited from providing or selling their personal notes to anyone else or being paid for taking notes by any person or commercial firm without the instructor's express written permission. Unauthorized use of these copyrighted lecture materials and recordings constitutes copyright infringement and may be addressed under the university's policies, UWS Chapters 14 and 17, governing student academic and non-academic misconduct.

How to Succeed in This Course

We have tried to set up a variety of opportunities to ensure student success in this course. First, please try to read through the assigned chapters before class on the day that the chapter is due. Second, try to attend all lectures (either in person or virtually) and complete all assignments. If you have questions or concerns about material or your performance in the course, I STRONGLY suggest you contact us either via email or at office hours: students who are struggling in the course often turn their grade around after coming to talk with the Professor or TAs.

Additional resources that may be useful for you throughout the semester can be found at the following links:

- [University Health Services](#)
- [Undergraduate Academic Advising and Career Services](#)
- [Office of the Registrar](#)
- [Office of Student Financial Aid](#)
- [Dean of Students Office](#)

Digital Course Evaluation (AEFIS)

Students will be provided with an opportunity to evaluate this course and your learning experience. Student participation is an integral component of this course, and your confidential feedback is important to me. I strongly encourage you to participate in the course evaluation.

UW-Madison uses a digital course evaluation survey tool called [AEFIS](#). For this course, you will receive an official email two weeks prior to the end of the semester, notifying you that your course evaluation is available. In the email you will receive a link to log into the course evaluation with your NetID. Evaluations are anonymous. Your participation is an integral component of this course, and your feedback is important to me. I strongly encourage you to participate in the course evaluation.

Students' Rules, Rights & Responsibilities

Please see the link above for the UW-Madison Undergraduate Guide that includes Students' Rights and Responsibilities.

Diversity & Inclusion Statement

[Diversity](#) is a source of strength, creativity, and innovation for UW-Madison. We value the contributions of each person and respect the profound ways their identity, culture, background, experience, status, abilities, and opinion enrich the university community. We commit ourselves to the pursuit of excellence in teaching, research, outreach, and diversity as inextricably linked goals. The University of Wisconsin-Madison fulfills its public mission by creating a welcoming and inclusive community for people from every background – people who as students, faculty, and staff serve Wisconsin and the world.

Academic Integrity Statement

By virtue of enrollment, each student agrees to uphold the high academic standards of the University of Wisconsin-Madison; academic misconduct is behavior that negatively impacts the integrity of the institution. Cheating, fabrication, plagiarism, unauthorized collaboration, and helping others commit these previously listed acts are examples of misconduct which may result in disciplinary action. Examples of disciplinary action include, but is not limited to, failure on the assignment/course, written reprimand, disciplinary probation, suspension, or expulsion.

Accommodations for Students with Disabilities Statement

The University of Wisconsin-Madison supports the right of all enrolled students to a full and equal educational opportunity. The Americans with Disabilities Act (ADA), Wisconsin State Statute (36.12), and UW-Madison policy (Faculty Document 1071) require that students with disabilities be reasonably accommodated in instruction and campus life. Reasonable accommodations for students with disabilities is a shared faculty and student responsibility. Students are expected to inform faculty [me] of their need for instructional accommodations by the end of the third week of the semester, or as soon as possible after a disability has been incurred or recognized. Faculty [I], will work either directly with the student [you] or in coordination with the McBurney Center to identify and provide reasonable instructional accommodations. Disability information, including instructional accommodations as part of a student's educational record, is confidential and protected under FERPA. (See: [McBurney Disability Resource Center](#))

Academic Calendar & Religious Observances

Please see above for the UW-Madison Academic Calendar and Religious Observances. While we will try to limit overlap between class due dates and religious observances, if a conflict does arise, please notify the Professor and / or TA before the potential conflict so that accommodations can be made.