Term Information

Effective Term	Autumn 2026

General Information

Course Bulletin Listing/Subject Area	Atmospheric Sciences
Fiscal Unit/Academic Org	Geography - D0733
College/Academic Group	Arts and Sciences
Level/Career	Undergraduate
Course Number/Catalog	4981
Course Title	Capstone in Atmospheric Sciences
Transcript Abbreviation	Capstone AtmosSci
Course Description	This senior-level capstone course combines soft-skills and career readiness topics with the development of a final project representative of scientific inquiry and synthesis of knowledge acquired over the student's academic career. Capstone to be taken the final Autumn semester prior to graduation for Atmospheric Sciences majors.
Semester Credit Hours/Units	Fixed: 2

Offering Information

Length Of Course	14 Week
Flexibly Scheduled Course	Never
Does any section of this course have a distance education component?	No
Grading Basis	Letter Grade
Repeatable	No
Course Components	Lecture
Grade Roster Component	Lecture
Credit Available by Exam	No
Admission Condition Course	No
Off Campus	Never
Campus of Offering	Columbus

Prerequisites and Exclusions

Prerequisites/Corequisites	Prereq: Sr standing or above and enrolled in the Atmospheric Sciences major program.
Exclusions	None.
Electronically Enforced	Yes

Cross-Listings

Cross-Listings

Subject/CIP Code

Subject/CIP Code	40.0401
Subsidy Level	Baccalaureate Course
Intended Rank	Senior

Requirement/Elective Designation

Required for this unit's degrees, majors, and/or minors

Course Details

Course goals or learning objectives/outcomes

- Understand the multitude of career options that exist for atmospheric scientists and identify the career path (or paths) in which you are most interested.
- Develop and enhance critical thinking and analytical skills through interpretation and understanding of visual and written science.
- Increase awareness of the strengths and weaknesses in your meteorological knowledge as it relates to your intended career path
- Increase awareness of your strengths and weaknesses in terms of the technical skills and soft skills that are required for your intended career path
- Understand and exercise the principles of proper ethical behavior and professional conduct within the atmospheric sciences regarding
- Synthesize, and apply knowledge of the atmospheric sciences through the completion of the final project
- Gain career skill-sets including generating resume/CV; communicate scientific information in different written formats

Content Topic List

- Resume Development
- Career Introspection
- Job Negotiation
- Scientific Inquiry
- Data Analysis
- Ethics of Science

Sought Concurrence

Yes

Attachments

- ATMOSSC 4981_Course Submission Cover Letter.pdf: Cover Letter_ATMOSSC 4981
  (Cover Letter. Owner: Godfrey,Ryan B)
- Concurrence from EarthSci_9.16.25.pdf: Concurrence_ATMOSSC 4981
  (Concurrence. Owner: Godfrey,Ryan B)
- ATMOSSC 4981_Syllabus_Capston_11.11.25.pdf: Syllabus_ATMOSSC 4981_11.11.25
  (Syllabus. Owner: Godfrey,Ryan B)
- ASP B.S. Curriculum Map_Fall 2025.pdf: ASP Major Revision Curricul Map
  (Other Supporting Documentation. Owner: Godfrey,Ryan B)

Comments

- Revised Syllabus attached with new curricular map. *(by Godfrey,Ryan B on 11/11/2025 06:29 AM)*
- Sent back while conversation re: revision to the major is ongoing. *(by Vankeerbergen,Bernadette Chantal on 10/08/2025 12:27 PM)*

Workflow Information

Status	User(s)	Date/Time	Step
Submitted	Godfrey,Ryan B	09/17/2025 05:28 PM	Submitted for Approval
Approved	Coleman,Mathew Charles	09/17/2025 05:48 PM	Unit Approval
Revision Requested	Vankeerbergen,Bernadette Chantal	09/18/2025 10:33 AM	College Approval
Submitted	Godfrey,Ryan B	09/24/2025 01:32 PM	Submitted for Approval
Approved	Coleman,Mathew Charles	09/24/2025 03:08 PM	Unit Approval
Revision Requested	Vankeerbergen,Bernadette Chantal	10/08/2025 12:28 PM	College Approval
Submitted	Godfrey,Ryan B	11/17/2025 04:37 PM	Submitted for Approval
Approved	Houser,Jana Bryn	11/18/2025 12:14 PM	Unit Approval
Approved	Vankeerbergen,Bernadette Chantal	11/24/2025 09:22 PM	College Approval
Pending Approval	Jenkins,Mary Ellen Bigler Neff,Jennifer Vankeerbergen,Bernadette Chantal Steele,Rachel Lea	11/24/2025 09:22 PM	ASCCAO Approval

THE OHIO STATE UNIVERSITY

Department of Geography
College of Arts and Sciences

1036 Derby Hall
154 North Oval Mall
Columbus, Ohio 43210
www.geography.osu.edu

Curriculum and Assessment Services
College of Arts and Sciences

September 16, 2025

Subject: ATMOSSC 4981 New Course Submission

Dear Arts and Sciences Curriculum Committee,

The Department of Geography is proposing to offer a new course: ATMOSSC 4981 entitled "Capstone in Atmospheric Sciences". This course will be an added requirement to the Atmospheric Sciences B. S. program pending the successful administrative integration into the curriculum and it will be incorporated into an updated major plan which will soon be submitted to ASCC.

We are developing this course in accordance with new guidance from the American Meteorological Society, which recommends that all universities having an atmospheric science or meteorology program should include a capstone experience for students in their curriculum.

This course has a two-prong focus. This first is on developing soft skills that students will need as they transition into the workforce and prepare for careers in atmospheric science-related fields. A portion of coursework is dedicated to investigating a range of practical topics from resume writing, to interview skills, to ethics in science. The other focus point of the class is to provide a formal opportunity for students to think about communicating and interpreting scientific data, and to reflect upon themselves as scientists. With this in mind, course content includes discussion of how to utilize multiple media outlets to disseminate or consume science, and how to interpret visual tools such as article figures, graphics, etc. While there is a required text for the class, many weeks will require students to read from digital sources available online, which are listed in the footnotes of the semester schedule.

Successful completion of the course requires students to take a prior experience they completed, such and an internship, a research experience, or a class project, reflect upon that experience, and improve upon it. The final deliverable will be a poster presentation accompanied by a final paper explaining the project and the improvements made using knowledge they gained in the capstone classroom. The range of acceptable activities is designed to be broad and tailored to students' individual interests, career aspirations, and goals. As such, the parameters of the project are defined in terms of reflection and improvement upon the original experience and/or product but not on the generation of a new product.

The class requires senior standing in order to guarantee that students are nearing the end of their undergraduate program, are getting ready to transition to the work force, and that they have completed some sort of experience that would qualify for the starting point of the project.

We look forward to your feedback and any suggestions the curriculum committee might have for improvement.

Sincerely,

Dr. Jana Houser
Associate Professor of Meteorology
Director of Undergraduate Studies
Department of Geography
The Ohio State University
houser.262@osu.edu

SYLLABUS

ATMOSSC 4981

Capstone in Atmospheric Sciences

Autumn 2026 (Full Term)
2 credit-hours
In person, no remote option

Day: Wednesdays

Time: 3:00-4:45 pm

Location: TBD

Prerequisites: Senior standing or above and enrolled in the Atmospheric Sciences major program.

COURSE OVERVIEW

Instructor

1. Instructor: Dr. Zhengyu Liu
2. **Email:** liu.7022@osu.edu
3. **Telephone:** 614-292-7948
4. **Office Hours:** Office hours will be held Monday and Wednesday (1:00 to 2:30 pm) and by appointment. If the above times do not work for you, please email me to setup a meeting at a time that works for you.
5. **Office:** 1106 Derby Hall

Teaching Assistant

1. TBD
2. **Office Location:** TBD
3. **Email:** TBD
4. **Telephone:** TBD

Course description

The American Meteorological Society recommends all students complete a capstone experience that multidimensionally synthesizes the various academic skills gained over the course of a student's undergraduate education and "soft" skills required for students to transition to the workforce and become successful employees. We meet this requirement with this two-credit capstone course which combines the introduction of tools and skills students will need as they begin their careers, with a culminating final paper that is a summary, expansion, and reflection of a project (e.g., semester or REU project), experience (e.g. internship, business enterprise, etc.), or other deliverable (e.g., an app, software that was developed, literature synthesis of a topic of their choice). It is expected that the source material for the final project will have already been completed in prior coursework or professional experiences either within or external to the Department of Geography, but will be expanded upon using skills developed in this class and any additional curricular knowledge gained since the completion of the original project.

The objectives of this course are to:

1. Synthesize and reflect on the knowledge and skills that students have gained in the Atmospheric Sciences major
2. Prepare for life after graduation
3. Effectively communicate scientific information in a variety of oral, written, and visual formats
4. Understand and exercise the principles of proper ethical behavior and professional conduct within the atmospheric sciences.

This course requires introspection. Students will be asked to think about the knowledge and skills that have already been obtained, and to articulate professional aspirations and the path required to achieve them. Class meetings will be structured around discussing readings, preparing for the weekly assignments, practicing skills that are taught, and engaging with the guest speakers. Outside of class students will be asked to read and write as they complete weekly assignments and to familiarize themselves with the many career resources that are available for supporting your professional development. This class is designed to support all students, regardless of their intended plans after graduation.

It is expected that this class will be taken during the final fall semester of a student's enrollment. Successful completion of this capstone seminar is required for graduation as an Atmospheric Sciences Major.

Course learning outcomes

After taking this course you should know certain things (knowledge objectives) and be able to do certain things (skill objectives).

Knowledge objectives (Things you should know by the end of the course):

- Understand the multitude of career options that exist for atmospheric scientists and identify the career path (or paths) in which you are most interested
- Develop and enhance critical thinking and analytical skills through interpretation and understanding of visual and written science
- Increase awareness of the strengths and weaknesses in your meteorological knowledge as it relates to your intended career path
- Increase awareness of your strengths and weaknesses in terms of the technical skills and soft skills that are required for your intended career path
- Understand and exercise the principles of proper ethical behavior and professional conduct within the atmospheric sciences regarding
- Synthesize, and apply knowledge of the atmospheric sciences through the completion of the final project

Skill objectives (Things you should be able to do by the end of the course):

- Generate a professional resume and/or CV
- Effectively communicate scientific information in different written formats
- Deliver a clear and concise oral presentation
- Effectively network with professionals in your chosen field
- Prepare for and successfully complete an interview
- Create and publish a LinkedIn profile or professional website
- Create graphics (line graphs, pie graphs, box plots, etc.) that effectively communicate information

How This Course Works

Mode of delivery: Course material is delivered via in-person classes that are held each week on Wednesday (3:00-4:45 pm). Graded materials are completed both in class and after class on the student's own time. Course materials will also be provided on Carmen for student's access.

Credit hours and work expectations: This is a **2-credit-hour course**. According to Ohio State policy, students should expect around 2 hour per week of time spent on direct instruction

in addition to 4 to 6 hours of work outside of class (reading and assignment preparation, for example) *to receive a grade of (C) average*. Earning a higher grade will likely require additional time spent.

Attendance and participation requirements: Each student is expected to attend class every week. Attendance will be taken and will contribute to your grade as specified in the grade breakdown below. Furthermore, every student is expected to participate in the activities that are executed in class. Examples of in class participation include demonstrating or practice certain skills such as an elevator pitch, contributing thoughts to in-class discussions, and providing helpful feedback to peers. Additionally, students are expected to engage with online materials prior to class time that are provided for them in advance to help them prepare for the classroom experience of that week. Office hour participation is recommended, but is optional.

Course Materials and Technologies

Textbook

REQUIRED

Eloquent Science: A practical guide to becoming a better writer, speaker & atmospheric scientist, David Schultz, ISBN-13: 978-1-878220-91-2, American Meteorological Society.

Grading and Faculty Response

How your grade is calculated

Your grade will be based on four categories:

Participation	15%
Self Reflection Journal	20%
Weekly Assignments (11)	40%
Final Project	25%

See course schedule below for due dates.

Participation: Students will receive one point per class they attend for participation/attendance. Each point is one percentage point. Thus, for the 15 week semester, participation will contribute to 15% of the grade. If a student is ill or cannot attend class, communication with the instructor is required PRIOR TO CLASS. Students are allowed to

miss 1 class without negative consequences to their grade, as long as they inform the instructor of their absence.

Self-Reflection Journal: The learning objectives for this course include: increasing your awareness of the strengths and weaknesses in your meteorological knowledge as it relates to your intended career path, and increasing your awareness of your strengths and weaknesses in terms of the technical skills and soft skills that are required for your intended career path. Each student will be asked to keep a self-reflection journal where they will write about what they are learning. Three times over the course of the semester, students will be given specific writing prompts they must respond to. While there are no "correct" answers, student entries must be thoughtful and show meaningful personal contribution. The grade for each assignment will be based upon completion (did the student do the assignment in the first place), content (did the student appropriately reflect upon and discuss the aspects of the prompts provided), and length (each personal reflection must be at least 500 words to demonstrate thorough thought and reflection.)

Weekly Assignments: There is an assignment that is due at the beginning of each week (due Monday at 11 pm). These are individual assignments and each student must submit their own work. However, you may discuss the questions and work collaboratively. **There are no makeup exercises and late submissions are not accepted. Please refer to Carmen for due dates.** There are 11 exercises that will be assigned during the semester. You will get credit for the best 10 scores.

Final Project: The final project will have multiple graded components including: 1) An initial identification of the project provided to the professor the first week of class (5% of Final Project grade). 2) A summary statement of the deliverable where the student describes what the deliverable is, and how it was completed (10% of Final Project grade). 3) A statement identifying what the student will be changing/adding to the previously executed deliverable (10% of Final Project grad). 4) A printed poster that will be presented during the final week of classes to the Geography Department (45% of Final Project grade). 5) A 2-page written description summarizing the final deliverable, highlighting changes made to the final deliverable compared to its original form, and a final self-reflection entry of what skills the deliverable has taught (30% of Final Project grade). Details about the final project can be found on the last pages of the syllabus.

Grading scale

93–100: A
90–92.9: A-
87–89.9: B+
83–86.9: B
80–82.9: B-
77–79.9: C+
73–76.9: C

70 –72.9: C-
67 –69.9: D+
60 –66.9: D
Below 60: E

Instructor feedback and response time

I am providing the following list to give you an idea of my intended availability throughout the course:

- **Grading and feedback:** Weekly assignments will be returned once everyone has completed the assignment. This will typically be within 7 days of the due date.
- **Email:** I will do my best to reply to emails within 24 hours on days when class is in session at the university**.**

Final Project Details

For the final project, each student is required to reflect upon one specific learning deliverable or experience that they have completed over their academic experience. The final project is NOT meant to be an execution of a new deliverable or the creation of a new project. Instead, it is an opportunity to revisit a substantial assignment or learning experience and to reflect and present the material in a new, better way, based upon the knowledge gained in this class. It is additionally an opportunity to reflect upon the learning that has taken place over the course of your academic progression from the time you were a freshman to present. It is selected based upon the student's discretion and individualized learning experience.

There are a variety of deliverables/experiences that are considered satisfactory which include but are not necessarily limited to:

i. a summer internship at a relevant atmospheric science related agency (National Weather Service, News station, Environmental Protection Agency, county emergency management office, etc.);

ii. a summer or departmental research experience (honor's thesis, NSF REU, Hollings scholarship research experience, faculty-led research experience or independent study which resulted in a notable outcome such as a publication, conference presentation, etc.),

iii. a personal side project which resulted in notable product development such as an app, a piece of software, piece of technology or instrumentation, etc.,

iv. a comprehensive literature synthesis of a specific topic

v. a substantial semester project in an Atmos Sci course taken at Ohio State.

Students who do not participate in an internship, REU, etc., are guaranteed to have had the opportunity to complete a semester project through the completion of Atmos Sci 5301, which has an internal course requirement of a final project. Other Atmos Sci classes that have a semester project are also satisfactory. Classes outside of Atmos Sci are NOT allowed for this project.

As part of the requirements of the final project, students MUST identify something they want to change or add on to the deliverable that was NOT present in the original. This could include making a literature review more robust by adding papers or subtopics, adding another case study to a previously performed analysis, reworking data in a different manner by, for example, adding a statistical analysis where one was lacking before, by following up with a mentor after an internship and interviewing that person about their career/job responsibilities, adding additional features to a software program/app, etc. Students are reminded that, while this change must be meaningful, it is not meant to require more than 2-3 hours of work per week.

The goals of the final project are as follows:

1) Revisit the deliverable or experience and improve upon your original product based upon what you learned in this class
2) Address the AMS requirements for a capstone project by articulating how the project improved your personal proficiency in:
    a. Understanding the physical science governing atmospheric behavior,
    b. Understanding Earth's atmosphere as part of a holistic, planetary system
    c. Using quantitative methods to solve data-driven atmospheric science problems
    d. Using and interpreting data from traditional meteorological sources and tools including observations and models
    e. Communicating scientific information through oral, visual and written media.
3) Reflect upon how the project demonstrates your personal progress made over the course of your academic career.

The final project will have multiple deliverables instituted over the course of the semester including:

- An initial identification of the deliverable/experience you will be focusing on (Due Week 1)
- A written summary statement to introduce to the deliverable/experience you will be focusing on (Due Week 3). This statement provides the instructor with an overview of what your final project will focus on. It will explain the intent of the original project, identify what you did, and describe how the previous project was executed.
- A written statement describing how you will improve upon your original deliverable, or how you will synthesize information not previously designed to be a deliverable, into deliverable form. (Due Week 5)
- A poster presentation where you present your deliverable (talking about your internship experience, presenting the study you executed during your REU or research experience, highlighting a product you developed, etc.) This presentation will be made to the department on a preselected date towards the end of the semester. (Due Week 15)
- A written reflection piece where you explicitly address the course goals identified above. In this piece you will: 1) describe the improvements you made to your deliverable if you had previously made a deliverable, or describing the creation of the deliverable for this class, 2) address how this project satisfied the goals specified by the AMS capstone experience, 3) reflect upon your personal growth and progress as an atmospheric scientist over the course of your academic career to date, and 4) describe your proposed career path as you move forward past graduation. This will be due during final exam week.

Other Policies

Academic Misconduct

Academic integrity is essential to maintaining an environment that fosters excellence in teaching, research, and other educational and scholarly activities. Thus, The Ohio State University and the Committee on Academic Misconduct (COAM) expect that all students have read and understand the University's Code of Student Conduct, and that all students will

complete all academic and scholarly assignments with fairness and honesty. Students must recognize that failure to follow the rules and guidelines established in the University's Code of Student Conduct and this syllabus may constitute Academic Misconduct.

The Ohio State University's Code of Student Conduct (Section 3335-23-04) defines academic misconduct as: Any activity that tends to compromise the academic integrity of the University or subvert the educational process. Examples of academic misconduct include (but are not limited to) plagiarism, collusion (unauthorized collaboration), copying the work of another student, and possession of unauthorized materials during an examination. Ignorance of the University's Code of Student Conduct is never considered an excuse for academic misconduct, so please review the Code of Student Conduct and, specifically, the sections dealing with academic misconduct.

If an instructor suspects that a student has committed academic misconduct in this course, the instructor is obligated by University Rules to report those suspicions to the Committee on Academic Misconduct. If COAM determines that a student violated the University's Code of Student Conduct (i.e., committed academic misconduct), the sanctions for the misconduct could include a failing grade in the course and suspension or dismissal from the University.

If students have questions about the above policy or what constitutes academic misconduct in this course, they should contact the instructor.

Copyright disclaimer

The materials used in connection with this course may be subject to copyright protection and are only for the use of students officially enrolled in the course for the educational purposes associated with the course. Copyright law must be considered before copying, retaining, or disseminating materials outside of the course.

Creating an Environment Free from Harassment, Discrimination, and Sexual Misconduct

The Ohio State University is committed to building and maintaining a welcoming community. All Buckeyes have the right to be free from harassment, discrimination, and sexual misconduct. Ohio State does not discriminate on the basis of age, ancestry, color, disability,

ethnicity, gender, gender identity or expression, genetic information, HIV/AIDS status, military status, national origin, pregnancy (childbirth, false pregnancy, termination of pregnancy, or recovery therefrom), race, religion, sex, sexual orientation, or protected veteran status, or any other bases under the law, in its activities, academic programs, admission, and employment. Members of the university community also have the right to be free from all forms of sexual misconduct: sexual harassment, sexual assault, relationship violence, stalking, and sexual exploitation.

To report harassment, discrimination, sexual misconduct, or retaliation and/or seek confidential and non-confidential resources and supportive measures, contact the Civil Rights Compliance Office (CRCO):

Online reporting form: http://civilrights.osu.edu/

Call 614-247-5838 or TTY 614-688-8605

civilrights@osu.edu

The university is committed to stopping sexual misconduct, preventing its recurrence, eliminating any hostile environment, and remedying its discriminatory effects. All university employees have reporting responsibilities to the Civil Rights Compliance Office to ensure the university can take appropriate action:

All university employees, except those exempted by legal privilege of confidentiality or expressly identified as a confidential reporter, have an obligation to report incidents of sexual assault immediately.

The following employees have an obligation to report all other forms of sexual misconduct as soon as practicable but at most within five workdays of becoming aware of such information: 1. Any human resource professional (HRP); 2. Anyone who supervises faculty, staff, students, or volunteers; 3. Chair/director; and 4. Faculty member.

Intellectual Diversity

Ohio State is committed to fostering a culture of open inquiry and intellectual diversity within the classroom. This course will cover a range of information and may include discussions or debates about controversial issues, beliefs, or policies. Any such discussions and debates are intended to support understanding of the approved curriculum and relevant course objectives rather than promote any specific point of view. Students will be assessed on principles applicable to the field of study and the content covered in the course. Preparing students for

citizenship includes helping them develop critical thinking skills that will allow them to reach their own conclusions regarding complex or controversial matters.

Counseling and Consultation Services / Mental Health Statement

As a student you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance or reduce a student's ability to participate in daily activities. The Ohio State University offers services to assist you with addressing these and other concerns you may be experiencing.

If you or someone you know are suffering from any of the aforementioned conditions, you can learn more about the broad range of confidential mental health services available on campus via the Office of Student Life's Counseling and Consultation Service (CCS) by visiting ccs.osu.edu or calling 614-292-5766. CCS is located on the 4th floor of the Younkin Success Center and 10th floor of Lincoln Tower. You can reach an on-call counselor when CCS is closed at 614-292-5766 and 24-hour emergency help is also available through the 24/7 by dialing 988 to reach the Suicide and Crisis Lifeline.

Your mental health

As a student you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance or reduce a student's ability to participate in daily activities.

The Ohio State University offers services to assist you with addressing these and other concerns you may be experiencing. If you or someone you know are suffering from any of the aforementioned conditions, you can learn more about the broad range of confidential mental health services available on campus via the Office of Student Life's Counseling and Consultation Service (CCS) by visiting ccs.osu.edu or calling 614-292-5766. CCS is located on the 4th Floor of the Younkin Success Center and 10th Floor of Lincoln Tower. You can reach an on call counselor when CCS is closed at 614-292-5766 and 24 hour emergency help is also available 24/7 **by dialing 988 to reach the Suicide and Crisis Lifeline**.

DISIBILITY STATEMENT (WITH ACCOMMODATIONS FOR ILLNESS)

The university strives to maintain a healthy and accessible environment to support student learning in and out of the classroom. If students anticipate or experience academic barriers based on a disability (including mental health and medical conditions, whether chronic or

temporary), they should let their instructor know immediately so that they can privately discuss options. Students do not need to disclose specific information about a disability to faculty. To establish reasonable accommodations, students may be asked to register with Student Life Disability Services (see below for campus-specific contact information). After registration, students should make arrangements with their instructors as soon as possible to discuss your accommodations so that accommodations may be implemented in a timely fashion.

If students are ill and need to miss class, including if they are staying home and away from others while experiencing symptoms of viral infection or fever, they should let their instructor know immediately. In cases where illness interacts with an underlying medical condition, please consult with Student Life Disability Services to request reasonable accommodations.

slds@osu.edu

https://slds.osu.edu/

098 Baker Hall, 113 W. 12th Ave

614-292-3307 phone

Religious Accommodations

Ohio State has had a longstanding practice of making reasonable academic accommodations for students' religious beliefs and practices in accordance with applicable law. In 2023, Ohio State updated its practice to align with new state legislation. Under this new provision, students must be in early communication with their instructors regarding any known accommodation requests for religious beliefs and practices, providing notice of specific dates for which they request alternative accommodations within 14 days after the first instructional day of the course. Instructors in turn shall not question the sincerity of a student's religious or spiritual belief system in reviewing such requests and shall keep requests for accommodations confidential.

With sufficient notice, instructors will provide students with reasonable alternative accommodations with regard to examinations and other academic requirements with respect to students' sincerely held religious beliefs and practices by allowing up to three absences each semester for the student to attend or participate in religious activities. Examples of religious accommodations can include, but are not limited to, rescheduling an exam, altering the time of a student's presentation, allowing make-up assignments to substitute for missed class work, or flexibility in due dates or research responsibilities. If concerns arise about a requested accommodation, instructors are to consult their tenure initiating unit head for assistance.

A student's request for time off shall be provided if the student's sincerely held religious belief or practice severely affects the student's ability to take an exam or meet an academic requirement **and** the student has notified their instructor, in writing during the first 14 days after the course begins, of the date of each absence. Although students are required to provide notice within the first 14 days after a course begins, instructors are strongly encouraged to work with the student to provide a reasonable accommodation if a request is made outside the notice period. A student may not be penalized for an absence approved under this policy.

If students have questions or disputes related to academic accommodations, they should contact their course instructor, and then their department or college office. For questions or to report discrimination or harassment based on religion, individuals should contact the Civil Rights Compliance Office.

Policy: Religious Holidays, Holy Days and Observances

Accessibility of course technology

This course requires use of Carmen (Ohio State's learning management system) and other online communication and multimedia tools. If you need additional services to use these technologies, please request accommodations from me.

- CarmenCanvas accessibility
- CarmenZoom accessibility

Course Schedule

Date	Day	Class Content	Readings	Assignments	Week
Aug. 25	W	Syllabus and intro	Atmospedia[1]; AGU Webinar[2]	Self-Reflection 1: Personal assessment; **Identification of final project deliverable**	1
Sep. 1	W	Creating a professional resume (or CV)	Template[3]; OSU Career Services[4]	Assignment #1: Resume	2
Sep. 8	W	How to prepare for a job Interview, execution of mock interviews with peers	AMS webinar[5]	Assignment #2: Job Interview **Summary statement of final project topic**	3
Sep. 15	W	What is grad school? Should I go to grad school?	Atmospedia[6];	Assignment #3: Grad school review	4
Sep. 22	W	How to write a research statement/cover letter, the Elevator Pitch Elevator pitch practice with peers	ES Chapter 18; Optimizing your cover letter[7]	Assignment #4: Research statement or cover letter **Identification of changes or improvements to final project deliverable**	5
Sep. 29	W	Careers in the NWS, Federal Government, and Academia	AGU Webinar[8]; NWA Webinar[9]	Self-Reflection 2: intended career path	6

[1] https://atmospedia.org/wiki/Main_Page
[2] https://youtu.be/qs6cjKAbnzY?si=aPI7P3-OuEYU9Q0V
[3] https://artsandsciences.osu.edu/sites/default/files/asc-ccps-resumes-ASCResumeTemplateInstructions.pdf
[4] https://asccareersuccess.osu.edu/services-we-offer/resume-review
[5] https://www.gotostage.com/channel/b3452c5546e441afbe21e0d3b70c68d6/recording/80adf054e907452bb036dbe721a846f6/watch
[6] https://atmospedia.org/wiki/Main_Page
[7] https://zoom.us/rec/play/ILHkSLxhotAsbKPmhWJbQZI2y9ECN2ukAXWL_H9I5LbKAx9D92FAFfWQFat7T7XoMB2EALJGb63GXNk.dUsIQRfvgkyOUA8s?canPlayFromShare=true&from=share_recording_detail&startTime=1585234603000&componentName=rec-play&originRequestUrl=https%3A%2F%2Fzoom.us%2Frec%2Fshare%2F_NUyLeHx7D1JXKP85h7BCvIEBbT8X6a82ylLqfNcnUpQSpS-a7-9tf7P1Mir41_I%3FstartTime%3D1585234603000
[8] https://youtu.be/ZPgUFnW9hrA?si=LC9ooxsOFEE8onYR
[9] https://www.youtube.com/playlist?list=PLYsC5TDceC_aA783ELlh6zktaZ0baYGyq

Oct. 6	W	Careers in the private sector and Broadcast	AMS Webinar[10]; AGU Webinar[11] AMS Guide[12]; Education Backgrounds; Women Weathercasters	Assignment #6: Creating a professional online presence	7
Oct. 13	W	Money, money, money! Negotiating a salary	Salary Negotiation Tips[13]; BLS[14]	Assignment #7: What are starting salaries in your field? (Glassdoor)	8
Oct. 20	W	Analysis and Interpretation of Scientific data	ES Chapters 19 & 20	Assignment #8: Interpreting graphs and figures	9
Oct. 27	W	Professional Conduct and Ethics in Atmospheric Sciences	AMS Code of Conduct[15]; BAMS Ethics articles[16]; RCR module; ES Chapter 15	Assignment #9: Ethics case study	10
Nov. 3	W	How to give an effective oral presentation	ES Chapters 24, 25, 26 & 28	Assignment #10: Oral presentation	11
Nov. 10	W	How to create effective visuals	ES Chapter 11 & 27	Self-Reflection 3: What are your communication strengths and weaknesses	12
Nov. 17	W	How to communicate effectively for different audiences; Elevator pitches	ES Chapters 4-9, 29 & 30	Assignment #11: Blog/newspaper article	13
Nov. 24	W	**Thanksgiving Break Week**			14
Dec. 1	W	Networking: It's not what you know, it's who you know that matters	AMS webinar 1[17], webinar 2[18]	**Final Presentations**	15
Dec		Finals Week		Final Paper on Deliverable due	16

[10] https://www.gotostage.com/channel/b3452c5546e441afbe21e0d3b70c68d6/recording/a4a70207d87d47b085a9a73e5831cb06/watch
[11] https://youtu.be/vOKtx8iiFkw?si=b--gwJ8TIDw6mEHU
[12] https://www.ametsoc.org/index.cfm/ams/education-careers/careers/ams-professional-certification-programs/information-for-cbms-and-sealholders/information-for-broadcast-meteorologists/broadcast-meteorology-surveys-and-career-guides/
[13] https://careerservices.erau.edu/salary-negotiation-tips
[14] https://www.bls.gov/ooh/life-physical-and-social-science/atmospheric-scientists-including-meteorologists.htm
[15] https://www.ametsoc.org/index.cfm/ams/about-ams/ams-organization-and-administration/ams-code-of-conduct/
[16] https://www.ametsoc.org/index.cfm/ams/education-careers/careers/professional-development/ethics-articles/
[17] https://www.ametsoc.org/index.cfm/ams/webinar-directory/networking-learning-and-expanding-your-horizon/
[18] https://www.gotostage.com/channel/b3452c5546e441afbe21e0d3b70c68d6/recording/abd141bd7a294749bfb7e5e13a176452/watch

Curriculum Map: Bachelor of Science in Atmospheric Sciences

Curriculum map, indicating how program goals are accomplished via specific courses

KEY:	*1=Beginner*	*2= Intermediate*	*3 = Advanced*	

	Learning Outcome 1	Learning Outcome 2	Learning Outcome 3	Learning Outcome 4
Prerequisites or Corequisites:				
MATH 1151				1
MATH 1152				1
MATH 2153				1
MATH 2255				2
PHYSICS 1250	1	1		
PHYSICS 1251	2	1		
CHEM 1210	1	1		
STATS 2450				1
GEOG 1900	1			
Required Core:				
ATMOSSC 5201 (Formerly GEOG 5940)	2	1		2
ATMOSSC 5202 (Formerly GEOG 5941)	3	2	3	2
ATMOSSC 5203 (Formerly GEOG 5942)	3	2	3	3
ATMOSSC 5301 (Formerly GEOG 5921)	1	2	3	2
ATMOSSC 5302 (Formerly GEOG 5922)	2	2	2	2
ATMOSSC 5401 (Data Processing)		3	2	1
ATMOSSC 5501 (Formerly 5950)	3	2	2	2
ATMOSSC 5502 (Physical Met)	3	2	2	3
ATMOSSC 5601 (Formerly 5951)	3	2	2	2
ATMOSSC 5602 (Formerlv 5952)	3	2	2	3
ATMOSSC 4981 (Capstone)		2	3	
GEOG 4911	2			2
Electives:				
ATMOSSC 5450 (Radar)	2	3	2	3
ATMOSSC 5701 (Field Obs)	2	2	3	
ATMOSSC 5901 (Climate Modeling)	2	3	2	
ATMOSSC 4191 (Internship)		1-3	1-3	1-3
ATMOSSC 4998 (Research)		1-3	1-3	1-3
GEOG 3900.01 OR GEOG 3900.02	2		3	
GEOG 5200	1	1	2	1
GEOG 5210	1	1		
GEOG 5225	2	2		2
EARTHSC 2206	1		1	
CIVILEN 5130	3	3		3
CIVILEN 5420	2	3		2

Learning Outcome 1: Students acquire the theoretical basis for fundamental atmospheric processes and systems. Learning Outcome 2: Students are familiar with computational and other forms of technology used in the atmospheric sciences. Learning Outcome 3: Students can communicate atmospheric science concepts and methods orally, visually, and in writing. Learning Outcome 4: Students can solve problems faced by atmospheric scientists.

THE OHIO STATE UNIVERSITY

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Curriculum and Assessment Services
College of Arts and Sciences

September 17, 2025

Subject: ATMOSSC 4981 Concurrence Inquiry to EARTHSC (Course Request 1072892)

To Whom May Concern,

The Department of Geography's Director of Undergraduate Studies, Dr. Jana Houser, sent a concurrence inquiry to the School of Environmental Sciences (EARTHSC) for ATMOSSC 4981: Capstone in Atmospheric Sciences.

Our inquiry for input was sent September 16, 2025 to Dr. W. Ashley Griffith, Associate Director for Administration in SES raised no concurrence concern. We submit this documentation to your office to continue in support of the new course request.

Sincerely,

Ryan B. Godfrey
Academic Planning Specialist
Department of Geography
College of Arts and Sciences

1049B Derby Hall
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+1 (614) 292-7788

To: Ashley Griffith and Ann Cook: School of Earth Sciences
Sent: 9/16/2025

Hi Ashley and Ann,

Geog is proposing a new capstone course for our senior atmospheric science students with the goal of teaching soft skills and preparing our soon-to-be graduating seniors for the work world.

We'd appreciate it if you could take a quick peak at our syllabus for concurrence.

Let me know if you have any concerns!

Thanks!

-Jana

Dr. Jana Houser
Director of Undergraduate Studies
Associate Professor of Meteorology
Atmospheric Sciences Program
Department of Geography
The Ohio State University
Columbus, OH

RESPONSE:

From: Ashley Griffith
On: 9/16/2025

Hi Jana – No concerns from SES regarding concurrence. This looks like a great course 😊

Sincerely,
Ashley

W. Ashley Griffith, PhD
Professor
Associate Director for Administration
School of Earth Sciences
The Ohio State University
275 Mendenhall Laboratory, 125 South Oval Mall, Columbus, OH 43210-1308
Office Location: ML 381
Cell: 330-285-4650