



# Graduate Student Orientation

Department of Atmospheric Sciences, 2023-2024

**COLLEGE OF SCIENCE**



COLLEGE OF MINES AND EARTH SCIENCES

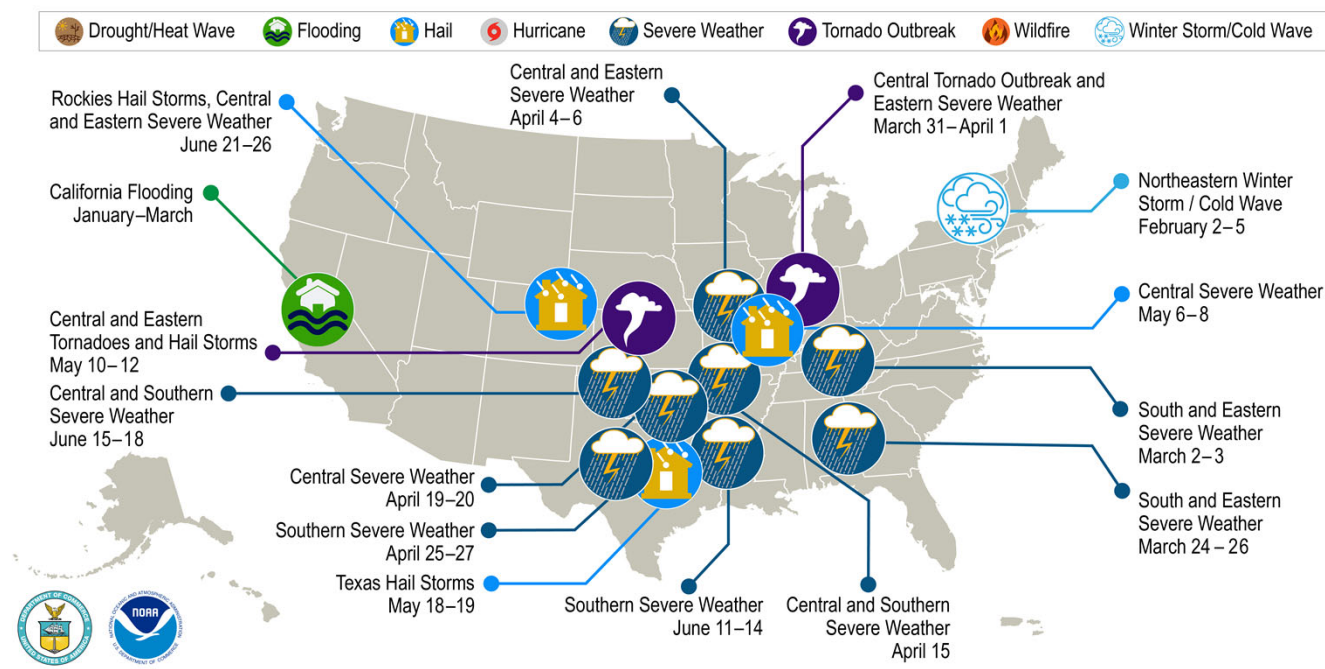
# Introductions

- Court Strong, Director of Graduate Studies (DoGS)
- Brenda Bowen, Department Chair
- Nola Lucke, Administrative Manager
- Alex Munoz, Administrative Assistant

# Atmospheric Sciences

## Impacts of weather and climate on people: Health, safety, and economic well being

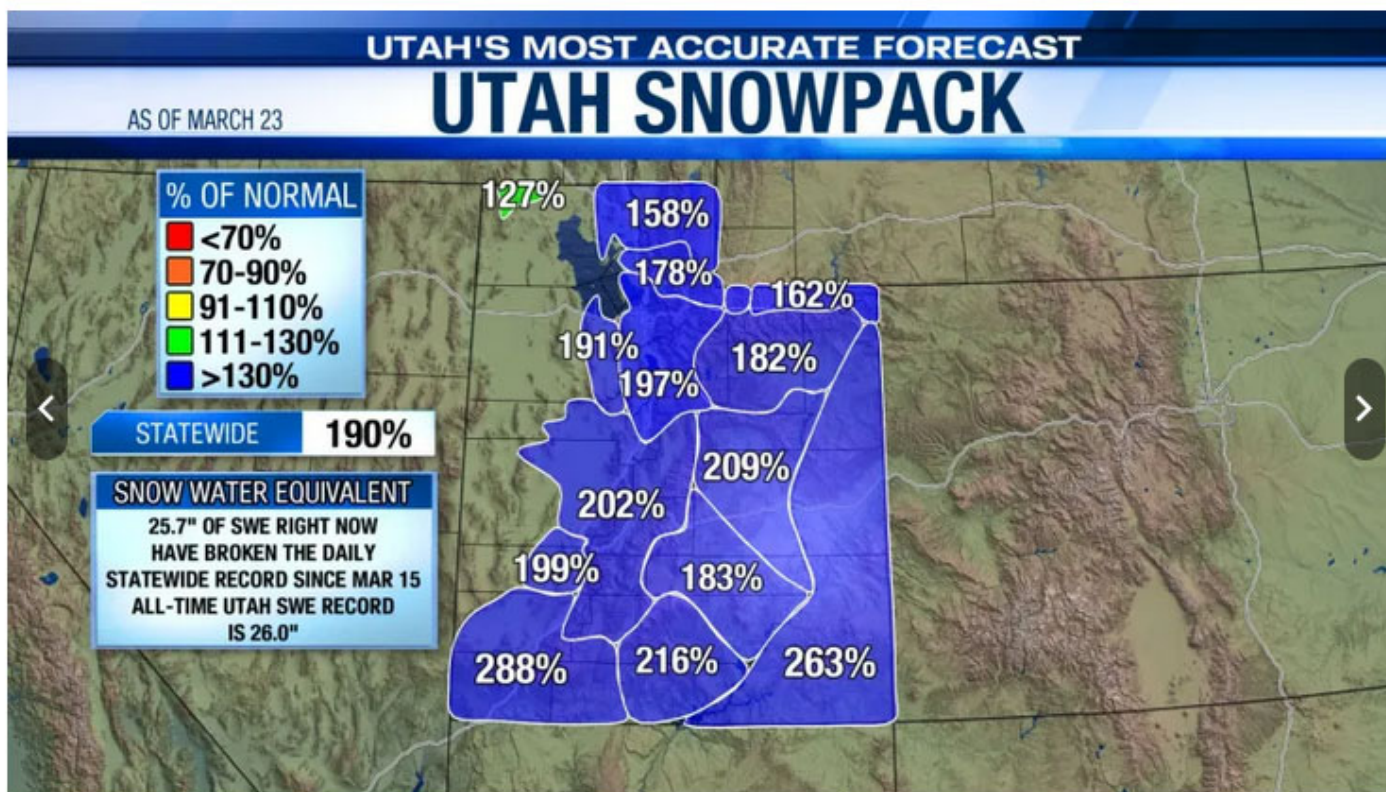
U.S. 2023 Billion-Dollar Weather and Climate Disasters



*This map denotes the approximate location for each of the 15 separate billion-dollar weather and climate disasters that impacted the United States through July 2023.*

**15 events during 2023 each with billion-dollar impacts**

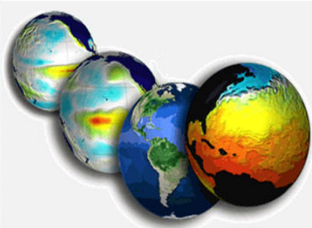
*Atmospheric Sciences*  
*Impacts of weather and climate on people:*  
*Health, safety, and economic well being*



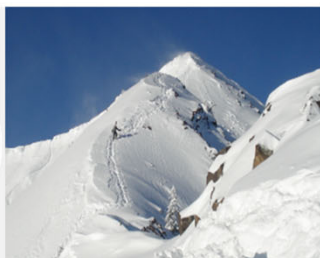
*Record snowpack followed by record heat*

# Atmospheric Sciences

*Mission: discover, advance, and disseminate knowledge about weather and climate for the benefit of the people of Utah and the wider international community*



Global & Regional Climate



Mountain Weather & Climate



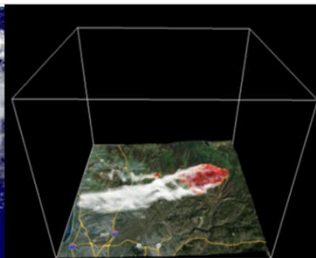
Air Quality & Health



Aerosols, Clouds, & Climate



Tropical Weather & Modeling



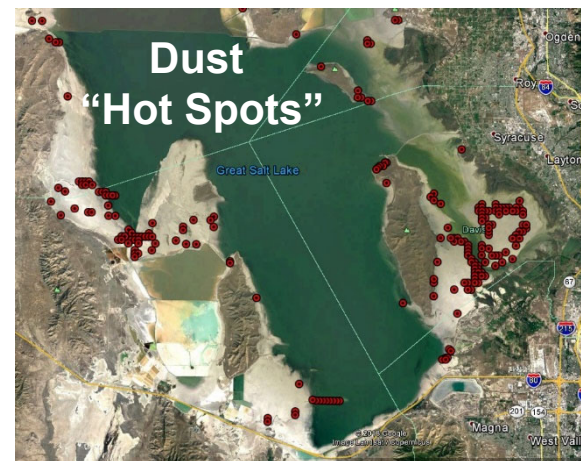
Cloud & Wildfire Modeling



Heber Valley Fog Study

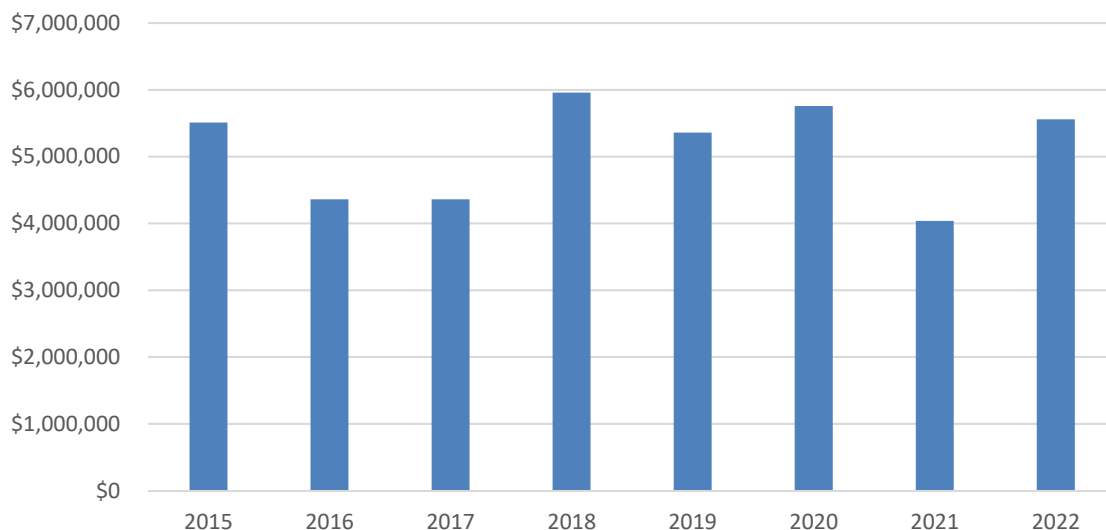


Storm Peak Laboratory



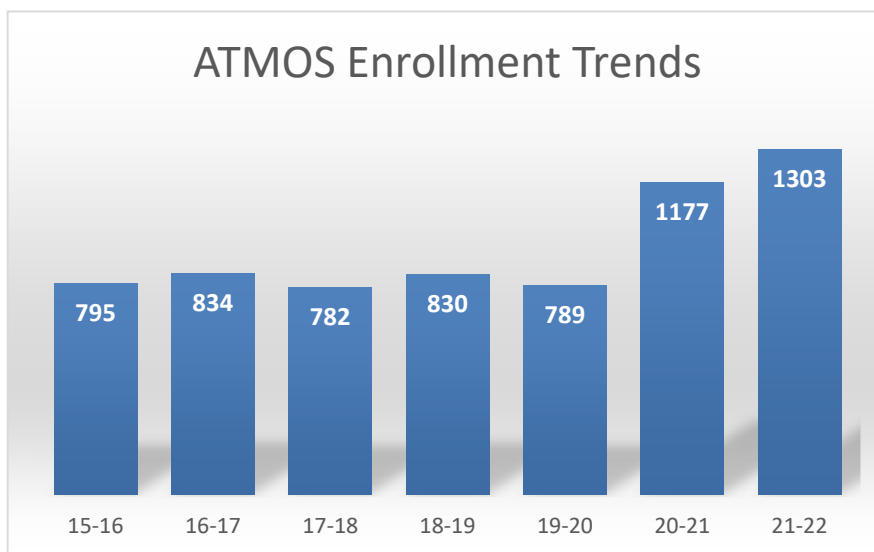
# Numbers

Atmospheric Sciences Research Awards



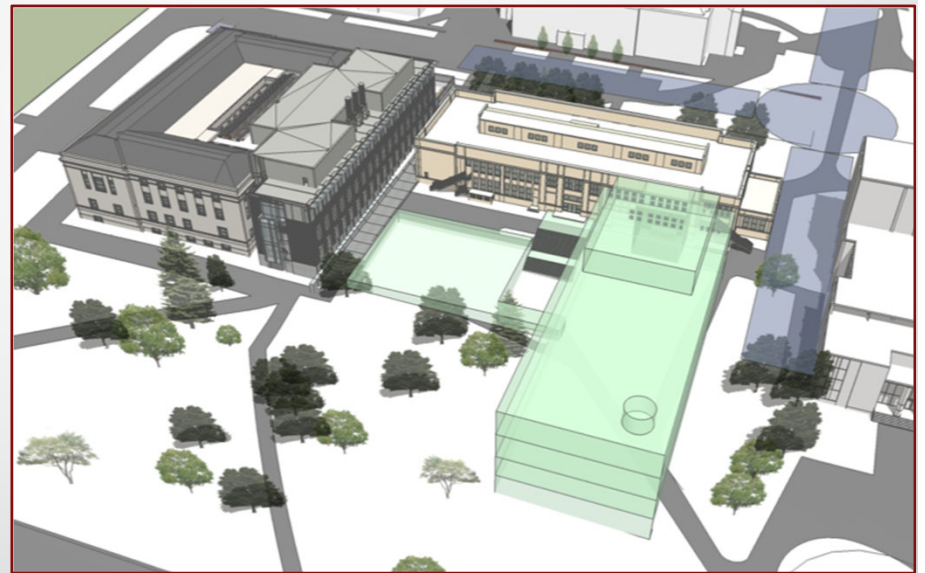
**Academic faculty: 14**  
**Research Faculty: 6**  
**Postdoc/Staff: 5**  
**Majors/Minors: 73/11**  
**M.S. Students: 30**  
**Ph.D. Students: 10**

ATMOS Enrollment Trends



# Applied Sciences Building

- New Applied Science Building
- Renovate and add to the historic William Stewart Building
- \$85 million project will provide state of the art STEM teaching and research facility for the Departments of Physics & Astronomy and Atmospheric Sciences



# Where we are going?

- *Building upon fundamental research and education, we are addressing challenges facing Utah and the nation including climate change, water availability, air quality, and wildfires*
- Federal & state initiatives directed towards air quality & the Great Salt Lake
- Foster environmental justice research and education



<https://atmos.utah.edu>

Follow us on Social Media



## Atmospheric Sciences Graduate Student Guide

Department of Atmospheric Sciences  
College of Mines and Earth Sciences  
University of Utah

Approved  
January 8, 2016

GRADUATE

AIR QUALITY

FUTURE

GRADUATE

MS

PHD

COURSES

GRADUATE STUDENT GUIDE

TUITION BENEFIT PROGRAM

THE GRADUATE SCHOOL

UNIVERSITY WRITING CENTER

STUDENTS WITH CHILDREN

ADVISING

# Upcoming Activities

- Wednesday August 23, 3:00-4:15 PM  
Faculty Intros. Grad Seminar. 110 INSCC
- Friday August 25, 4:00-8:30 PM  
Dept picnic. Sugar House Park



Department of  
**ATMOSPHERIC SCIENCES**  
MINES AND EARTH SCIENCES | THE UNIVERSITY OF UTAH

## ATMOS DEPARTMENT BACK TO SCHOOL SOCIAL

Who: Students, Staff, Faculty, Alumni, Family, and Friends

What: We supply sandwiches and beverages! Feel free to bring a salad or dessert, but not required!

Where: Mt Olympus Pavilion, Sugar House Park

When: Friday, August 26th 5pm-8:30pm

Why: It's time to see each other!

RSVP HERE



# Your Connections

Advisor &  
Research Group

Thesis Committee,  
Other Students &  
Faculty

Dept Office,  
Faculty, Staff

College\*  
Epicenter  
CHPC

Graduate School

Campus Services

# Be Involved!

- Read emails in the Department sent to [atmos-grad@lists.utah.edu](mailto:atmos-grad@lists.utah.edu)
- Read emails to you coming from the College!
- Use your Unid based email ([uXXXXXXX@utah.edu](mailto:uXXXXXXX@utah.edu) or an alias to that)
- Department Seminars
- GCSC Seminars
- AMS Student Chapter
- AMS local Chapter
- Graduate Student Trainings
- Epicenter
- Other College & Campus Groups

# COLLEGE MERGER

## College of Mines and Earth Sciences to merge with College of Science.

The University of Utah College of Mines and Earth Sciences will merge with the College of Science beginning July 1, 2022, a move that will unite well-funded programs and resources between faculty and create a much stronger base for science and research at the U.

Deans Darryl Butt of the College of Mines and Earth Sciences and Robert Anderson of the College of Science have worked with university administration and members of the merger. The College of Mines and Earth Sciences will retain its name as part of the College of Science and all faculty, students, buildings and research programs will continue in the combined unit.

- ACADEMIC UNITS
- College of Mines & Earth Sciences
- Atmospheric Sciences
- Biological Sciences
- Chemistry
- Geology & Geophysics
- Materials Science & Engineering
- Mathematics
- Mining Engineering
- Physics & Astronomy
- Center for Science & Math Education
- Center for Cell & Genome Sciences



# Office Staffing

- [atmos-office@lists.utah.edu](mailto:atmos-office@lists.utah.edu)
- Nola Lucke, Administrative Manager 801-581-6137
- Alex Munoz, Administrative Assistant 801-581-6136
- Staffed in person or virtually from 9AM – 4PM
  - 819 WBB
  - For urgent needs if no one there, go to EpiCenter (1st floor Sutton) for Other issues

# Advising Issues

- [atmos-advising@lists.utah.edu](mailto:atmos-advising@lists.utah.edu)
- Court Strong, Director of Graduate Studies
- Brenda Bowen, Department Chair



## **Student Mental Health Resources**

Rates of burnout, anxiety, depression, isolation, and loneliness have noticeably increased during and since the pandemic.

If you need help, reach out for campus mental health resources, including counseling, training, and other support.

[https://cmes.utah.edu/student\\_wellness\\_resources.php](https://cmes.utah.edu/student_wellness_resources.php)



# Being Safe on Campus

## ▼ Safety at the U

The University of Utah values the safety of all campus community members. You will receive important emergency alerts and safety messages regarding campus safety via text message.

For more information regarding safety and to view available training resources, including helpful videos, visit [safeu.utah.edu](https://safeu.utah.edu).

To report suspicious activity or to request a courtesy escort, contact:

### **Campus Police & Department of Public Safety**

 801-585-COPS (801-585-2677)


 [dps.utah.edu](https://dps.utah.edu) 

 1735 E. S. Campus Dr.  
Salt Lake City, UT 84112


Search Site 

Search Site  Search Campus

MAIN MENU

 Home

About the College

Current Students 

Academic Advising

New Student Orientation

Convocation

Sustainability Pledge

Undergraduate Students

Career Coaching

Graduate Students

Late Withdrawals

Scholarships, Grants & Financial Aid

Student Engagement

Science Ambassadors

What Can You Do with a Science Degree

Take advantage of resources for students through College of Science ([science.utah.edu](http://science.utah.edu)) and Graduate School ([gradschool.utah.edu](http://gradschool.utah.edu))



THE GRADUATE SCHOOL

COLLEGE OF SCIENCE


STUDENT WELLNESS

COLLEGE OF SCIENCE

EQUITY, DIVERSITY, & INCLUSION

Your well-being is our top priority. We offer a variety of resources to help you stay healthy and successful.

>>  **A diverse scholarly community stimulates innovation and educational excellence.**

>>  **The College of Science works to maintain a respectful, inclusive, and supportive environment where all students, staff, and faculty can flourish. We are actively working to increase the diversity of our faculty, staff, and students to promote belonging and community for all. We value constructive input and welcome feedback from our community.**

**Our efforts are ongoing. Like scientific discovery, the work toward fostering diversity, equity, and inclusion is never "done."**

- Join the [CoS Equity, Diversity, and Inclusion committee](#) and learn more about our activities.
- View our [2020 Strategic Plan](#) and read more about the goals of the College of Science.
- [Resources](#) from the U's Office of Equity, Diversity, and Inclusion.

# Compensation

- Equivalent of \$30,000 for the year (but Aug 16-May 15 and funding after that based on passing 1<sup>st</sup> year comprehensive exam)
- There should be no cost to you for tuition or fees
- \$1000 housing allowance to be provided in a September pay period

# Student/Advisor Relationship

- Completing your advanced degree will be hard work
- Discuss now with your advisor what is expected of you
  - When are you expected to be in the office during a normal week vs. academic breaks? Who do you tell when you will be absent?
  - Find out how your RA is being funded and how that might affect the research you are likely to work on
  - Don't assume what other students in the dept/college tell you is necessarily what you should be doing
- Discuss with your advisor the mentor/mentee agreement
  - Both of you should sign and the advisor sends the signed copy to the department
- Faculty are expected to know and follow University policies:  
<https://regulations.utah.edu/academics/6-316.php>
- Student have rights and responsibilities too:  
<https://regulations.utah.edu/academics/guides/students/studentRights.php>

# Mentor/mentee agreement

## Department of Atmospheric Sciences Mentee/Mentor Collaboration Agreement

As faculty advisor (mentor), I will:

- Serve as an advisor and mentor by providing intellectual guidance, cutting-edge research opportunities, and professional development;
- Encourage and enable you to participate in scholarly and professional activities such as attending scientific meetings, scientific paper reviews, manuscript authorship, teaching experiences, grant writing, and professional networking;
- Encourage you to reach out to subject matter experts outside of our research team, including your thesis committee and faculty and staff in other research groups;
- Assist the development of your research, teaching, writing, and oral and poster presentation skills;
- Meet regularly with you to evaluate and discuss your research and academic progress;
- Help you to manage and appropriately balance your research and academic activities;
- Assist your pursuit of academic and professional success and future employment;
- Abide by the University of Utah Faculty Code of Responsibilities and not discriminate against, harass, or impose prejudicial treatment because of race, color, religion, national origin, gender, sexual orientation, gender identity/expression, country of citizenship, age, political beliefs, or status as a person with a disability, protected veteran, or because of any other criterion or characteristic that is an impermissible basis, under applicable constitutional or statutory provisions (<https://regulations.utah.edu/academics/6-316.php>);
- Not impede communication between you and University Administrators in the Department, College, and University to discuss conflicts that may arise between us;
- Encourage that you participate fully in Department activities such as: seminars and thesis defenses, Department sponsored social activities, and study sessions with students outside of my group;
- Encourage improved language skills and inclusiveness by conducting group and professional discussions in English;
- Avoid excessive communication with you after hours or during weekends that implies urgency of action required by you nor will I expect a response from you until the next workday;
- Recognize that work from home or at the office by you after hours or on weekends is a voluntary activity for the mentee's educational and research activities and not required nor implied to be necessary for my benefit;
- Provide a fun and enjoyable work environment with opportunities for leave and vacation as approved in advance and consistent with Department, College, and University policy.

# Mentor/mentee agreement

My expectations are that you (mentee) will:

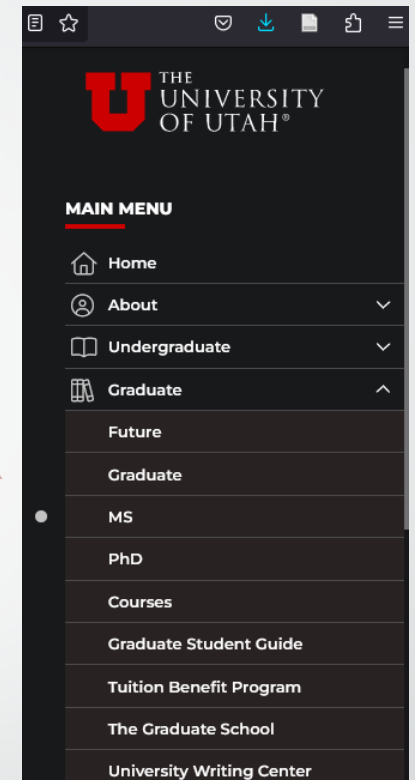
- Enthusiastically pursue your graduate education and research;
- Meet regularly with me through drop-in or scheduled meetings to assess your research and academic progress, define and refine your topic of research, and receive professional guidance;
- Communicate with your committee members (and if applicable other faculty mentors), including meeting with them as a group at least once a year to review research and progress toward your degree;
- Fulfill the commitment of research hours expected based on your level of compensation for your assigned research project;
- Work additional hours on research and academic pursuits needed to complete your degree in a timely fashion;
- Discuss with me prior to considering additional employment off campus;
- Discuss leaves and vacations with me in advance;
- Pursue and learn research methods appropriate for your topic area;
- Exercise the highest integrity in all aspects of your work including the collection, analysis, and presentation of research data and results;
- Support and nurture the success of our group by asking questions, being collaborative, and participating in open, honest, and respectful communication;
- Contribute to an environment of collegiality and collaboration with your fellow graduate students and scientists;
- Abide by the University of Utah Code of Student Rights and Responsibilities (<https://regulations.utah.edu/academics/6-400.php>);
- Alert an appropriate contact the Department Chair, Dean, or other University official) regarding any unwelcome conduct, academic or professional misconduct, or unethical actions by students, staff, or faculty;
- **Have fun!**

# What to do if issues arise?

- The University is expected to be a safe environment
- Graduate school should be a positive, even if stressful, experience with minimal conflicts
- How to handle conflicts with advisor, other students, staff, instructors?
- Deal with problems as they develop as soon as possible, don't let them grow into even bigger issues
- Assess with whom you would be most comfortable discussing conflicts
  - that individual at an appropriate time/place?
  - Advisor, Director of Graduate Studies, Chair, Dean, Campus Service agencies?
  - Ask one of us (including Nola and Alex) regarding whom to talk to- we may not know the answers, but can help find someone who can
- Expect to have timely discussion & resolution for you & others involved

Use the MS Timeline document linked from the menu on our homepage

M.S. Program	
Degree Requirements	<ul style="list-style-type: none"> <li>GPA maintained above 3.0</li> <li>Minimum 30 total credits with a minimum 20 non-thesis course credits (5000 and above) and a minimum of 10 thesis course credits (ATMOS 6970)</li> <li>Apply for graduation by November 1 (for following Spring), May 1 (for following Summer), July 1 (for following Fall) <a href="http://registrar.utah.edu/handbook/graduategraduation.php">http://registrar.utah.edu/handbook/graduategraduation.php</a></li> <li><a href="#">Provide Supervisory committee with thesis two weeks in advance of an oral thesis defense presentation</a></li> <li><a href="#">After thesis approved by the Supervisory committee, submit thesis to the Thesis Office for format approval</a></li> <li>Due dates for Thesis Office and Graduate School: <a href="https://gradschool.utah.edu/thesis">https://gradschool.utah.edu/thesis</a></li> </ul>
Tuition Benefit Program	<ul style="list-style-type: none"> <li>Students eligible for a maximum 24 total credit hours during the first two academic years (Fall, Spring, Summer semesters)</li> <li>Students are not required to take more than 9 credit hours in a fall or spring semester and not required to take ANY courses during the Summer semester</li> <li>Before classes start every semester, let office staff (<a href="mailto:atmos-office@lists.Utah.edu">atmos-office@lists.Utah.edu</a>) know via email if you are opting into the student health insurance and sign your tuition benefit offer through the CIS portal</li> <li>If you are a U.S. Citizen and not a Utah resident, you will need to graduate by Summer Year Two or complete a total of 40 credit hours prior to Fall Year 3 and complete a residency application to qualify for Extended Tuition Benefits in Year 3</li> </ul>
Expectations	<ul style="list-style-type: none"> <li>Meet with your Supervisory committee members at least once per semester</li> <li>Meet with Court Strong, Director of Graduate Studies at least during Fall semester to review progress</li> </ul>
Fall Year One	<ul style="list-style-type: none"> <li>Review with your advisor mentor/mentee agreement</li> <li>Register for ATMOS 6010, ATMOS 6600, ATMOS 7810, and other courses or thesis credit hours as directed by your advisor</li> <li><b>Supervisory Committee Due:</b> submit "Supervisory Committee Request" form to the Academic Advisor before last day of classes</li> <li><b>Program of Study Due:</b> submit "Program of Study Request" form to the Academic Advisor before the last day of classes</li> </ul>
Spring Year One	<ul style="list-style-type: none"> <li>Register for ATMOS 6030, ATMOS 6600, ATMOS 7810, and other courses as directed by your advisor</li> <li><b>Complete the Comprehensive Exam:</b> prior to due dates, submit Research Prospectus to your committee and complete the oral presentation to the department faculty</li> </ul>



## Atmospheric Sciences M.S.



The M.S. program at the University of Utah provides the technical expertise necessary to advance your career tracks. Motivated students are encouraged to apply. We intend to provide our current students with the resources to successfully complete the M.S. program.

[MS TIMELINE](#)

Academic Information  
Program of Study:



# Core Courses

## M.S. Degree

ATMOS 6010: Fundamentals of Dynamic Meteorology

ATMOS 6020: Fundamentals of Physical Meteorology

ATMOS 6030: Climate Dynamics

ATMOS 7810:  
Graduate Seminar (Take for 2 semesters for credit)

Other electives recommended by advisor and committee

# Supervisory Committee

## M.S. Degree

3 members total

2 members must be regular faculty (tenure or tenure track) in the Department\*

Due before the end of the Fall semester of the first year

Talk to your advisor over the next couple of months

## Ph.D. Degree

5 members total

3 members must be regular faculty (tenure or tenure track)\*

At least 1 member must be from outside the department

If outside member is not from the University of Utah, then a CV must be sent to [atmos-office@lists.utah.edu](mailto:atmos-office@lists.utah.edu)

Due before the end of the Fall semester of first year

\*Research faculty may serve as supervisory committee chair with Graduate School approval if the majority of your committee is still considered regular faculty (tenure or tenure track).

# Comprehensive Exam

- Consists of Core Course Grades, Written Research Prospectus, and Oral Presentation
- Potential Outcomes
  - **Pass with Distinction** – move directly to Ph.D. program (may also complete M.S. if desired)
  - **Pass** – may apply to Ph.D. program through CODA after M.S. completed
  - **Fail** – potential dismissal from program

# Written Research Prospectus

- Thesis Proposal (~3000 words) Includes:
  - Background/Significance
  - Questions/Hypotheses to be Addressed
  - Research Plan/Methodology
  - Preliminary Results (optional)
- Will be graded by the Supervisory Committee members
- Due near end of Spring Semester  
(April 2023)

# Oral Research Prospectus

- 30-Minute Presentation to the Entire Faculty
  - 20 minutes for presentation
  - 10 minutes for questions
- Will be graded by all faculty in attendance
- Will be May 9 2023

# Prospectus Preparation

- Fall Semester

- Emphasis on building core knowledge through classes (core and electives)
- Become familiar with the research projects of your advisor and others in your group
- Discuss research project options with advisor
- Discuss informally with your committee members
- Complete a literature review to identify outstanding questions and/or hypotheses
- Begin research as time permits

# Prospectus Preparation

- Spring Semester
  - Participate in ATMOS 6600 - 001 Scientific Writing taught by Dr. John Lin
  - Set weekly deadlines and stick to them
  - Meet with your advisor often to get feedback and guidance

# Tuition Benefit Program

- Your tuition and mandatory fees are covered
- You are eligible for health insurance if you want it
- You are required to register for at least 9 credit hours in fall and spring
- *You may register for more than 9 hours for classes, but don't register for extra thesis credit hours that extend beyond 9 credit hours*



# Be Proactive

- Take responsibility for your education and career development
- Some aspects of the graduate program are different for you compared to when other grad students started
- Take full advantage of the many opportunities to learn
- Ask questions if you are not sure what you should be doing to complete your research and degree
- Respond to email requests from Nola, Alex, and the College promptly
- Use your unid email or an alias to that using your name:  
[uXXXXXX@umail.utah.edu](mailto:uXXXXXX@umail.utah.edu)

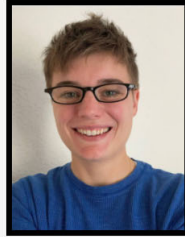
# Be Involved

- Let us know how we can help you avoid feeling isolated
- Attend as many opportunities as you can
- Contribute to a collaborative learning involvement with the other members of the first-year cohort
- Get connected with others in the department, college, university, and the community

# Action Item:

## Provide photo to atmos-office w Research Interests

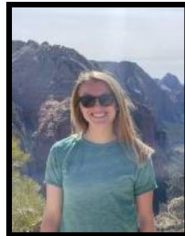
### Graduate Students



Kim Bestul

Graduate Student (M.S.)

Email: [kimberly.a.bestul@utah.edu](mailto:kimberly.a.bestul@utah.edu)

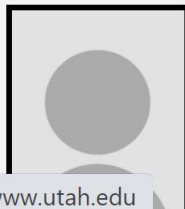


Julie Ann Cunningham

Graduate Student (M.S.)

Email: [julie.cunningham@utah.edu](mailto:julie.cunningham@utah.edu)

Research Interests: Mountain meteorology and hydrometeorology



Matthew DeMaria

Graduate Student (M.S.)

Email: [matthew.demaria@utah.edu](mailto:matthew.demaria@utah.edu)

# Action Item

- Do you have your U Card?
- Do we have your correct contact info?
  - phone number
  - emergency contact info
  - current address
- If not, send asap via email to [atmos-office@lists.utah.edu](mailto:atmos-office@lists.utah.edu) and enter in CIS as well

# Action Item

- Do you know where your office is?
- Do you need a key? If so, contact [atmos-office@lists.Utah.edu](mailto:atmos-office@lists.Utah.edu)
- Card key access to study areas in 708, 711, and 801 will be available

# Have Fun!

- Any questions?
- If you think of questions after orientation, feel free to email [atmos-office@lists.utah.edu](mailto:atmos-office@lists.utah.edu) with any inquiries or concerns, or contact Court or Brenda