

Welcome!



WALTER SCOTT, JR.  
COLLEGE OF ENGINEERING  
COLORADO STATE UNIVERSITY

Associate Dept. Head Prof. Eric Maloney

Graduate Advisor Sarah Tisdale

Department of Atmospheric Science

August 17, 2020

# Introductions

# Presenters

- Prof. Jeffrey Collett, Department Head  
491-8697, [jeffrey.collett@colostate.edu](mailto:jeffrey.collett@colostate.edu)
- Associate Department Head Prof. Eric Maloney  
491-3368, [eric.maloney@colostate.edu](mailto:eric.maloney@colostate.edu)
- Sarah Tisdale, Graduate Coordinator  
491-8360, [sarah.tisdale@colostate.edu](mailto:sarah.tisdale@colostate.edu)

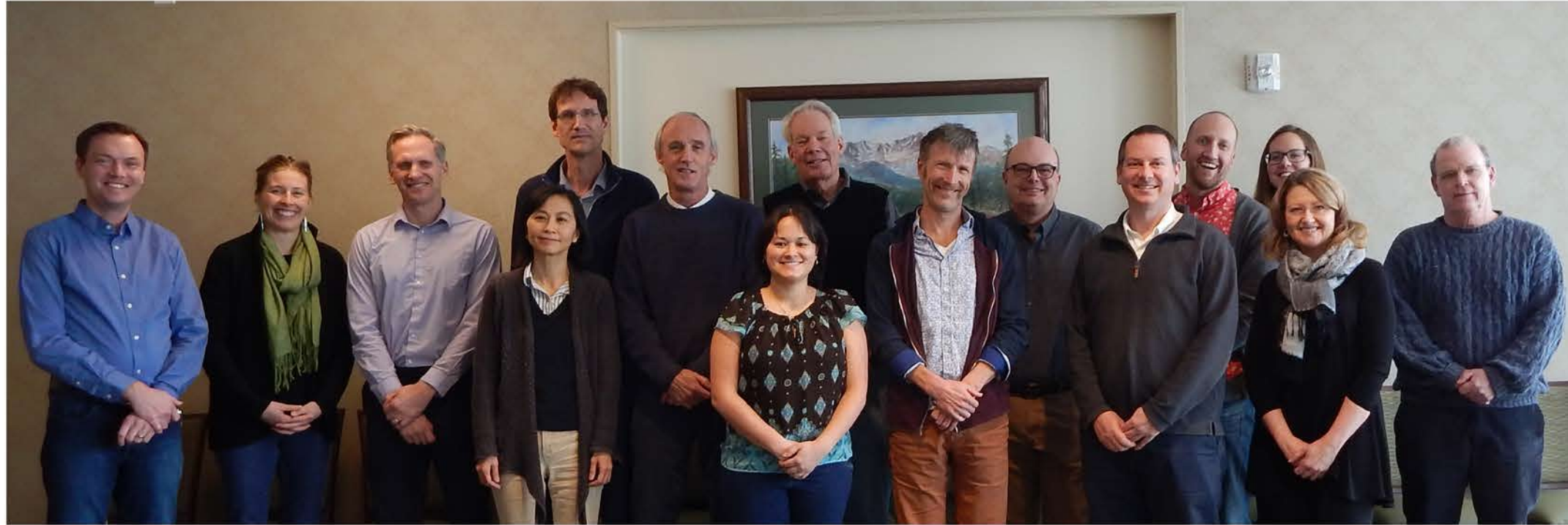


# Fall 2020 Incoming Class

Last Name	First Name	Degree Sought	Advisor	Previous University	Major
Alessi	Marc	PhD	Rugenstein	Cornell University	MS in Atmospheric Science
Connolly	Charlotte	MS	Barnes	Ohio University - Athens	BA in Geography
Corwin	Kimberley	PhD	Fischer	Boise State University	MS in Geology
Gordon	Emily	PhD	Barnes	University of Otago	MS in Physics
Hueholt	Daniel	MS	Barnes/Hurrell	North Carolina State University - Raleigh	BS in Meteorology
Hughes	Ann Casey	MS	Randall	University of Colorado	MS in Applied Mathematics
June	Nicole	MS	Pierce	Pennsylvania State University	BS in Meteorology and Atmospheric Science
Leitmann-Niimi	Nicolas	MS	Kummerow	University of Washington	BS in Physics
Leung	Gabrielle	MS	van den Heever	Ateneo de Manila University	BS in Physics
Patnaude	Ryan	PhD	Kreidenweis/D. DeMott	San Jose State University	MS in Meteorology and Climate Science
Shackelford	Kyle	MS	van Leeuwen/C. DeMott	University of Maryland - College Park/Metropolitan State University of Denver	BA in Spanish/Meteorology coursework
Shogrin	Madison	MS	Fischer	University of Colorado	BA in Environmental Studies
Veloso Aguila	Daniel	PhD	Maloney/Rasmussen	University of Concepcion	BS in Geophysics plus work equal to a MS
Zhang	Weixin	MS	Collet	Chengdu University of Information Technology	BS in Atmospheric Science



# ATS Faculty



*Pictured from left to right:* Russ Schumacher, Emily Fischer, Eric Maloney, Christine Chiu, Peter Jan van Leeuwen, Chris Kummerow, Kristen Rasmussen, Steve Rutledge, Dave Thompson, Jeff Collett, Michael Bell, Jeff Pierce, Sonia Kreidenweis, Libby Barnes (back), Dave Randall

*Not pictured:* Scott Denning, Jim Hurrell, A.R. Ravishankara, Maria Rugenstein (starting in August 2020)



Department Staff	
Darby Nabors	Manager of Business Operations
Heather Packard	Human Resources Manager
Amanda Davey	Front Office Manager, Travel and Purchasing Unit Manager
Erin Carleton	Travel and Purchasing Coordinator
Hannah Gluckstern	Administrative Assistant
Shannon Irely	Research Project Manager
Sharon King	Research Project Manager
Jared Pelton	Research Project Manager
Samantha Reynolds	Research Project Manager
Jayme DeLoss	Communications Manager
Sarah Tisdale	Graduate Adviser, Assistant to Department Head

**Department Office Hours: 8:30am – 4:30pm, Monday – Friday**



# Department Staff Continued



**Heather Packard**  
HR Manager



**Erin Carleton**  
Travel and Purchasing  
Coordinator



**Sharon King**  
Resource Project Manager



**Jayme DeLoss**  
Communications Manager



# 2020 – 2021 Graduate Student Representatives



**Julieta Juncosa  
Calahorrano**

Continuing from  
last year



**Kirsten Mayer**

Soon to be  
announced





# Department Student Groups

<https://www.atmos.colostate.edu/grad-prog/student-organizations/>

- AMS Chapter – FORTCAST (FORT Collins Atmospheric Scientists)
- AAAR – American Association for Aerosol Research
- GWIS – Graduate Women in Science





# FORT Collins Atmospheric Scientists (FORTCAST)



*Northern Colorado Local Chapter of the American Meteorological Society*



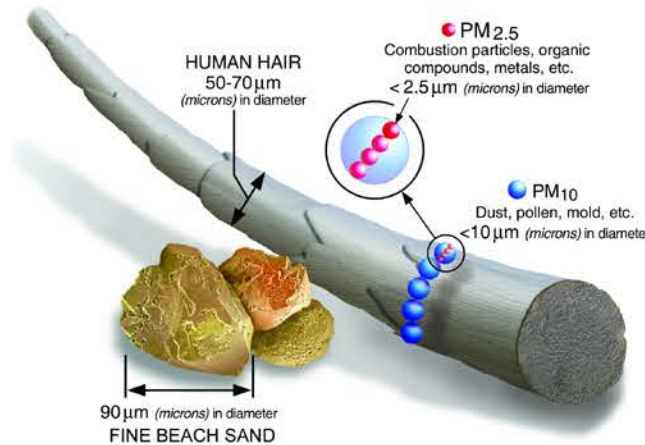
- Educating Our Community
- Enriching Student Members
- Supporting Northern Colorado
- Mentoring the Next Generation of Scientists

Join us:

[fortcast.atmos.colostate.edu](http://fortcast.atmos.colostate.edu)

# AAAR – CSU Student/Postdoc Chapter

- American Association for Aerosol Research
  - You do **NOT** need to be involved with Aerosol Research to be part of CSU-AAAR
- **Board Members:**
  - Kelsey Bilsback, Ali Akherati,
  - Anna Hodshire, Kate O'Dell
- **Faculty Advisor:**
  - Dr. Jeff Pierce
- **Activities:**
  - Virtual journal club/gatherings
  - Student/postdoc led research
  - Community service
  - Happy hour/social events
  - Professional development/networking
- **Getting involved:**
  - Email [Kelsey.Bilsback@colostate.edu](mailto:Kelsey.Bilsback@colostate.edu) to be added to the list serve



Virtual Journal Club & Happy Hours





## Graduate Women in Science

Social events

Outreach

Professional Development

**CONNECT.** Strive to build a powerful international network of women scientists.  
**LEAD.** Mentor the leaders of today so that they can inspire the leaders of tomorrow.  
**EMPOWER.** Empower women scientists to excel in their careers.



# Principles of Community

Inclusion

Integrity

Respect

Service

Social Justice

# Today's Agenda

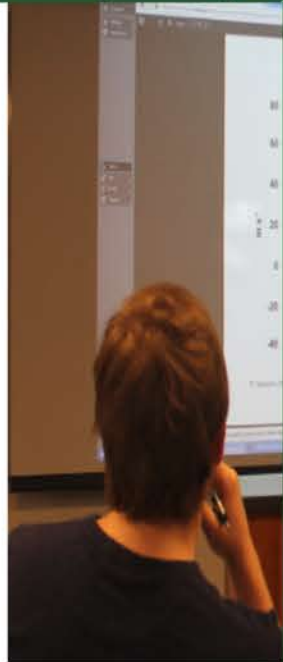
- Welcome!
- Graduate Program Tab
- About the Department
- Graduate School Philosophy
  - GRA
  - Adviser/Student Relationships
- Curriculum
- Graduate Student Guide
- Registration/Committee/Degree Procedures
- Fees and University Bill
- CSU Health Insurance
- Miscellaneous
- Upcoming Events



# Graduate Program Tab



- Admission Requirements and Application Process
- Courses
- Financial Aid
- Graduate Student Guide
- Housing Information
- M.S. Program
- Ph.D. Program
- M.S. and Ph.D. Defense
- M.S. to Ph.D. Transition
- New Student Orientation
- Preliminary Exam
- Residency
- Student Organizations
- Visit Us



July 28, 2017

REU interns present research



July 10, 2017

# Website's Graduate Program Tab

- Admission Requirements and Application Process
- Courses
- Financial Aid
- Graduate Student Guide
- Housing Information
- M.S. Program
- Ph.D. Program
- M.S. and Ph.D. Defense
- M.S. to Ph.D. Transition
- New Student Orientation
- Preliminary Exam
- Residency
- Student Organizations

# About the Department

# A Little Department History

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- Founded in 1962 by Dr. Herbert Riehl
- Ph.D. program started in 1964
- ATS main building built in 1967
- Added buildings: ACRC (CloudSat activities); Atmos Chem; ATS West (houses NSF STC, ESMEI)
- CIRA (NOAA Cooperative Institute) founded in 1980
- Nearly 762 M.S. and 363 PhD graduates
- ATS 50<sup>th</sup> Anniversary in 2012



# Graduate School Philosophy

# Philosophy

- Transition to self-learning
- Classes just one part of overall learning environment
- Other opportunities:
  - Weekly colloquia
  - Special seminars (announced by email)
  - Programming resources
    - Spring programming TA
    - Self-guided online
    - ATS 607: Computation Methods for Atmospheric Science



# Graduate Research Assistantships

- Financial support to pursue your education
  - Stipend tied to research project; nominally half-time in academic year and 75% time in summer
  - Outside employment discouraged
  - Discuss extenuating circumstances with advisor and Department Head
  - Renewal of GRA contract each year is expected, but not guaranteed (satisfactory progress, good standing in CSU, GPA > 3.0)
- Your research progress, spending time in your office, computer protocols, etc.
  - **Discuss work expectations with your adviser**
- Leave policies
  - Official leave/holiday policy for GRAs on next page
  - Generally, ATS students take 2 week vacation during the year
  - **Discuss leave policies with your adviser**



# CSU Official Leave Policy for GRAs

Graduate Research Assistants are entitled to specific paid holidays as specified in the University General Catalog calendar. These holidays include:

Monday, September 7, 2020	Labor Day
Thursday, November 26 – Friday, November 27, 2020	Thanksgiving Break
Wednesday, December 23 – Friday, December 25, 2020	Winter Break
Friday, January 1, 2021	New Year Holiday
Monday, January 18, 2021	Martin Luther King, Jr. Holiday
Monday, May 31, 2021	Memorial Day
Monday, July 5, 2021	Independence Day

There are no paid vacation days, in addition to those above, for GRA's. Any additional time off or absence from your location of employment must have the explicit permission from the student's adviser. If a student is making satisfactory progress towards his/her degree objectives, if obligations to the research program permit, and if specific timing does not interfere with timely completion of the degree, it is reasonable to expect that a request for a brief period of absence may be granted. In all cases, this leave beyond the official holidays would be classified as "comp time" and would be made up either prior to or following the leave.



# Your Points of Contact

- a. Adviser
- b. Associate Department Head – Prof. Eric Maloney
- c. Graduate Adviser – Sarah Tisdale
- d. Student Representatives (especially for community and campus resources)
- e. Department Head – Prof. Jeff Collett
- f. Campus resources (next slide)





# CSU Resources for Graduate Students

All of these resources and links can be found at <https://studentaffairs.colostate.edu/resources/current-students/graduate-student-resources/>

- Student Diversity Programs and Services
- Off Campus Life
- Student Legal Services
- The Recreation Center
- CSU Health Network
  - Counseling Services
- Case Management



# Professional Development

# Professional Development Opportunities

- Professional and scientific conferences – discuss with your adviser
- Fellowships
- Field campaigns – discuss with your adviser
- Young Scientists Symposium (YSSAR – usually mid-fall)
- CIRA daily weather briefings at 3:00pm in CIRA's Weather Lab
  - Contact Kate Musgrave ([kate.musgrave@colostate.edu](mailto:kate.musgrave@colostate.edu)) with additional questions
- Individual group meetings



# ATS 693 Responsible Conduct of Research

- Required course for M.S. and Ph.D. programs
- Offered every spring
- 1 credit, discussion-based class
- **Complete online RCR training first**
- Professional development topics (writing cv's, effective scientific posters and presentations, interview tips)



# Sexual Assault Prevention Course

- Mandatory course for all new CSU students to complete before the first day of class on August 24
- There are 2 parts; Part 1 is the portion that must be completed before classes start and takes about an hour to complete
- Access the link to this class through the RamReady checklist on the front page of RamWeb
- Additional information and FAQs can be found at <https://health.colostate.edu/sexual-assault-prevention-faqs/>.



# Department Awards

## Herbert Riehl Memorial Award

Named in memory of the founder, the department offers the Herbert Riehl Memorial Award annually to a graduate student who submits the best technical manuscript for publication in the referred literature during the previous eighteen-month period. The student can be either a current M.S. candidate or in the Ph.D. program for less than one year. Students in the Ph.D. program must have obtained their M.S. from the department.

## Alumni Award

The department offers the Alumni Award annually to a senior Ph.D. student for outstanding research. Students become eligible after passing the preliminary exam and submitting at least one paper to the peer-reviewed literature based on their dissertation work.

## Dietrich Award

The Dietrich Scholarship is sponsored by Air Resource Specialists, Inc. and named in honor of David Dietrich, retired president of the company. The award recognizes outstanding study and research by an Atmospheric Science graduate student in the area of air quality.



# Department Awards continued

## **Shrake-Culler Award (College of Engineering)**

Awarded to recognize outstanding graduate student dedication to higher education.

## **Sjostrom Family Award**

Awarded to students who have a demonstrated research and/or professional interest in improving the quality of life in less industrialized communities.

## **ASCENT Award**

Supported by the ASCENT student development initiative, this award provides travel support of international research experience, and can help with costs such as international airfare and/or housing costs abroad.

## **MAC Travel Award**

Supported by the local MAC Foundation, these awards are intended to support graduate student travel to showcase student research findings at atmospheric science conferences and workshops.



# Applying for Fellowships

## Why apply?

- Helps you organize your own research and develop your skills in proposal writing
- Recognition of excellence in academics and research
- Helps our department make more resources available to students
- The department will ensure your total stipend at least matches our regular stipend
- Gives research flexibility

## How to apply?

- Discuss with your advisor (will need references)
- Department can help (sometimes needs to be submitted as a research proposal through formal channels)





# Examples of Available Fellowships

## NSF Graduate Research Fellowship (GRFP)

- <http://www.nsfgrfp.org/>
- Deadline: October 20, 2020 (Geosciences)

## NASA Earth and Space Science Fellowship (ESSF)

- <http://nspires.nasaprs.com/external/solicitations/solicitations.do?method=open&stack=push>
- May not be available in 2020-21 as NASA is still in process of deciding what solicitations will be available

## DOE Computational Science Graduate Fellowship (SGCF)

- <http://www.krellinst.org/csgf>
- 2020-2021 application expected to be available late October 2019
- Deadline: expected to be January 2020
- See note for the NASA ESSF above

## DoD National Defense Science and Engineering Graduate Fellowship

- <http://ndseg.asee.org/>
- Application: 2021 application will open August 2020  
Deadline: November 3, 2020



# Examples of Available Fellowships continued

## Hertz Foundation PhD Fellowships

- <http://hertzfoundation.org>
- Deadline: October 2020

## Rocky Mountain States Section of the Air & Waste Management Association (RMSS-AWMA)

- <http://www.awma-rmss.org/>

## AAUW (formerly American Associate of University Women) Fellowships and Grants

- <https://www.aauw.org/resources/programs/fellowships-grants/>

## Science.gov STEM Graduate Student Fellowships

- <https://stemgradstudents.science.gov/>



# Travel Grants

There are often opportunities for students to receive assistance to attend a conference. Most of the upcoming conferences will be virtual, but in the future, check the conference's website for links, and be sure to discuss with your adviser.

## Common conferences with student travel grants:

**American Meteorological Society**, Annual Meeting, held in January or February

<https://www.ametsoc.org/ams/index.cfm/meetings-events/>

- Link to student travel grants:
  - <https://www.ametsoc.org/ams/index.cfm/information-for/students/ams-student-travel-grants/>

**American Geophysical Union**, Annual Meeting, held in December

<https://education.agu.org/grants/student-travel-grants-application-requirements/>



# Curriculum

# The Master of Science Degree

The M.S. degree with thesis (Plan A, with thesis) in Atmospheric Science requires 30 credits:

- At least 19 in structured academic classes
  - Must be for credit (no audits accepted)
  - Does not include research, independent study
- Up to 11 credits of research can be included
  - ATS 699, A-V (depending on adviser)
  - Excess research credits earned during the M.S. may be applied toward the Ph.D. degree
  - Of the total 30 credits, 20 must be Department of Atmospheric Science courses (ATS prefix)



# The Master of Science Degree continued

## Plan A (Thesis Plan)

All M.S. students must complete the following required courses (required courses account for 13 credit hours):

601 Atmospheric Dynamics I (2 credits)

606 Introduction to Climate (2 credits)

620 Thermodynamics and Cloud Physics (2 credits)

621 Atmospheric Chemistry (2 credits)

622 Atmospheric Radiation (2 credits)

693 Responsible Conduct of Research (1 credit)

One of the following:

640 Introduction to Synoptic Dynamics (2 credits)

641 Introduction to Mesoscale Dynamics (2 credits)

All M.S. students must also complete 6 elective credit hours in structured classes. Electives may include ATS structured class at the 500/600 level. With adviser approval, electives may also include structured 700 level classes and/or structured graduate courses in other departments. Audits are not accepted in fulfillment of M.S. degree requirements.



## List of Course Offerings for First Year M.S. Students (Entering Fall 2020)

### Fall Semester 2020

<b>Course</b>	<b>Title</b>	<b>Instructor</b>	<b>Credits</b>
ATS 555	Air Pollution	J. Pierce	3
ATS 601 <sup>1</sup>	Atmospheric Dynamics I	E. Barnes	2
ATS 620 <sup>1</sup>	Thermodynamics and Cloud Physics	M. Bell	2
ATS 621 <sup>1</sup>	Atmospheric Chemistry	E. Fischer	2
ATS 640 <sup>1</sup>	Synoptic Meteorology	K. Rasmussen	2
ATS 652	Atmospheric Remote Sensing	C. Kummerow	2
ATS 721	Theoretical Topics in Radiative Transfer	C. Chiu	3
ATS 724	Cloud Microphysics	S. van den Heever	2
ATS 735	Mesoscale Dynamics	R. Schumacher	3
ATS 745	An Introduction to Global Atmospheric Modeling	D. Randall	3
ATS 750	Climate Dynamics: Atmospheric Variability	D. Thompson	3
ATS 781A3	Atmosphere/Ocean as Dynamical and Statmech System	P.J. van Leeuwen	2

<sup>1</sup>M.S. core class



**List of Course Offerings for First Year M.S. Students  
(Entering Fall 2020)**

**Spring Semester 2021**

<b>Course</b>	<b>Title</b>	<b>Instructor</b>	<b>Credits</b>
ATS 556	Climate Intervention	J. Hurrell	2
ATS 581A1	Science, Policy, and Management of Environmental Issues	A.R. Ravishankara	2
ATS 605	Atmospheric Circulations	D. Randall	3
ATS 606 <sup>1</sup>	Introduction to Climate	D. Thompson	2
ATS 622 <sup>1</sup>	Atmospheric Radiation	C. Chiu	2
ATS 632	Interpreting Satellite Observations	E. Fischer	2
ATS 641 <sup>1</sup>	Mesocale Meteorology	R. Schumacher	2
ATS 651	Data Assimilation	P.J. van Leeuwen	3
ATS 655	Objective Analysis in the Atmospheric Sciences	E. Barnes	3
ATS 693 <sup>1</sup>	Responsible Research in Atmospheric Science	S. Kreidenweis	1
ATS 715	Atmospheric Oxidation Processes	J. Collett	2
ATS 781	TBD	M. Rugenstein	TBD
ATS 786	Practicum	S. Rutledge	TBD

<sup>1</sup>M.S. core class





## Signing up for ATS 6/799 this Fall

M.S.	Ph.D.		
ATS 699 A	ATS 799 A	Global Climate Change	M. Rugenstein
ATS 699 C	ATS 799 C	Tropical Meteorology	M. Bell
ATS 699 D	ATS 799 D	Weather Systems	R. Schumacher
ATS 699 E	ATS 799 E	Remote Sensing	C. Kummerow
ATS 699 F	ATS 799 F	Ocean-Atmosphere Interactions	E. Maloney
ATS 699 G	ATS 799 G	General Circulation	D. Randall
ATS 699 I	ATS 799 I	Atmospheric Chemistry	S. Kreidenweis
ATS 699 J	ATS 799 J	Aerosol and Cloud Microphysics	J. Pierce
ATS 699 L	ATS 799 L	Data Assimilation	P.J. Van Leeuwen
ATS 699 M	ATS 799 M	Mesoscale Meteorology	K. Rasmussen
ATS 699 O	ATS 799 O	Mesoscale Modeling	S. van den Heever
ATS 699 P	ATS 799 P	Radiation Transfer	C. Chiu
ATS 699 R	ATS 799 R	Aerosol and Cloud Chemistry	J. Collett
ATS 699 S	ATS 799 S	Climate Dynamics	D. Thompson
ATS 699 T	ATS 699 T	Climate Analysis	J. Hurrell
ATS 699 U	ATS 799 U	Tropospheric Chemistry	E. Fischer
ATS 699 V	ATS 799 V	Atmospheric Variability	E. Barnes



## Worksheet for M.S. Program

Fall 2020	Credits	Spring 2021	Credits
ATS 699	<u>15</u>	ATS 699/ATS 693	<u>15</u>
Fall 2021	Credits	Spring 2022	Credits
ATS 699	<u>15</u>	ATS 699	<u>15</u>

ATS 601 Atmospheric Dynamics I	2 credits
ATS 606 Introduction to Climate	2 credits
ATS 620 Thermodynamics and cloud physics	2 credits
ATS 621 Atmospheric Chemistry	2 credits
ATS 622 Atmospheric Radiation	2 credits
ATS 693 Responsible Conduct of Research	1 credit
One of the following:	
ATS 640 Intro to Synoptic Meteorology	2 credits
ATS 641 Intro to Mesoscale Meteorology	2 credits
Total credits:	(should be 13 credits)
Elective Credits:	6 credits
<u>Total 699</u>	<u>11 credits</u>
Total for M.S. degree (minimum)	30 credits



## M.S. Program: Sample First-Year Curriculum

### Fall Courses

<u>Course</u>	<u>Title</u>	<u>Credits</u>
ATS 601 <sup>1</sup>	Atmospheric Dynamics I	2
ATS 620 <sup>1</sup>	Thermodynamics and Cloud Physics	2
ATS 621 <sup>1</sup>	Atmospheric Chemistry	2
ATS 640 <sup>1</sup>	Synoptic Meteorology	2
ATS 699	Thesis (use advisor suffix)	7 (adjust to make up 15 total credits)
	TOTAL	15

**BE SURE TO DISCUSS COURSE PLAN WITH YOUR ADVISER!**



## M.S. Program: Sample First-Year Curriculum continued

### Spring Courses

<u>Course</u>	<u>Title</u>	<u>Credits</u>
ATS 606 <sup>1</sup>	Introduction to Climate	2
ATS 622 <sup>1</sup>	Atmospheric Radiation	2
ATS 641 <sup>1</sup>	Mesoscale Meteorology	2
ATS 693 <sup>1</sup>	Responsible Conduct of Research	1
ATS 6XX	Elective	3
ATS 699 X	Thesis (use advisor suffix)	5
	TOTAL	15

**BE SURE TO DISCUSS COURSE PLAN WITH YOUR ADVISER!**



## Sample Worksheet for M.S. Program

Fall 2020	Credits	Spring 2021	Credits
ATS <b>640</b> Synoptic Meteorology	2	ATS <b>606</b> Introduction to Climate	2
ATS <b>601</b> Atmospheric Dynamics I	2	ATS <b>693</b> Responsible Conduct in Research	1
ATS <b>620</b> Thermodynamics and Cloud Physics	2	ATS <b>641</b> Mesoscale Meteorology	2
ATS <b>621</b> Atmospheric Chemistry	2	ATS 6XX (Elective)	3
ATS 699 X Thesis (use advisor suffix)	7	ATS 699 X Thesis (use advisor suffix)	7
	15		15
Fall 2021	Credits	Spring 2022	Credits
ATS 6XX (Elective)	3	ATS <b>622</b> Atmospheric Radiation	2
ATS 699 X Thesis	12	ATS 699 X Thesis	13
	15		15

ATS <b>601</b> Atmospheric Dynamics I	2 credits
ATS <b>606</b> Introduction to Climate	2 credits
ATS <b>620</b> Thermodynamics and cloud physics	2 credits
ATS <b>621</b> Atmospheric Chemistry	2 credits
ATS <b>622</b> Atmospheric Radiation	2 credits
ATS <b>693</b> Responsible Conduct of Research	1 credit
One of the following:	
ATS <b>640</b> Intro to Synoptic Meteorology	2 credits
ATS <b>641</b> Intro to Mesoscale Meteorology	2 credits
Total credits:	13 credits
Elective Credits: ATS <b>641</b> , ATS <b>6XX</b> , ATS <b>6XX</b>	7 credits
Total 699 X	10 credits
Total for M.S. degree (minimum)	30 credits



## M.S. Program: Curriculum Options

### Elective Courses

The following elective courses are offered on a variable schedule and may be chosen to fulfill the 6 elective credit hours required. *Note: With instructor and adviser permission, M.S. students may take 700 level courses.*

	<u>Credits</u>
ATS 555 Introduction to Air Pollution	3
ATS 556 Climate Intervention	2
ATS 560 Air Pollution Measurement	2
ATS 581 Chemical Kinetics and Photochemistry of the Atmosphere	2
ATS 602 Atmospheric Dynamics II	3
ATS 604 Atmospheric Modeling	3
ATS 605 General Circulation of the Atmosphere	3
ATS 607 Computational Methods in the Atmos. Sci.	3
ATS 610 Physical Oceanography	3
ATS 623 Atmospheric Boundary Layer	2
ATS 631 Introduction to Atmospheric Aerosols	2
ATS 632 Interpreting Satellite Observations	2
ATS 650 Measurement Systems and Theory	2
ATS 651 Data Assimilation	3
ATS 652 Atmospheric Remote Sensing	2
ATS 655 Objective Analysis in the Atmospheric Science	2
ATS 681 Mountain Meteorology	2



# The Doctoral Degree

The Ph.D. degree requires 72 credits:

- At least two structured academic courses per academic year. Only one may be taken as an audit each year. These courses may be 500, 600, or 700 level.
- Sign up for a total of 15 credits using ATS 799 X to make up balance after classes

What classes should you choose? (consult with your adviser)

Preliminary Exam

- Must be taken within 18 months of admission to the program
- Consists of three parts: proposal, written examination, and oral examination





### Audit Grading Form

\_\_\_\_\_  
(Last)                      (First)                      (CSU ID)

\_\_\_\_\_  
Major                      Email

Level:  Undergraduate    Graduate    Professional (DVM)

Semester:  Fall    Spring    Summer   Year: 20 \_\_\_\_

Signature of Student: \_\_\_\_\_

**Instructor Audit Approval Section:**

Section ID	Section Number	Credits	Course
_____	_____	_____	_____

I authorize this student to use Audit grading for the course listed above. Date: \_\_\_\_\_

Printed Name of Instructor: \_\_\_\_\_

Signature of Instructor: \_\_\_\_\_

**IMPORTANT – PLEASE READ**

- Tuition and fees are assessed for audited credits.
- Audited courses do not count toward degree requirements.
- Audited courses will not work as prerequisites.
- Audits do not count for full-time status for loan deferments, financial aid, etc.
- Changes to or from audit status must be made during the registration or schedule change period.
- Students must be registered for the course before submitting an Audit Grading Form.

**Resident Undergraduate Students:**

CCHE prohibits any institution from requesting a COF stipend on your behalf for any course receiving a grade of Audit. You will be responsible for all tuition and fees associated with this course.

**AUDIT DIRECTIONS:**

Auditing a course requires prior approval of the instructor of the course. If an instructor determines that an auditor's attendance or participation in the course is unsatisfactory, the course will not be recorded on your academic record.

Submit this completed form no later than the end of the add/drop period for the course to the Office of the Registrar. Bring the form in person with your photo ID to the Office of the Registrar, Centennial Hall or email it to [registrarsoffice@colostate.edu](mailto:registrarsoffice@colostate.edu) from your CSU email address.

# Audit Grading Form

Student Option Audit Grading forms can be found at:

<https://registrar.colostate.edu/audit-satisfactory-unsatisfactory-grading/>

- Students are responsible for filling out their information at the top and the “Instructor Audit Approval Section”. You are also responsible for getting the instructor’s signature.
- Be sure to register for the class first
- Once the form is complete, email it to [registrarsoffice@colostate.edu](mailto:registrarsoffice@colostate.edu)

**Audit forms must be submitted by Wednesday, September 9 (census)**





## Fall 2020 Class Schedule

	MONDAY		TUESDAY		WEDNESDAY		THURSDAY		FRIDAY
800-850									
900-950	ATS 601 Atmospheric Dynamics I Barnes 101 ATS	ATS 745 Atmospheric General Circulation Modeling Randall 121 ATSW	ATS 652 Atmospheric Remote Sensing Kummerow 121 ATSW	ATS 781A3 Atmosphere/Ocean as Dynamical and StatMech Systems van Leeuwen 212B ACRC	ATS 601 Atmospheric Dynamics I Barnes 101 ATS	ATS 745 Atmospheric General Circulation Modeling Randall 121 ATSW	ATS 652 Atmospheric Remote Sensing Kummerow 121 ATSW	ATS 781A3 Atmosphere/Ocean as Dynamical and StatMech Systems van Leeuwen 212B ACRC	ATS 745 Atmospheric General Circulation Modeling Randall 121 ATSW
1000-1050	ATS 724 Cloud Microphysics van den Heever Online		ATS 620 Thermodynamics and Cloud Physics		ATS 724 Cloud Microphysics van den Heever Online		ATS 620 Thermodynamics and Cloud Physics		
1100-1150	ATS 721 Theoretical Topics in Radiative Transfer Chiu Online	ATS 621 Atmospheric Chemistry Fischer 101 ATS	Bell 101 ATS 10:30-11:20	ATS 750 Climate Dynamics: Atmos Variability Thompson 121 ATSW 11:00-12:15	ATS 721 Theoretical Topics in Radiative Transfer Chiu Online	ATS 621 Atmospheric Chemistry Fischer 101 ATS	Bell 101 ATS 10:30-11:20	ATS 750 Climate Dynamics: Atmos Variability Thompson 121 ATSW 11:00-12:15	ATS 721 Theoretical Topics in Radiative Transfer Chiu Online
1200-1250									
100-150	ATS 735 Mesoscale Dynamics Schumacher 101 ATS 1:30-2:45		ATS 350 Introduction to Weather and Climate Maloney Beh. Sci. Bld. 131	ATS 640 Synoptic Meteorology Rasmussen 101 ATS 1:00-2:15	ATS 735 Mesoscale Dynamics Schumacher 101 ATS 1:30-2:45		ATS 350 Introduction to Weather and Climate Maloney Beh. Sci. Bld. 131	ATS 640 Synoptic Meteorology Rasmussen 101 ATS 1:00-2:15	
200-250									
300-350			FACULTY MEETINGS 211 ACRC 3:00-5:00				WEEKLY COLLOQUIUM 3:00-4:00		
400-450	ATS 555 Air Pollution Pierce B101 Engr (4:00-5:15)				ATS 555 Air Pollution Pierce B101 Engr (4:00-5:15)				



Group Photo and Break Time!

# Graduate Student Guide

# Graduate Student Guide

Available online at:

[https://www.atmos.colostate.edu/documents/](https://www.atmos.colostate.edu/documents/GraduateStudentGuide2020.pdf)

[GraduateStudentGuide2020.pdf](https://www.atmos.colostate.edu/documents/GraduateStudentGuide2020.pdf)



- Admission Requirements and Application Process
- Courses
- Financial Aid
- Graduate Student Guide
- Housing Information
- M.S. Program
- Ph.D. Program
- M.S. and Ph.D. Defense
- M.S. to Ph.D. Transition
- New Student Orientation
- Preliminary Exam
- Residency
- Student Organizations
- Visit Us

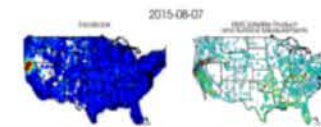
August 7, 2017

Stacey Hitchcock awarded



August 3, 2017

SOURCE: Where there's fire, there's smoke – and social media



Atmos research scientist Bonne Ford, who works in the lab of Associate Professor Jeff Pierce, led a study that shows striking correlation between numbers of Facebook users posting about visible smoke and commonly used datasets for estimating harmful smoke exposure. Read the SOURCE article here.



# Registering for Class

# Registration

Registration and Class Schedule is online at:

<https://ramweb.colostate.edu>

- You must register for your first class by midnight the day before your first day of class to avoid the \$50 late registration fee
- The last date you can add or drop a class for the Fall 2020 semester is Wednesday, September 9 (census)
  - Census is always 2 ½ weeks into the semester



# Graduate School Procedures

# Formation of Graduate Committee: GS 6 Program of Study

- Must be completed before you register for spring 2022
- Start committee member discussion with adviser fall 2021
- List courses taken/plan to take to meet degree requirements
- Declare graduate committee
- GS 6 Form (Program of Study) is completed online through your RAMweb account (ramweb.colostate.edu/)
- Graduate School will notify the student, the adviser, and the department via e-mail once the GS 6 form has been approved

\*\* Audited classes do not count toward Graduate School degree credit requirements (30 for M.S., 42 additional for Ph.D.)

Additional instructions at: <https://graduateschool.colostate.edu/forms/g6-program-of-study-resources/>





## Summary of Procedures for the M.S. and Ph.D. Degrees

NOTE: Each semester the Graduate School publishes a schedule of deadlines. Deadlines are available on the Graduate School website. Students should consult this schedule whenever they approach important steps in their careers.

<https://graduateschool.colostate.edu/current-students/>

STEP	DUE DATE
Application for admission (online)	Six months before first registration
Appointment of adviser	At time of admission
Selection of graduate committee	Before the time of fourth regular semester registration
Filing of program of study (GS Form 6)	Before the time of fourth regular semester registration
Announcement of Preliminary Exam ( <i>Ph.D. only</i> )	To Department Office at least two weeks in advance of target date <a href="https://www.atmos.colostate.edu/gradprog/prelim-form.php">https://www.atmos.colostate.edu/gradprog/prelim-form.php</a>
Preliminary examination ( <i>Ph.D. only</i> )	Two terms prior to final examination
Report of preliminary examination (GS Form 16) ( <i>Ph.D. only</i> )	To Graduate School within two working days after results are known



## Summary of Procedures for the M.S. and Ph.D. Degrees continued

Changes in committee (GS Form 9A)	When change is made
Proposal Assessment Committee Meeting <i>(Ph.D. only)</i>	Typically 6-12 months after the Preliminary Examination
Application for Graduation (GS Form 25)	Refer to published deadlines from the Graduate School website
Reapplication for Graduation (online)	Failure to graduate requires Reapplication for Graduation (online) for the next term for which you are applying
Submit thesis/dissertation to committee	Four weeks prior to final examination
Announcement of Final Exam	Two weeks prior to final exam; notify graduate adviser for faculty announcement.
Report of final examination (GS Form 24)	To Graduate School within two working days after results are known; refer to published deadlines from the Graduate School website
Submit a signed Thesis/Dissertation Submission Form to the Graduate School prior to submitting the electronic thesis/dissertation	Refer to published deadlines from the Graduate School website. Submit the Survey of Earned Doctorates (Ph.D. only)
Submit the thesis/dissertation electronically	Refer to published deadlines from the Graduate School website



## Fees 2020-2021 Academic Year

Fees (student paid, based on 15 credits)

	<b>Engr. Tech.</b>	<b>General</b>	<b>Univ. Facility</b>	<b>Univ. Tech.</b>	<b>Alt. Transp.</b>	<b>Semester Total</b>
Fall	\$170.00	\$879.50	\$311.25	\$32.00	\$33.55	\$1,426.30
Spring	\$170.00	\$879.50	\$311.25	\$32.00	\$33.55	\$1,426.30

\*\* Fees are paid by the student. Semester totals are due by the 3<sup>rd</sup> Wednesday of each semester; GRAs receive an extension

### Fellowships

Students with fellowships or other external support sometimes need to pay tuition directly. All of you will receive a spreadsheet with detailed information specific to your awards (your research project manager will contact you to discuss details).

### Tuition

Tuition charges will appear in your student account, but in most cases will be paid from a research or department account, with payment handled by the department.



# Paying CSU Bill

## University Billing Statement



ID	Statement Date	Statement Balance	Payment Due Date
809888006	08/17/2015	2,694.74	10-SEP-2015

TRANSACTION DATE	TRANSACTION DESCRIPTION	REFERENCE	CHARGES	PAYMENTS OR CREDITS
	BALANCE FORWARD		0.00	
	----- CURRENT CHARGES -----			
17-AUG-2015	Base Tuition, Resident GR FT	FA 2015	11,457.90	
28-JUL-2015	Graduate Program Diff Tuition	FA 2015	990.00	
17-AUG-2015	General Fee	FA 2015	792.49	
17-AUG-2015	University Facility Fee	FA 2015	311.25	
17-AUG-2015	University Technology Fee	FA 2015	25.00	
17-AUG-2015	Technology Charge - Engineering	FA 2015	170.00	
17-AUG-2015	Health Insurance - Domestic	FA 2015	1,396.00	
	----- CURRENT PAYMENTS -----			
17-AUG-2015	Transfer to 3rd Party Sponsor	FA 2015		990.00
17-AUG-2015	Transfer to 3rd Party Sponsor	FA 2015		11,457.90

- If you are being paid as a GRA, the Department will pay for these
- Student pays (note: if you are a GRA registered for 5 or more credits, Graduate School will cover health insurance)
- Department paid charges (should be paid within three weeks of the start of the semester)

**Statement Message**

Charges that appear on this statement are due on the date noted above. If you require additional time to pay, your account will incur a monthly payment deferral charge of 1.5%. Charges must be paid in full before leaving the university or before registering for a future term.

**If you have questions regarding your student bill, please see Heather Packard, office 109 ATS West**



# CSU Health Insurance

All new, full-fee paying resident-instruction graduate students (i.e. all new Atmospheric Science graduate students) will be **required** to enroll in the CSU Student Health Insurance Plan, or to **opt out by demonstrating comparable health insurance coverage**.

- 2020-21 health insurance information is available online at: <http://health.colostate.edu/student-health-insurance/>
- If you are a ¼ time (or more) GRA and enrolled in 5+ resident credits, you will receive a contribution covering 100% of the health insurance premiums from Graduate School in the second month of the semester

***\*\* Please note that the Graduate School's 100% contribution is deposited into your student account in September for fall and February for spring and that you are often taxed on this amount. This results in your paycheck being less in these months than others.\*\****

More details can be found at: <http://graduateschool.colostate.edu/financial/assistantships/assistantship-health-contribution/>



# CSU Health Insurance continued

**Your enrollment in the CSU plan will be automatic if you are enrolled in 6+ credits.** However, CSU Health Network now encourages all students to enroll ahead of the start of the fall and spring semesters to ensure continued coverage.

**If you have equivalent coverage from another source, you can submit your request to opt out.** If granted, you will **not** receive the semester health contribution from Graduate School.

The waiver may be accessed at: <http://health.colostate.edu/student-health-insurance/waiver-process-domestic-students/>

**If you plan to request a waiver, please do so early so that your registration is not delayed.**

**In order for a proposed plan to be considered for the waiver process, it must meet all minimum Colorado State mandated benefits.**



# Miscellaneous (but Useful) Department Information

# Building Safety Plan

<http://www.atmos.colostate.edu/documents/ATSBuildingSafetyPlan.pdf>

- Provides information on what to do in various types of emergencies that may occur
- Please review for your own safety





# Email Accounts

**All new Atmospheric graduate students have a Microsoft Office 365 email**

- This address looks like: [firstname.lastname@colostate.edu](mailto:firstname.lastname@colostate.edu)
- If you prefer to use Gmail, you can set up an @rams.colostate.edu account
- For more information, visit: <http://help.mail.colostate.edu/>
- Prof. Libby Barnes' website also has a useful Google Drive tutorial at <https://sites.google.com/rams.colostate.edu/barnesresearchgroup/courses?authuser=0>



# Department Services

- If having issues with either office keys or your keycard access with CSU ID: See Hannah in the main office if problems accessing buildings
- Mailboxes – located in the 113F ATS
  - Except students located in ATS Chem – mailboxes located in Chem building
  - Student mailboxes are grouped by the letter of your last name
- Office supplies – please ask your adviser first
- Computer issues – check with your adviser on who your group's system administrator is
- Office or building issues – please contact Hannah or Darby
- Questions on Graduate School procedure or forms requiring department head's signature – please see Sarah



# Foothills Campus Bus Service

- Transfort bus route 33 runs to the Atmos campus
- The first bus departs the CSU Transit Center at 7:15am and will then continue to depart each hour with the last bus at 6:15pm
- Transfort bus services are free to all fee-paying students; you will need your CSU ID to take advantage of this
- **Note:** bus only runs when school is in session; there will be no bus service during holidays and breaks
- For more information on bus stops, times, and route, go to: <http://www.ridetransfort.com/routes/route-33>





# Thank you



Colorado State University