

Barrett F. Gutter, Ph.D.

Assistant Teaching Professor – Mississippi State University – Department of Geosciences
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Curriculum Vitae

Education

Mississippi State University

Ph.D., Earth and Atmospheric Sciences (Geospatial Minor)

May 2017

GPA 4.0

Mississippi State University, Starkville, MS

- Classes and Applied Knowledge

- Adv. Mesoscale Meteorology
- Tropical Meteorology
- Remote Sensing
- Principles of GIS
- Advanced GIS
- GIS Programming (Python)

Dissertation: “Assessing tornado watches for accuracy, impacts on daily activities, and potential economic impacts”

Advisor: Dr. Michael E. Brown

M.S., Geosciences (Operational Meteorology)

May 2013

Mississippi State University, Starkville, MS

GPA 4.0

- Classes and Applied Knowledge

- Synoptic Meteorology
- Mesoscale Meteorology
- Adv. Satellite and Radar Meteorology
- Adv. Dynamic Meteorology
- Forecasting I & II
- Physical Meteorology
- Forecasting Severe Storms
- Statistical Climatology (R Programming)

Thesis: “Investigation of vegetation discontinuities related to multiple EF4 and EF5 tornado scars and enhanced convection for April 27, 2011”

Advisor: Dr. Michael E. Brown

B.S., Geography (Environmental & Natural Resources)

May 2011

University of Alabama, Tuscaloosa, AL

GPA 3.6

- Minor: Geology
- Classes and Applied Knowledge

- Physical Geography
- Climatology
- Hydroclimatology
- Severe Weather
- Geomorphology
- Volcanology
- Hurricanes & Society

Teaching

Mississippi State University

Course Evaluations

Median Score across 10 courses: 4/4

Fall 2021 - Spring 2022

Average Global Index (GI) across 46 courses: 4.4/5

Fall 2017 - Summer 2021

Courses Taught

On-Campus/Campus-1

GR 1123 Introduction to World Geography

GR 1604 Weather and Climate

GR 4423/6423 Weather Forecasting I

GR 4433/6433 Weather Forecasting II

GR 4443/6443 Weather Prediction I

GR 4813/6813 Natural Hazards

Distance Learning/Campus-5

GR 4713 Synoptic Meteorology

GR 4923/6923 Severe Weather

GR 4963/6963 Mesoscale Meteorology

GR 8123 Meteorology II: Forecasting and Storms

GR 8133 Foundations of Forecasting

GR 8143 Advanced Forecasting Techniques

GR 8990 Forecasting Unique Regional Weather

GR 8400 Local Field Methods

GR 8423 Virtual Field Methods Seminar

Field Courses/Campus-5

GR 8410 Field Methods Seminar – Western Washington

GR 8410 Field Methods Seminar – Severe Storm Methods

GR 8410 Field Methods Seminar – Yosemite National Park

Courses Developed

GR 4443/6443 Weather Prediction I (On-Campus/Campus-1)

GR 4423/6423 Weather Forecasting I On-Campus/Campus-1)

GR 4433/6433 Weather Forecasting II (On-Campus/Campus-1)

GR 8410 Field Methods Seminar - Yosemite National Park (Field Course/Campus-5)

GR 8583 Environmental Geosciences Capstone Experiences (Distance Learning/Campus-5)

GR 8990 Forecasting Unique Regional Weather (Distance Learning/Campus-5)

Mentoring - On-Campus/Campus-1

Graduate Students (Thesis)

Caitlin Ford (Master's)

Spring 2021

Thesis: An Investigation of Sea-Breeze Driven Convection Along the Northern Gulf Coast

Brian DeVeau (Master's) Spring 2020
Thesis: Developing a New Atmospheric Dispersion Index for the Southeastern United States

Graduate Student Committee Member (Thesis/Dissertation)

Mackenzie O'Rourke (M.S.)	Current
Magye McCallie (M.S.)	Current
Cole Vaughn (Ph.D.)	Current
Craig Croskery (Ph.D.)	Current
Chris Lisauckis (Ph.D.)	Current
Caroline McDonald (M.S.)	Spring 2020
Chris Nunley (Ph.D.)	Fall 2018
Andrew Collins (M.S.)	Spring 2017
Craig Croskery (M.S.)	Spring 2017

Graduate Student Committee Member (Non-Thesis)

Melissa Meeder (M.S.)	Spring 2022
Chelsea Aaron (M.S.)	Spring 2021
Miller Hyatt (M.S.)	Spring 2021
Alyssa Miller (M.S.)	Spring 2021
Danielle Davis (M.S.)	Spring 2020

Research

Publications

Gutter, B.F., Sherman-Morris, K., and Brown, M.E., 2018: Severe Weather Watches and Risk Perception in a Hypothetical Decision Experiment. *Weather, Climate, and Society*, 10:4, 613-623.

Gutter, B.F. and M.E. Brown, 2016: Assessing the accuracy of tornado watches across the contiguous United States from 2007-2015. *Journal of Geography and Natural Disasters*.

Gutter, B.F., Brown, M.E., and Cox, D.A., 2014: Investigation of Vegetation Discontinuities Related to the Yazoo City Tornado Scar and Enhanced Convection. *Journal of Geology and Geosciences*, 4:1.

Gutter, Barrett, 2011: Assessing the Microclimate of Bryant-Denny Stadium. *The Journal of Science and Health at the University of Alabama*, 8, May 14-18.

Presentations

Gutter, Barrett, 2017: Impacts of Severe Weather Watches on Daily Activities. *Southeastern Division of the Association of American Geographers*, Mississippi State University, Starkville, Mississippi.

Gutter, Barrett, 2014: The El Reno Tornado: What Happened? *12th Annual Southeast Severe Storms Symposium*, Mississippi State University, Starkville, Mississippi.

Gutter, Barrett, 2013: Investigation of Vegetation Discontinuities Related to Multiple EF4 and EF5 Tornado Scars and Enhanced Convection for April 27, 2011 (Poster). *National Weather Association 38th Annual Meeting*, Charleston, South Carolina.

Gutter, Barrett, 2012: Investigation of Vegetation Discontinuities Related to the Yazoo City Tornado Scar and Enhanced Convection. *10th Annual Southeast Severe Storms Symposium*, Mississippi State University, Starkville, Mississippi.

Gutter, Barrett, 2011: Assessing the Microclimate of Bryant-Denny Stadium. *Undergraduate Research Creative Activity Conference*, University of Alabama, Tuscaloosa, Alabama.

Assistant

Verification of the Origins of Rotations in Tornadoes Experiment (Vortex-SE) 2016 - 2017, 2018 - 2019

Field Director– Launch weather balloons

Assessing the Microclimate of Davis-Wade Stadium Fall 2016

Assisted in data collection and generating Inverse Distance Weighting maps in GIS

Temperature Reconnaissance aboard Multiple Platforms 2014 - 2017

Field Operator – Launched weather balloons for Mississippi State University and Memphis, TN
National Weather Service on potential severe weather days

Invitational Presentations

Solar Decathlon Environmental Team November 2021

Safe room construction

Partnership Middle School June 2021

Weather station construction and activities

Guest Lecturer for Mrs. Lindsey Poe’s Broadcasting Course September 14th, 2020

Forecasting Basics

Guest Lecturer for Mrs. Lindsey Poe’s Broadcasting Course September 10th, 2019

Forecasting Basics

Broadcast Meteorology Program Workshop August 2019

Synoptic Review

Severe Weather Case Study

Science Night at the Museum February 20, 2020

Meteorology Demonstrations

Guest Lecturer for Dr. Athena Nagel’s Natural Hazards Course February 2020

Tornadogenesis

Guest Lecturer for Dr. John Rodgers’ Natural Hazards Course January 7th, 2020

Tornadogenesis and Economic Impact of Tornadoes

Invited Presentation – STEM Presentation for Starkville Public Library March 2019

“Storm Chasers’ Tail” and Hands-on Activities for Elementary School Students

Science Night at the Museum February 19, 2019

Meteorology Demonstrations

Guest Lecturer for Dr. John Rodgers’ Natural Hazards Course January 15th, 2019

Tornadogenesis and Economic Impact of Tornadoes

Broadcast Meteorology Program Workshop August 2018

Synoptic Review

Severe Weather Case Study

Guest Lecturer for Dr. John Rodgers' Natural Hazards Course

January 16th, 18th, 2018

- Tornadogenesis and Economic Impact of Tornadoes

Broadcast Meteorology Program Workshop

August 2017

- Synoptic Review
- Severe Weather Case Study

Graduate Exams Designed and Implemented

Comprehensive exam for Environmental Geosciences

Comprehensive exam for Applied Meteorology Program

Comprehensive exam for Teachers in Geosciences

Professional Training for the On-Line Environment

Quality Matters "Teaching Online Certificate"

April 16, 2018

- Acquired by completing seven Quality Matters courses:
 1. Gauging Your Technology Skills – 1 week course
 2. Evaluating Your Course Design – 2 week course
 3. Exploring Your Institution's Policies – 2 week course
 4. Orienting Your Online Learners – 1 week course
 5. Connecting Learning Theories to Your Teaching Strategies – 2 week course
 6. Creating Presence in Your Online Course – 2 week course
 7. Assessing Your Learners – 1 week course

Additional Professional Projects

Designed and built a weather station with Dr. Lalk for the Partnership Middle School at Mississippi State University

Course Migration to Distance

Helped several Arts & Sciences campus-1 professors migrate their courses into Canvas at the onset of the COVID pandemic.

Service

Mississippi State University

University Service

Faculty Advisor for the East Mississippi Chapter of the National Weather Association/American Meteorological Society	Fall 2017 – Current
College of Arts & Sciences Faculty Senate	Spring 2021 – Current
Department of Geosciences Distance Learning Oversight Committee	Fall 2022 – Current
UCAR Member Representative	Fall 2020 – Current
Department of Geosciences Co-Chair Building and Infrastructure Committee	Fall 2019 – Current
ACCESS program assistant	Fall 2018 – Current
Spring 2022 Graduate Research Symposium - Judge	February 26, 2022
College of Arts & Sciences Faculty Advisor	Fall 2020 – Spring 2021
Department of Geosciences GIS Faculty Search Committee	Fall 2020 – Spring 2021

College of Arts & Sciences Courses and Curriculum Committee	Fall 2018 – Spring 2021
Department of Geosciences Courses and Curriculum Committee	Fall 2018 – Spring 2021
Department Ad-Hoc Committee to Review Promotion for Clinical Faculty	Fall 2018 – Spring 2019

Professional Service – On-site Meteorologist

Crisis Action Team	Fall 2017 – Current
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- Provide weather forecasts and real-time impact statements during inclement weather
- Respond to emergency weather events after work for the university and for athletic events where players, coaches, staff, and attendees are often caught off-guard by inclement weather and are often vulnerable to strong winds, lightning, hail, and tornadoes

Mississippi State Baseball vs. University of Mississippi	April 2020
2019 NCAA Super Regional Baseball Tournament	June 2019
2019 NCAA Regional Baseball Tournament	May 2019
Severe Weather Threat	April 2014

Other *Mississippi State University*

Daily Journal Interview – MS State Meteorology Program	April 2022
WCBI Interview – How forecasting has changed over the years	April 2022