

## CURRICULUM VITAE

### **Megan Sirbaugh**

Lecturer, Department of Earth and Atmospheric Science  
The University of Alabama in Huntsville

#### EDUCATION

**Master of Science**, Earth Sciences, 2017

University of North Carolina at Charlotte, Charlotte, NC

Advisor: Dr. Matthew Eastin

*Thesis: Spatiotemporal Prediction Modeling of Dengue Fever in Colombia South America  
Based on Temperature and Precipitation*

**Bachelor of Science**, Meteorology, 2015

Virginia Tech, Blacksburg, VA

Minor: Geosciences

**Bachelor of Arts**, Geography, 2015

Virginia Tech, Blacksburg, VA

#### PROFESSIONAL EXPERIENCE

- 2019-            Lecturer, Department of Earth and Atmospheric Science, The University of  
Alabama in Huntsville, Huntsville, AL
- 2018            Science Teacher, Central Cabarrus High School, Concord, NC
- 2017-2018    Geospatial Technician, ESP Associates, Fort Mill, SC
- 2015-2017    Graduate Teaching Assistant, Department of Geography and Earth Science,  
University of North Carolina at Charlotte, Charlotte, NC
- 2013            GIS Technician, National Wetlands Inventory, Blacksburg, VA
- 2012-2014    Peer Mentor, College of Natural Resources and Environment, Virginia Tech,  
Blacksburg, VA
- 2011-2015    General Chemistry Lab Aide, Department of Chemistry, Virginia Tech, Blacksburg,  
VA

#### TEACHING AND RESEARCH INTERESTS

Earth and Environmental Science, GIS, Remote Sensing, Hyperspectral Remote Sensing, Medical Geography and Epidemiology, Tropical Infectious Diseases, Human-Climate-Environment Interactions, Tropical and Severe Weather, Sustainability

COURSES TAUGHT

*The University of Alabama in Huntsville*

Spring 2021

ESS 103 – Environmental Earth Science (Online) (**QEPO Certified Course**)

ESS 313 –Geographic Information Systems (Online)

ESS 490/590 – Special Topics: Geography of Infectious Disease (Online)

Fall 2020

ESS 103 – Environmental Earth Science (Online) (**QEPO Certified Course**)

ESS 313 –Geographic Information Systems (Online)

ESS 414/514 – Geospatial Applications (Online)

FYE 101S- First Year Experience- College of Science (Online)

Spring 2020

ESS 103 – Environmental Earth Science

ESS 313 –Geographic Information Systems

ESS 498 – Research & Professional Development Capstone

ESS 499 – Undergraduate Research (*student: Lucia Alonso-Guzman*)

Fall 2019

ESS 103 – Environmental Earth Science

ESS 103L – Environmental Earth Science Lab

ESS 414/514 – Geospatial Applications

*The University of North Carolina at Charlotte*

GEOL 1200L – Physical Geology Lab, 3 sections per semester (Fall 2015, Spring 2016, Fall 2016, Spring 2017)

*Central Cabarrus High School (2018)*

A.P. Environmental Science

Honors Chemistry

General Chemistry

PROFESSIONAL MEMBERSHIPS

American Geophysical Union  
Association of American Geographers  
American Meteorological Society

### CONFERENCE PRESENTATIONS

2017 University of North Carolina at Charlotte Graduate Research Symposium  
*Spatiotemporal Prediction Modeling of Dengue Fever in Colombia South America Based on Temperature and Precipitation*

2015 American Association of Geographers Annual Meeting  
*Analyzing Ice Formation and Typology on Lake Baikal using Hyperspectral Imaging*

### OTHER TALKS AND GUEST LECTURES

ESS 498 Guest Lecture- *Spatiotemporal Prediction Modeling of Dengue Fever in Colombia South America Based on Temperature and Precipitation*; Sept. 27, 2019

### DEPARTMENT SERVICE

#### *Advising*

Undergraduate Academic Advisor for AES Department-

Fall 2019 semester: 16 students individually advised

Spring & Summer 2020: 24 students individually advised, these timeframes also included additional advising appointments regarding the Pass/ Withdraw option and online learning concerns, as well as advising for new students in the department.

Fall 2020 semester: 23 students individually advised, included additional advising appointments regarding the Pass/ Withdraw option and meetings with new students recruited to the department.

#### *Recruiting*

**American Geophysical Union Conference-** (Dec. 9-13, 2019) Set up and worked at department table in the exhibit hall at AGU conference. Organized scheduling of four students who were required to work the table. Talked with potential graduate and doctorate students, collected contact information from interested students, and networked with industry professionals.

**AES Department Exploration Day-** (Nov. 22, 2019; full day) Lead the organization of a department visit day for prospective students, which involved tours of the NSSTC and SWIRLL, meetings with different research groups housed in our facilities, lunch with students, meetings with student organizations, a ride in atmospheric research vehicles and a weather balloon

launch. Invited 13 prospective students via email from a list of interested student contact information collected from other events. Participated in the development and finalization of a schedule for the day, secured meetings with personnel from NASA programs SERVIR, DEVELOP and EarthKam, and arranged for students to attend a class session of ESS 498. Provided a mini-lecture on coastal processes and human modification of coastlines. Organized and scheduled AES Ambassadors to participate in the day's activities and lead the prospective students on tours and to interact with the prospective students to give them a feel for what it is like to be a student in our department. Communicated with interested families and distributed the day's agenda. Four prospective students participated in this first-ever AES Department Exploration Day, and we plan to organize these events once or twice a semester moving forward.

**Individual meetings with prospective students-** Provide tours, information, and preliminary advising to prospective undergraduate students who are visiting campus for the day. Organize current students to interact and provide tours of the NSSTC and SWIRLL to prospective students.

**UAH Discovery & Charger Preview Days-** (Nov. 2, 2019, Nov. 23, 2019, Feb 22, 2020; 2 hours each) Lead the organization of student volunteers to represent our department at this university-wide event for prospective/ admitted students. Worked at department table, speaking with interested students and their families and collecting contact information from them to use to disseminate further recruiting materials.

**2019 Rocket City Weatherfest-** (Sept. 7, 2019; 2 hours) Worked at department table along with Department Chair and volunteer students to advertise our department to visitors.

### *Committees*

**Undergraduate Curriculum Committee—** Assist Ryan Wade, Larry Carey & department Chair with decisions regarding ESS degree requirements, courses and prerequisites. Learning processes involved with making and documenting changes to the curriculum and course development in order to take on a greater role within the committee in future semesters.

**AES Department Assessment Committee—**Lead Assessor for the ESS undergraduate degree program (Completed Oct. 20, 2019). Reviewed assignments and student work from eight courses within the ESS degree program to ensure our courses are meeting the department's student learning outcomes of integrating concepts from other scientific disciplines, incorporating remotely sensed and GIS data, and completing research projects.

**Consulting Committee—** (No official title for this committee). As the department is searching for ways we can make our students more marketable for jobs, Joe Fehrenbach has been hired to meet with GIS/ remote sensing and meteorology industry leaders in the greater Huntsville area to determine the needs of potential employers of our graduates, and encourage internship and/ or scholarship opportunity coordination with the department. I serve on the board that meets with him, along with Dr. John Mecikalski, Dr. Rob Griffin and Mr. Ryan Wade, to direct

Mr. Fehrenbach's efforts. Specifically, I have provided Joe with information on each of our undergraduate tracks, including courses required and course information, as well as distributing department promotional materials and suggesting industry professionals for him to contact. Have continued work with this committee in fall 2020 following up with Joe about ways to integrate his results into our coursework & increasing student internship opportunities with local companies.

### *Creating Student Opportunities*

**AES Department Ambassadors Program-** I spearheaded the effort to create an AES Ambassadors Program, along with Mr. Ryan Wade. The initial goal of this program is to train current undergraduate students to effectively recruit prospective students through providing tours of our facilities, knowing the ins and outs of our department's course offerings, tracks and research/ student work opportunities, and working at university wide events such as Discovery Days and Charger Preview Days. Once our first group of ambassadors is trained, they will be able to lead tours and train new ambassadors. Another goal of the program is to have the ambassadors serve as leaders in the department and organize events for other undergraduate students, in order to increase cohesion between students within each of our three degree tracks. Participated in two organizational meetings regarding the development of the program. Worked on the development of an application to the program. Lead two days of ambassador interviews along with Ryan Wade and Daniela Cornelius (Oct. 29 & Oct. 31). Sent out congratulatory emails to new ambassadors. Lead the first meeting of our ambassadors (Nov. 19, 2019), at which we discussed the program's goals, hierarchy and training, as well as developing a schedule of Ambassador participation in the AES Department Exploration Day.

Fall 2020 updates: I lead all ambassador virtual meetings, and helped with the creation of several student ambassador committees- Social Media, General Outreach, Recruiting and Current Student Engagement.

### **Summer Honors Capstone Research Program-**

Summer 2020 (Virtual)

Served as research mentor for ESS undergraduate student Rachel Suhs in creating a proposal for the summer Honors Capstone Research Program. Rachel's project studied the displacement and health effects of sea level rise on the general population and indigenous populations in the Pacific Northwest. Rachel presented her research at the UAH summer community of scholars research symposium, and an abbreviated version of her research paper was selected for publication in the UAH undergraduate research publication, Perpetua.

**Department Student Specialist Supervisor-** Supervised (along with Ryan Wade) student specialists Amanda Lee & Huntir Cramer during summer 2020 to work on updating ESS 103 & ESS 104 labs for online delivery. Supervise student specialist Kate Willis during Fall 2020 and

Spring 2021- Kate works on our social media posts & initiatives, assists with updating coursework as needed and helps to lead the department ambassador program.

#### UNIVERSITY SERVICE

**UAH Green Club Faculty Advisor-** I began serving as Green Club Faculty Advisor in Fall 2020. In this role I advertise our initiatives, and was a sponsor for a student-proposed university composting bill, which was approved by the SGA.

#### PROFESSIONAL SERVICE

2019 National Weather Association Annual Meeting, Huntsville, AL- Served as one of two professionals in academia on the mentor panel for student “Speed Mentoring” session. Answered student questions about careers in academia and other careers, and disseminated information to interested students about graduate degrees offered by the AES Department at UAH. (Sept. 8, 2019; 2 hours)

#### RESEARCH

**UAH Severe Weather Operations-** (Jan 11, 2020) Deployed for operations in M3V research vehicle. Operated mobile mesonet system, assisted in launching of windsonds, assisted with coordinating navigation.