



Olivia Grace Campbell

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Hi there! I'm Grace. My mission is to help agriculturalists and land managers understand weather and climate information and how it fits into their operations. I want to use my niche knowledge to help operations become more resilient in the face of climate change.

EDUCATION

August 2021 – May 2023

M.S. IN NATURAL RESOURCE SCIENCES, UNIVERSITY OF NEBRASKA-LINCOLN

- **GPA:** 4.00

August 2017 – May 2021

B.S. IN METEOROLOGY, WESTERN KENTUCKY UNIVERSITY

MINOR IN AGRICULTURE

HONORS COLLEGE GRADUATE

GIS CERTIFICATE

- **GPA:** 3.71
- **AWARDS:**
 - American Meteorological Society Senior Named Scholarship Winner (National)
 - American Meteorological Society Freshman Scholarship Winner (National)
 - NWAFF Ken Reeves Memorial AccuWeather Undergraduate Scholarship Runner-Up (National)
 - L. Michael Trapasso Scholarship (Local)
 - Rising Junior Award (Departmental)
- **HONORS:**
 - Magna Cum Laude
 - President's List (GPA 3.8-4.0): Fall 2018, Spring 2019, Spring 2020, Spring 2021
 - Dean's List (GPA 3.4-3.79): Spring 2018, Fall 2020
 - 2020 WKU Student Research Conference Session winner.
- **Honors Thesis** - Drought in the Breadbasket of America and the Influence of Oceanic Teleconnections – **Passed with honors**

May 2017

HIGH SCHOOL DIPLOMA, FRANKLIN-SIMPSON HIGH SCHOOL

- **GPA:** 3.71
- **HONORS:** Senior Scholar, Summa Cum Laude

EXPERIENCE

AUGUST 2021 - CURRENT

RESEARCH ASSISTANT, NATIONAL DROUGHT MITIGATION CENTER

I assist the NDMC with various cooperative agreement projects. My main duties in these projects are data analysis and reviewing/summarizing literature, but I also assist with outreach events, both locally and nationally at conventions. This has allowed me to work alongside other agencies, like the USDA and Regional Climate Centers, as well. Working with the NDMC has also given me experience with learning how to communicate the complexities of weather and climate information regarding natural resources to people of various backgrounds

JUNE 2020 – JULY 2021

INTERN, HIGH PLAINS REGIONAL CLIMATE CENTER

I worked closely with company climatologists to develop a soil temperature climatology for the HPRCC coverage area. I worked with data from various station networks and analyzed the data using ArcGIS Pro, Excel, and Python. I met frequently with my teammates to discuss progress and work out any issues regarding data and methodology. I also worked extensively with ArcGIS Pro to create maps that display station locations and used interpolation methods to create the climatology. The resulting maps can be found on the [HPRCC website](#). My teammates and I then wrote a manuscript and published in a climate services journal.

MAY 2019 – MAY 2021

CONTRIBUTOR, WXORNOTBG

Worked in a team environment to produce daily weather forecasts for Bowling Green, KY and surrounding counties. This includes daily blog updates and weather graphics posted to social media. Contributions have helped local insurance companies make decisions regarding weather-related claims. Additionally, monthly meetings are held to help contributors with personal growth and professional development.

FEBRUARY 2019 – FEBRUARY 2021

HEAD STUDENT QUALITY ASSURANCE ANALYST, KENTUCKY MESONET

Data monitoring for 70+ stations to ensure stations are functioning properly. I also organized and maintained station Trouble Tickets dating back to 2007. I assisted the Head QA Analyst with investigating why stations malfunction and how the data is affected.

SKILLS

Hard Skills

- Online writing
- Scientific Writing
- Social Media
- GIS/Spatial Analysis
- Oral Presentation
- Data analysis using Excel, Python
- Graphic Creation using PowerPoint

Soft Skills

- Communication
- Flexibility/adaptability
- Problem-solving
- Active listening
- Able to work independently or in a team
- Optimistic
- Planning

PUBLICATIONS

- Campbell, O., Umphlett, N., Stiles, C. (2022). To plant or not to plant? A soil temperature climatology for the northern and Central Plains. *Journal of Applied and Service Climatology*, 2022(001), 1–11. <https://doi.org/10.46275/joasc.2022.01.001>
- Campbell, Grace, "Drought in the Breadbasket of America and the Influence of Oceanic Teleconnections" (2021). Mahurin Honors College Capstone Experience/Thesis Projects. Paper 904. https://digitalcommons.wku.edu/stu_hon_theses/904

ACTIVITIES

UNDERGRADUATE STUDENT RESEARCH ASSISTANT, 2019 - 2021

I served as a research student that worked with the Kentucky Mesonet Research Scientist on a study of nocturnal temperature inversions using Kentucky Mesonet data. We analyzed this data using Excel and MATLAB. I presented this project in an online research conference and won my session. You can find the winning video here!

PRESIDENT OF THE WKU AMS/NWA STUDENT CHAPTER, Nov. 2019 – Feb. 2021

I was elected by my classmates to be the 2020 AMS/NWA Student Chapter President. I worked with the Vice President, Secretary, and Treasurer to develop activities for the club to help with student professional development at monthly meetings. We also ran the Mentorship Program, where incoming Freshmen and Sophomores were paired with a Junior or Senior in the program to help get new students involved and give someone to help them through their studies.

GUEST LECTURER FOR ELEMENTARY SCHOOL, March 2020

I was a guest teacher at my local elementary school multiple times during March 2020. I was responsible for teaching the entire 3rd grade about the weather, climate, and natural disasters. I created PowerPoints for each topic and taught over the Zoom platform. Afterwards I was able to interact with and answer questions the kids had. This was a great opportunity for me to learn how to communicate difficult and complex subjects in a way that could be understood by young children.

ANNUAL MISSION TRIP WITH CAMPUS MINISTRY TO FLORIDA TO AID IN HURRICANE RELIEF, 2017 - 2019

I was a member of the WKU Wesley Foundation. Every spring break, we travelled to Florida to volunteer with local agencies to help rebuild communities after hurricanes. We have served people in Plant City, Tampa Bay, and Port St. Joe rebuild their homes after Hurricanes Irma and Michael. I have learned how to use many tools on these trips!

GENERAL FORECASTER FOR WHITE SQUIRREL WEATHER, 2019

I served as a general forecaster for WKU's campus-based weather forecasting operation in 2019. Duties included making forecasts for any on-campus event, like sporting events and graduation ceremonies, and attending forecast discussions with the rest of the team when we faced inclement weather. I was part of a discussion that helped the University decide to shut down campus due to frigid temperatures.

WEATHER CAMP LEADER, July 22 – 25, 2019

I served as a WKU Weather Camp leader during the summer of 2019. This camp is for students in 6th – 12th grade who are interested in meteorology. We had students from as far as Texas come to participate! I taught a lesson on tornadoes and hail during one of our sessions and stayed in the dorms with the students. I also drove students to Nashville to visit a news station and the National Weather Service office on our last day.

GUEST LECTURER AT PRIVATE K-12 SCHOOL, October 2019

I, along with some of my fellow classmates, were invited to Randolph School in Huntsville, AL to present to the 6th grade class various topics over weather and climate. My partner and I were responsible for teaching the differences between weather and climate. We worked together to create a PowerPoint presentation and a hands-on activity to help the kids further understand what was taught in the PowerPoint.

EMERGENCY MANAGEMENT OPERATIONS FOR D1 BASKETBALL, Dec. 2019

I served in the emergency management office for multiple WKU Men's Basketball games. My duties were to watch radar for any inclement weather that may threaten people and/or operations.