

Nicolle Ho

**Graduation Year:** Junior

**College:** Science

**Major(s):** ACMS

**Minors(s):** European Studies

**Scholar Group Membership:** NA

**Did you received other funding for this project?:** NA

**Could you have completed this project without CUSE funding?** No

**More details on CUSE funding assistance?**

**Project Title:** Decoupling of Soil and Air Temperatures in Arctic Tundra: Implications for Ecosystem Function

**Project Location:** Toolik Field Station, North Slope Alaska

**ND Faculty Mentor:** Adrian Rocha

**Project Type:** Research

**Why did you undertake this project/experience?** Research/experience necessary for senior thesis or capstone project

**Did your funded experience help you:**

**[Deepen your understanding of your coursework or field of study]:** Very Much

**[Discern your interests and post-bac goals]:** Very Much

**[Become confident in your ability to set and achieve your goals]:** Yes

**[Gain a more nuanced view of local, national, or global communities]:** Very Much

**[Improve your written and verbal communications skills]:**Very Much

**Tell us about your experience.**

During my two weeks at Toolik Field Station in arctic Alaska, I studied the relationship between soil and air temperatures in the tundra, and its long term impacts on climate change. I visited 11 sites along a latitudinal gradient to collect temperature sensors and deploy new sensors for the next year. At each of these sites I took tussock plant samples to study the plant growth. My lab group and I collected over 80 tussock plant cores which we "plucked", sorted, weighed to analyze the ratio between live and dead roots. During free time, I networked with other researchers and hiked local mountains. I learned that ecological research can be long and difficult, but is often rewarding at the end of the day, especially if the weather is nice.

**Describe the impact this project had, both on you as a student-scholar and on the people you worked with.**

My project was instrumental in gathering data on soil quality, air temperatures, and impacts on vegetation. Thanks to CUSE, I gained 96 hours of experience in field work and lab assistantship. Our lab team finished processing all of our samples which will hopefully, after analysis, reveal the relationship between soil and air temperatures and its effect on arctic vegetation and climate change.

As a student-scholar, working in Alaska has given me a life changing experience. The field and lab work was challenging but fun. I also enjoyed meeting new researchers and learning more about the ongoing projects in arctic ecological research. I will be one of a select few who can say that they spent two weeks researching climate change in the arctic circle.

**Describe how this experience is connected to your plans as a student or future professional.**

My project was also very influential on my academic and career prospects. It has shown me the challenging, but welcoming environment of scientific research. My summer experiences at Toolik Field Station in Alaska has helped me to strongly consider a career involving climate change and environmental ethics. It has also given me the resources to consider environmental careers outside of research, such as a working in governmental policy or for a non-profit organization.

**What advice would you give other students who are planning to pursue similar projects?**

1. Take lots of pictures. CUSE might require three but your mom will want way more than that.
2. Do your job and do it well. Taking on too much is stressful and often yields poorer results.
3. Bugspray.

I acknowledge that this form has been filled out truthfully and to the best of my ability. I understand that this information will be shared with many different CUSE constituencies. As such, I have provided as much useful information as I was able. I understand that CUSE will not complete my award disbursement until this form is successfully completed. If I have any questions or concerns, I will contact CUSE before submitting this form. To illustrate that you understand all of these points, please enter your Notre Dame email in the box below.

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