Oklahoma State University’s Freshman Research Scholars program provides 60 students a $1,000 scholarship and the opportunity to go beyond the classroom and conduct research with experienced faculty.

1. Any incoming freshman can apply to become a Freshman Research Scholar. You can research any subject no matter your major. It’s not just labs and test tubes. Have a question? You’ve got your research opportunity.

2. Research is easier when you’re surrounded by faculty who are leading experts in their fields and want to help.

3. Taking part in research impacts your life in many ways. You make long-term connections with faculty and your peers; you also make a contribution inside or outside your discipline.

4. You don’t have to be a member of The Honors College. You just have to be motivated, intellectually curious and have a strong work ethic.

5. OSU is a comprehensive research university. You have the opportunity to take advantage of tools, labs and bright minds.

“Research is something that anyone can do, provided they have proper support and guidance.”
- JONATHAN LUSCOMB, Chemical Engineering

“The priority deadline for applying to the Freshman Research Scholars Program is November 1 of the upcoming academic year. To apply, log back into your completed OSU application where you’ll find a section titled, “Consider Research.” You’ll find a link to apply for the Freshman Research Scholars Program.

Questions? Contact the Office of Scholar Development at schdev@okstate.edu

“This program truly helped me move from being a student to being a scholar simply because I was engaged with the material. This was a huge part of my education this year, and I couldn’t be more grateful for such an awesome program. I think this program is one of the things that makes OSU so great!”
- MACY GLEASON, Secondary Education

“I learned that getting involved in research is not hard at all! All you have to do is ask around. In fact, the faculty loves helping students with their research projects. Great experience! I recommend it to everyone as a freshman!”
- KATE JANIKE, Nutritional Science

“I chose my topic because it was related to a sport I love to play and honestly, it was something I had always wondered about. There are so many research opportunities out there for people willing to participate.”
- RIVER CRAWFORD, Biochemistry and Molecular Biology
Impact of a Science Methods Course on Pre-Service Science Teachers’ Understanding of Nature of Science

By Macy Gleason
College: Education
Major: Secondary Education (Science)
Faculty Mentor: Julie Angle

“I am a pre-service science teacher myself. I thought getting involved in research that was close to my field would help me be a better teacher in the future.”

Gleason wanted to determine if a science methods course with a research component in science, technology, engineering and math would change a pre-service science teacher’s perspective on the nature of science. A pre-service teacher is one who has not yet begun to teach a science class, but who is working toward that goal. Gleason used a Views of Nature of Science questionnaire (VNOS-D+) to determine the outcome. Seventeen pre-service science teachers at OSU took part. They took a pre- and post-VNOS-D+ assessment after a 12-week research experience under OSU STEM research faculty. The research concluded that while the participants’ nature of science understanding increased overall, the change was minimal.

“I became an expert on the course that’s going to prepare me to be a teacher. I enjoy learning about research methods and how to present research. Learning how to work with a faculty member has rounded me out as a student and a person as a whole. The networking aspect has really helped me, as well.”

Collecting Data in Severe Storms with the Use of Dropsondes

By Nicholas Foster
College: Engineering, Architecture & Technology
Major: Mechanical and Aerospace Engineering
Faculty Mentor: Jamey Jacob

“Living in Oklahoma my entire life, I’ve gotten to experience all of the severe storms and hectic weather Oklahoma has. I thought it would be great to contribute to research so we can better understand it and prepare.”

Foster researched the creation of a deployment system from an unmanned aerial vehicle (UAV) to collect meteorological data. These UAVs drop sensors, called Dropsondes, which record a number of data points useful to meteorologists. Foster found that each Dropsonde would cost $130. Twelve of the Dropsondes could be fit into the UAV to be deployed from the ground at any time. The systems, with parachute attached, would be dropped into severe storms and relay information in real time or stored on the Dropsonde to be collected later.

“I am continuing to work with Dr. Jacob and hope to be selected as a Niblack scholar. My overall goal is to work in the Unmanned Aerial Systems graduate program and see where that takes me as a career. It’s been great because of the opportunities the research has presented me.”

The Effects of Energy Drink Consumption on Information Processing Speeds

By Alyssa Pasquini
College: Arts & Sciences
Major: Psychology
Faculty Mentor: Shelia Kennison

“I had this roommate who would drink cases of Red Bull constantly. I wondered if that was doing something to her. Was it beneficial?”

Pasquini chose to look at energy drinks and their effect on consumers who believe they help them stay focused and alert. She chose to investigate these claims by testing two groups - one who drank an 8.4 oz. can of Red Bull and the other who drank an 8 oz. bottle of water. Subjects were then tested on their speed before and after consuming their drink. They were asked to use their index finger to press a keyboard’s space bar with the hand that was indicated. Her study found that a person’s ability to process information does not appear to be affected by consuming one energy drink.

“Freshman Research Scholars, in general, has been really helpful. My project gave me a clear image of what research would be like in the future. It’s an eye-opening experience. It’s not something you necessarily think of when you first leave high school. They gave us a good knowledge base for moving on past the program.”

The Effect of Orange Pulp on Bone Microarchitecture

By Kate Janike
College: Human Sciences
Major: Nutritional Sciences
Faculty Mentor: Barbara Stoecker

“It’s a different way of learning. I’m a very hands-on learner. I like using my nutrition facts from class and applying it to formulate a conclusion.”

Janike wanted to determine whether bone density in post-menopausal females can be improved by drinking orange juice. Using two sets of female lab rats – those who had their ovaries removed to simulate post-menopausal women and those who served as a control – Janike fed both groups orange juice over a 3-month period. Her research found that the control group saw the benefits of the orange juice while those in the group with ovaries removed did not. Janike hypothesized that this could be due to a lack of hormones.

“It’s made me more confident, especially in coming up with ideas myself and not being afraid to speak to professionals. It’s given me an outlet to use the stuff I’ve learned in class in a different way. It’s more than filling in bubbles on tests. It’s more about coming up with ways to help people in the real world.”