



The Undergraduate Research Scholars Program at North Carolina Agricultural and Technical State University

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Undergraduate Research Experience (URE)

Undergraduate research is an important educational endeavor in today's college and university environments. Students are performing more research to become best prepared for their futures. The Undergraduate Research Experience (URE) provides undergraduate students with the opportunity to study an academic topic while often collaborating with others such as students, faculty or a research advisor.

The URE includes students performing different tasks such as:

- Research based/inquiry learning
- Faculty research projects
- Summer work/Community based research

Importance of Providing UREs

The internal and external implications for engaging undergraduate students in an effective research experience greatly impacts academic programs and institutional quality.

Some of the benefits of providing UREs to students include:

- Deepening and broadening experience and knowledge in the chosen academic or major field
- Developing certain problem-solving skills that potential employers are looking for in their applicants (Husic & Hensel, 2011)
- Encouraging self-growth
- Encouraging more self-confidence with academics
- Teaching appropriate responses to constructive criticism, and how to discuss controversial topics in constructive ways (Joyce, 2003)
- Allowing better understanding of published works & learning how to balance collaborative and individual work (Madan & Teitge, 2013)
- The ability to receive earned credit or payment for participation



Undergraduate Research at NC A&T

The School of Agriculture and Environmental Sciences' (SAES) Agricultural Research Program at North Carolina Agricultural and Technical State University (NC A&T) offers undergraduate students a view into the world of *research*.

The Undergraduate Research Scholars Program (URSP) has been in existence since 2010, and trains four students (one per academic department) each year in research skills ranging from understanding the research process, analyzing research articles, developing a research proposal and protocol, data collection and analysis, to presenting and writing up the results for publication consideration.

URSP provides student and faculty the opportunity to collaborate over the course of a one or two year period on innovative research projects. Past research topics have involved organically grown produce, effect of plant oils on cancer, soil conservation testing kits, E. coli 0157-H7 in caffeine, poultry feed, functional bread using grape pomace, and factors contributing to obesity, to name a few.

Mentor/Mentee Relationship

The mentor/mentee relationship offers students support and development. During the relationship, students receive guidance from their mentors on conducting research, analyzing, writing and publishing research findings and presenting at professional conferences.

As a result of completing the program, each student is reminded that, as a researcher, he or she can be the first person in the world to discover the solution to an issue or problem, and add to the body of knowledge in their chosen field. In addition to presenting their research at professional conferences, students are encouraged to submit their research manuscript to scholarly journals for publication consideration.



How to be a Success

To be successful accomplishing the research program requires three elements:

- **“Collaboration”** - the relationship between the student and the research mentor;
- **“New”** - the work is bringing forth something partially or totally novel; and;
- **“Share”** – an expectation that the results or products will be disseminated

Developing an undergraduate research culture – and a culture of inquirers – is a way of improving learning and motivation. This program is poised to accomplish each of these goals, and much more.

To date, 10 of the 12 students have graduated from the program, eight are enrolled in graduate school and two had their research published in scholarly journals.

The program, while in its infancy is having the impact of developing a culture of inquirers who will become the next generation of researchers/scientists.

References

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