



Undergraduate Research Scholars Program (URSP)
College of Agriculture and Environmental Sciences
North Carolina Agricultural & Technical State University

Program Description & Guidelines | August 2018

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College of Agriculture and Environmental Sciences (CAES)

Undergraduate Research Scholars Program (URSP)

The Council on Undergraduate Research defines Undergraduate Research as: *An inquiry or investigation conducted by an undergraduate student that makes an original, intellectual or creative contribution to the discipline.*

I. Program Description

The CAES Undergraduate Research Scholars Program (URSP) is one component of and a starting point in the development of an organized and formalized undergraduate research program in the College of Agriculture and Environmental Sciences. The program began fall 2010 and has continued to expand in subsequent years. The program is **one to two years in length** and open to junior and senior CAES students. The program is supported with funds from the Office of Agricultural Research. Participation in the URSP is *voluntary* for the student and the scientist.

II. Program Requirement (Student Participation & Compensation)

Eligibility Qualifications: Undergraduate students with at least a 3.0 GPA will be identified and encouraged to participate in the program. Juniors and seniors in the CAES may apply to the program. A list of faculty mentors with a description of their research and interest areas is available on the URSP website: <http://www.ncat.edu/caes/agresearch/undergraduate-research-program/mentors.html>. Participation requires that students:

1. Submit an application to participate in the Undergraduate Research Scholars Program
 - a) Obtain signatures of their academic advisor and the faculty mentor (faculty with/on Evans Allen projects) on the application.
 - The academic **advisor's** signature verifies that the student meets program qualifications and has room in their schedule to enroll in the required courses (AGRI 499 - 3 credits during fall semester; and AGRI 499 - 1 credit during subsequent semesters while conducting research).
 - The faculty **mentor's** signature confirms her or his commitment to work with the student throughout the research process.
 - b) An acceptance letter will be sent to each student accepted into the program by the Associate Dean for Research. Included with that letter will be a **signature page** outlining the student's and mentor's responsibilities.
2. Devote **10-15** hours per week to the research project.
3. Be compensated **\$12** per hour for research time and related activities.
4. Complete electronic time sheets (to be verified by faculty mentor).
5. Enroll in **AGRI 499 - 3 credits** during the first semester of participation and **AGRI 499 - 1 credit** during subsequent semesters while conducting the research project.

6. Maintain a minimum 3.0 cumulative GPA throughout participation in the Undergraduate Research Scholars Program.
7. Attend scheduled seminars each semester that are part of the Undergraduate Research Program Lecture Series.
8. Develop a research proposal with the faculty mentor that delineates the project, the procedure, the timeline for progress reports and the deliverables by the end of the first semester (completed in conjunction with the AGRI 499 course).
9. Work with assigned faculty mentor to conduct a research project and meet with the mentor regularly to discuss research progress and issues.
10. Submit a written abstract of research findings for presentation at a professional conference and present research (oral or poster format) at one or more meetings/conferences (travel supported by Agricultural Research).
11. Be encouraged to submit a manuscript based on their research to a refereed journal for publication consideration.

In return, the student will receive the following:

- a) Designation as a CAES Undergraduate Research Scholar.
- b) Training and mentoring in conducting research.
- c) Opportunities for career development.
- d) Compensation for work with the mentor in the Evans Allen Program (10-15 hours a week).
- e) Paid travel to attend agreed upon professional meetings where her or his research is presented.
- f) Recognition at the CAES Awards Program.
- g) Certificate of participation and recognition.
- h) Potential membership in professional organizations in their field (students are encouraged to join a professional organization at their expense).

III. Consequences of Non-compliance

Non-compliance refers to students who *repeatedly* fail to: 1) complete the required hours specified in the program of work; 2) meet with faculty mentor as scheduled; 3) attend seminars/training required; 4) complete the required assignments and conduct the research in an appropriate, timely, and satisfactory manner; and 5) maintain cumulative and semester GPAs of 3.0.

Faculty mentors will provide guidelines/directions for completing required assignments and specify additional expectations beyond those noted in Section II above.

Students who do not perform satisfactorily in the program (fail to be in compliance) will be penalized in one or more of the following ways:

1. Denial of financial compensation
2. Receipt of failing grade for the semester
3. Dismissed from the program

IV. Faculty Mentors' Responsibilities

1. New mentors will receive training during the year.
2. Mentors' work with the program is considered **service** to the department (as with advising undergraduate research participants). Service can be documented via approved work completed with mentees, including research proposals, presentations and publications.
3. Faculty members who are PI's on Evans Allen funded projects can serve as mentors for scholars. Mentor participation is voluntary and counts as service to the department.

Expectations of the faculty mentor include:

- a. Agree to work with an identified student on an individualized research project (signed student application and agreement).
- b. Assist mentee in developing a research proposal.
- c. Meet with mentee regularly to support/guide their research.
- d. Assist mentee in preparing research results for presentation at professional meetings/conferences and submission of manuscript for publication consideration.
- e. Receive service credit from the Department Chair in their annual review for participation in the Undergraduate Research Scholars Program.
- f. Submit mid-term and final semester grades to AGRI 499 as the instructor of record.

V. Undergraduate Research Course (AGRI 499)

AGRI 499- Undergraduate Research Course: This course focuses on conducting research with specific attention to: definition of research; critiquing research articles; writing research objectives and hypotheses; types of research; ethics in research; research methods; human subjects guidelines, including completion of human subjects certification training and the IRB process; collecting research data; analyzing data; writing research results; presenting research results; and publishing research.

- a. AGRI 499 - variable credit course (repeatable credit) with URSP participants enrolling in the course for 3 credits during their **first semester** (fall) and for 1 credit during subsequent semesters.
- b. Faculty advisors and mentors are responsible for ensuring that students are enrolled in AGRI 499 for the appropriate number of credits.
- c. **Drs. Radiah Minor & Sung-Jin Lee** are the instructors for the Undergraduate Research course (AGRI 499 - 3 credits, fall only). We ask that mentors work with them in the development of the mentee's research proposal and review it for appropriateness and completeness as it pertains to the discipline and research field.
- d. During subsequent semesters a section of AGRI 499 - 1 credit is created by the Associate Dean for Academics for each faculty mentor working with an Undergraduate Research scholar.
- e. A course syllabus outlining the expectations of the student's work on the research project and the grading criteria must be developed for each semester the student is working with the

mentor. A copy of the syllabus should be submitted to the Association Dean for Research each semester.

VI. Expected Outcome and Final Results

Through engagement in the URSP, scholars will be able to:

1. Learn new knowledge and/or study research issues.
2. Develop skills in research such as literature search and review, proposal writing, experimental design, abstract and presentation (oral and poster) preparation, and/or effective scientific discussions.
3. Gain confidence in scientific research.
4. Gain confidence in themselves.
5. Deepen their connections to the university research community.
6. Choose a potential career path.
7. Use the research opportunity to create new works that are appreciated at the university and beyond.
8. Experience the joys of scholarship and the thrill of discovery.

VII. Program Deadlines

1. Deadline for applications – April 5, 2019.
2. Students selected and notified – May 14, 2019.
3. Window to enroll in AGRI 499 – May - August 2019.
4. New scholars' orientation (August) - First Monday following commencement of fall classes

VIII. Student Compensation: Processing Student Authorization Contracts

The process outlined below is to be utilized to compensate research scholars. Paperwork should be generated at least **three weeks** prior to the start of each semester of participation.

1. At the respective departmental level, complete a "*Student Authorization*" form for each participating student from the department denoting "*Undergraduate Research Scholar Participant*" next to the student's name.
 - a. Students can devote a max of **15 hours** per week to the research program and are paid at the rate of **\$12** per hour
 - b. Students will be paid only for hours devoted each week to the program; therefore, actual hours of work are to be reported on weekly electronic time sheets in Banner.

NOTE: Participants are **not** receiving scholarships, rather they are being paid for **research work** conducted and will be paid on a bi-weekly schedule.

2. Submit form(s) associated with payroll to Adonica Williams, Agricultural Research Budget Manager, for assignment of budget number and submission to Human Resources. Students cannot begin work until their paperwork has been approved by Human Resources.

IX. Semester Grading

Non-Graduating students:

- 1) First semester program enrollment (**AGRI 499 - 3 credits**): Students have a detailed course syllabus with an associated grading rubric to assess their performance and determine the final course grade. An end product for the course is the research proposal which is used to guide individual activities of each undergraduate research scholar.
- 2) Enrollment in subsequent semesters (**AGRI 499 - 1 credit**): Students work directly with their mentor on the research outlined in the proposal developed during their first semester. They are conducting the research and/or fine tuning the process. Their grade is based on their progress and fulfillment of requirements assigned, including journal article critiques, literature reviews, draft paper, draft manuscript, etc. A common AGRI 499- Undergraduate Research Independent Study syllabus (template) guides each faculty mentor in developing the rubric used to assess their scholar's research activities. The template can be obtained from the Associate Dean for Research.

Graduating students:

- 1) Completion of a research paper.
- 2) At least one (1) professional presentation beyond NC A&T's campus.
- 3) Submission of a manuscript from the research project for publication consideration in a professional journal in the respective discipline (may occur after the student has graduated).

Questions regarding the procedures and program can be directed to:

- Ms. Alphanie McCall, Administrative Support Specialist, at aymccall@ncat.edu or 336-285-4701.
- Dr. Valerie Giddings, Interim Associate Dean for Research, at vlgiddin@ncat.edu or 336-334-7612.
- Office of Agricultural Research, CH Moore Agricultural Research Station, Room B16.

(Updated August 16, 2018)