

Office of Undergraduate Research Assessment Plan 2003-2004

I. Mission Statement

The Office of Undergraduate Research at North Carolina State University supports and promotes excellent undergraduate opportunities in discovery-, inquiry- and creativity-based scholarship through mentored research experiences with NC State faculty and other national and international scholars and professionals.

II. Program Objectives

1. Develop and maintain a dynamic (always under construction) website that enables mentors and students (NC State Undergraduates, non-NC State Undergraduates, Community College students, high school students) to find one another, to have access to information related to local and national competitions, scholarships, workshops, reports on best practices, graduate and professional school opportunities, career advising, national fellowship advising, internships, cooperative education, service learning, and opportunities to work with field faculty involved in extension and engagement.
2. Develop and maintain a new *NC State Journal of Undergraduate Research*
3. Contribute to the UNC-Office of the President Undergraduate Research Consortium
4. Participate in national dialogues/meetings devoted to promoting undergraduate research
5. Seek scholars/professionals to serve as mentors from industry, state and federal agencies, and international sites
6. Cultivate study abroad opportunities involving undergraduate research
7. Help position faculty for grants that include support for undergraduate research (REUs, etc.)
8. Support and promote excellent undergraduate opportunities in discovery-, inquiry- and creativity-based scholarship through mentored research experiences

III. Outcomes

- 1a. By January 1, 2004, a comprehensive and dynamic undergraduate research website will be established.
- 1b. Undergraduate students will self-report that the website is useful for identifying undergraduate research mentors, providing information related to local and national competitions, scholarships, workshops, reports on best practices, graduate and professional school opportunities, career advising, national fellowship advising, internships, cooperative education, service learning, and in identifying opportunities to work with field faculty involved in extension and engagement.
- 2a. By December 15, 2004, a new NC State Journal of Undergraduate Research will be published and disseminated *via* the website: www.ncsu.edu/undergrad-research/ to the NC State community and beyond.
- 2b. The NC State Journal of Undergraduate Research will be rated as a journal of high quality by the national organization, the Council on Undergraduate Research.
3. The Office of Undergraduate Research will contribute to the Undergraduate Research Consortium of the UNC-Office of the President by participating in regularly scheduled meetings, sharing website materials with other institutions, leading the Spring 2005 Research in the Capital Undergraduate Research Symposium at the legislature in Raleigh, NC, and participating in grants intended to build cooperation within the Consortium of 16 UNC institutions.
- 4a. The Director of the Office of Undergraduate Research will represent the NC State faculty at national dialogues/meetings devoted to promoting undergraduate research.
- 4b. Each year, the Director of Undergraduate Research will attend at least two national dialogues/meetings devoted to promoting undergraduate research.
- 4c. As a result of attending the national meetings, the Director of Undergraduate Research will summarize important findings and distribute them to campus Undergraduate Coordinators, Faculty Advisers, Associate Deans for Academic Programs, and the Directors within the Division of Undergraduate Affairs.
- 5a. The Director of Undergraduate Research will identify 5% or more of the total mentor population to serve as mentors from industry, state and federal agencies, and international sites.
- 5b. The students engaged off campus will benefit by conducting research in areas directly related to their discipline of academic study, and by working with potential employers while off campus. The non-faculty mentors will benefit by having undergraduates assist in their research/community programs. These partnerships are expected to increase in number as the program succeeds over the first five years (2003-2008).
- 6a. Through coordination with the Study Abroad office, The Director of Undergraduate Research will identify five new opportunities in undergraduate research for study abroad students.

- 6b. An important mission of the Study Abroad Program is to encourage students to become engaged in foreign academic experiences that are longer than a single summer session or even for an entire summer. Students who remain abroad for six months or longer have the best international experiences. Undergraduate research may be an excellent way to involve students in longer scholarship activities that could be financed by the international mentor's grants. Undergraduate student researcher exchanges between institutions might arise from successes with this initiative.
- 7a. Through coordination with each College, The Director of Undergraduate Research will identify 1-5 new opportunities in grant funding for faculty engaged in undergraduate research.
- 7b. Many federal granting agencies, such as the National Science Foundation, require that all grants detail how the work will reach out to the general public. Undergraduate research mentorship is one excellent way to do this; however, faculty are often unfamiliar with the NSF Research Experience for Undergraduates (REU) grant opportunities that can be filed once the major grant has been secured. Thus, the faculty can benefit by submitting an REU grant, and the Office of Undergraduate Research will promote this opportunity.
- 8a. Through mentored research experiences, students will demonstrate discovery-, inquiry- and creativity-based scholarship.
- 8b. Evidence of research-based learning will be seen at symposia held at NC State (April each year), the Triangle Undergraduate Research Symposium (November each year at a different campus), and the National Council on Undergraduate Research meeting held in November each year.

IV. Evaluation Methods and Criteria

- 1a. The live website will be posted to the undergraduate research server. Monthly web statistics will be utilized in order to determine the sites that are most frequently used. This data will be used to inform decision to refine and re-organize the website.
- 1b. A self-report survey will be administered to users of the website. (The survey needs to be developed. At that time, the director will be able to define in detail items from the survey that will help the identify how this outcome will be met.)
- 2a. By December 15, 2004, a new NC State Journal of Undergraduate Research will be published and disseminated *via* the website: www.ncsu.edu/undergrad-research/ to the NC State community and beyond.
- 2b. The Council on Undergraduate Research (CUR) will be asked determine if the Journal is of high quality based on a review committee of that organization. Note that the CUR currently does not provide this service; nonetheless, CUR will be asked for this service.
3. The Office of Undergraduate Research will contribute to the Undergraduate Research Consortium of the UNC-Office of the President by participating in regularly scheduled meetings, sharing website materials with other

institutions, leading the Spring 2005 Research in the Capital Undergraduate Research Symposium at the legislature in Raleigh, NC, and participating in grants intended to build cooperation within the Consortium of 16 UNC institutions.

- 4a. The Director of the Office of Undergraduate Research will represent the NC State faculty at national dialogues/meetings devoted to promoting undergraduate research.
- 4b. The identification of 3 national dialogues/meetings devoted to promoting undergraduate research that the Director of Undergraduate Research attended.
- 4c. To be developed after outcome(s) is (are) solidified.
- 5a. The identification of 5% or more scholars/professionals to serve as mentors from industry, state and federal agencies, and international sites
- 5b. To be developed after outcome(s) is (are) solidified.
- 6a. Through coordination with the study Abroad office, The Director of Undergraduate Research will have identified 5 new opportunities in undergraduate research for study abroad students.
- 6b. To be developed after outcome(s) is (are) solidified.
- 7a. Through coordination with each College, The Director of Undergraduate Research will have identified 4 new opportunities in grant funding for faculty engaged in undergraduate research.
- 7b. To be developed after outcome(s) is (are) solidified.
- 8a. Support and promote excellent undergraduate opportunities in discovery-, inquiry- and creativity-based scholarship through mentored research experiences.
- 8b. To be developed after outcome(s) are solidified.

V. Implementation TimeLine

The programs and initiatives of academic year 2003-04 will be assessed beginning July 1, 2004 with a final report to be submitted to the Office of Academic Assessment on or before August 15, 2004. All annual assessment reports will follow this general timeline. As various events such as the UG Research Symposium are completed during the academic year, data will be entered/summarized as a way to expedite the completion of the annual August assessment report.

VI. Results and Decisions Made

1. The website's completion will enable students and mentors to find each other. That component of the website should increase the number of students who participate in the UG Research Symposium each April. Many other services are provided on the site and it is expected that the number of "hits" will increase greatly from both on and off campus.
2. The new *J. Undergrad. Res.* will promote excellent research by students and bring attention to outstanding mentorship. It will also enable NCSU to better complete with peer institutions.
3. The Undergraduate Research Consortium of the UNC-OP, if fully active, will enable students to conduct research at other UNC system institutions. This

- will permit the participating universities to have good success in securing outside funding from federal granting agencies, especially the NSF.
4. Attendance at national meetings dedicated to UG Research will permit the director to bring good ideas to campus and to showcase unique/successful components of our UG Research programs.
 5. It is important to increase off campus mentorship of students, especially because of the proximity of the Research Triangle Park (RTP) and surrounding universities. This will require that special contacts be made with the many companies and agencies in the RTP. The director will begin by using the employer list provided by the Office of Cooperative Education. For larger organizations/agencies, visitations will be made. Currently, students are mentored off campus; however, we have no idea of how many are mentored each year by non-faculty. The website will enable the director to build a database that can track off campus mentorship.
 6. Very few students conduct research abroad. Every effort will be made to work closely with the Office of Study Abroad and the International Programs to secure at least 5 opportunities each year for students.
 7. The director will continue to work with the Office of Grants and Contracts to identify grant opportunities for undergraduate research. The NSF has Research Experiences for Undergraduates (REU) grants that require that the faculty member submit a simple addition to an already funded grant. Many faculty are not aware of this opportunity with NSF. Other federal grants require that the investigator show how the research will extend to the public. Mentorship of undergraduates is one way to extend the mission of the research and this will be promoted to the faculty through the website. Similarly, faculty may fulfill this requirement of the grant by teaching special courses/seminars that are related to the mission of the grant. In this way, both the University Honors Program, and the Office of Undergraduate Research will work together on this initiative.
 8. The website will have opportunities built into it for the student to evaluate the research experience and for the mentor to evaluate the student. Since these evaluations will be kept confidential, only general numbers related to student or mentor satisfaction, along with annotations, will be stored/recorded. It is expected that more students will evaluate the mentor than visa versa.