

Enhancing Undergraduate Research Through Campus-wide Collaborations

Diana Adams Elrod, Ph.D.²; Gloria Cox, Ph.D.¹; and Susan Eve, Ph.D.¹
Honors College¹ and McNair Scholars Program²
University of North Texas
Denton, Texas 76203

ABSTRACT

The University of North Texas (UNT) is the largest and most comprehensive research and doctoral degree-granting institution in the North Texas area (DFW Metroplex) and the flagship of the UNT System. Enrollment for fall of 2013 was 36,168 (29,481 undergraduates) and is projected to surpass 40,000 by 2015. UNT is the fourth largest university in the state of Texas and 24th-largest in the nation. The university's 2012-2017 strategic plan outlines the process for providing the best undergraduate research education in Texas to include rigorous and innovative programs that enhance the relationships between teaching and learning. Undergraduate research supports the university's goals by uniting teaching and learning with research and scholarly activity. For more than 20 years, UNT has had dedicated undergraduate research programs. These programs collaborate with one another and other campus entities to provide undergraduates with comprehensive and significant research experiences. The UNT Honors College, the McNair Scholars Program, the Terry Scholars Program, the Emerald Eagle Scholars Program, discipline specific REUs, and the Office for Nationally Competitive Scholarships are just a few of the stakeholders in UNT's efforts. In this presentation, we will discuss collaborative classes, presentation opportunities, a refereed student journal, and successful scholarship and fellowship achievement processes.



NSF FOCUS

- *Fostering Outstanding Cohorts in Undergraduate Science* offers scholarships to UNT students majoring in chemistry, mathematics, physics, ecology, biochemistry, or biology
- Learning communities and mentoring are major components
- Conduit to UG research, summer internships, McNair Scholars Program, and/or Honors College

Honors College

- Develops, edits, and designs online UG research journal *The Eagle Feather*
- Major sponsor of *University Scholars Day*
- Supports four UG research classes
- Provide housing for NSF REU participants
- Publishes REU research papers in *The Eagle Feather*

McNair Scholars Program

- Faculty mentored research for 100% of participants year-round
- Provides *Introduction to Research and Scholarly Activity* course
- Administrators from Honors College, ORED, and ONCSF are advisory board members
- Has institutional financial support (\$40,000/year) in addition to federal funding

UNT HHMI

- Research funded by the Howard Hughes Medical Institute offer several programs to biology and biochemistry majors such as Phage Hunters, UG Researchers Program, and Transitions for Community College Students
- Conduit to continued UG research, summer internships, McNair Scholars Program, and/or Honors College

Undergraduate Research at UNT

Texas Academy of Mathematics & Science (TAMS)

- Residential program for high-achieving math and science high school-aged Texas students (last 2 years of high school = first 2 years of college)
- Faculty mentored research for 100% of participants during summers

Terry Scholars Program

- Freshman and Transfer Scholarships developing leaders in Texas
- All participate in UG research seminar course
- Conduit to UG research, summer internships, McNair Scholars Program, and/or Honors College

NSF REUs

- Anthropology
- Chemistry
- Peace Science and Civil Conflict Management

Emerald Eagle Scholars Program

- Selective program providing tuition and fees to academically talented and motivated students from economically challenged families
- UG research is encouraged
- Conduit to UG research, summer internships, McNair Scholars Program, and/or Honors College

Office of the Provost & Vice President for Academic Affairs

- Promotes UG research campus-wide
- Provost mentors UG researchers in his own lab
- Co-sponsors *University Scholars Day* with Honors College

Departmental & Other Opportunities

- Biological Sciences, Psychology, and Engineering support theses and senior projects
- All UG researchers at UNT may present their research at University Scholars day
- TAMS, Psychology, Biological Sciences, and Engineering host UG research presentation events for UNT students; McNair hosts a national conference every year

Office of Research & Economic Development (ORED)

- Co-sponsors *University Scholars Day* with Honors College
- Provides funding for awards and travel for awardees for University Scholars Day
- Works with PIs and others for proposal development to include UG research component

UNT Libraries

- Provides classes and workshops as requested
- Hosts online journal of UG research, *The Eagle Feather*
- Provides reference librarians
- Digitizes and hosts all UNT UG theses

Office for Nationally Competitive Scholarships & Fellowships (ONCSF)

- Works closely with UNT UG researchers to secure scholarships and fellowships
- Provides *Disciplinary Themed Research* course
- Goldwater, NSF-GRF, Ford, Jack Kent Cooke, and others annually awarded to UNT UG