

# Archived Information

## University of North Texas (UNT)

### Mathematics and Science Initiative

#### Activity: Texas Academy of Mathematics and Science (TAMS)

**Goal area of the activity: Increasing public awareness  
Supporting high quality research**

#### **Summary of work:**

The Texas Academy of Mathematics and Science (TAMS) is located on the campus of the University of North Texas. TAMS is an early admission residential program established in 1987 by the Texas legislature to offer high school students with very high potential in mathematics and science the opportunity to advance academically. It is a program for students who will likely pursue careers in mathematics, science, engineering, technology, or medicine. Each year the Academy selects and admits about 200 students who would be entering the junior year in high school. These students spend the next two years living on campus and pursuing a rigorous program of university courses. TAMS students complete the university courses that are required for a major in the science departments at UNT. As a minimum, they take Calculus I and II, two semesters each of Biology, Chemistry, calculus based Physics, four semesters of English and English literature, two semesters of American History, and one of Political Science. The minimum GPA required for graduation from the Academy is 3.0 (on a 4.0 scale).

Some of the Academy students accomplish significant research while they are students at UNT by collaborating with research faculty on projects that culminate in a presentation to an international research conference in various science areas.

#### **Accomplishments/Results:**

The current class of 185 seniors has an average GPA of 3.69 and 53 National Merit Finalists. The Academy will have graduated more than 2,000 students by the end of this semester. Approximately 80% of these graduates have pursued careers in mathematics and science. Many of the recent graduates are still in school. Academy graduates are heavily recruited by the nation's most prestigious universities (Rice, UT, Caltech, MIT, Stanford, Johns Hopkins, Harvard, West Point, etc.). The total amount of the scholarships offered TAMS graduates annually is generally eight to nine million dollars and they accept two to three million. Most TAMS graduates return to the Texas workforce. Some hold faculty positions, some work for business and industry, and some have professional positions with the government. Those who teach range from one who is a high school science teacher in Fort Worth to one who is on the Chemistry faculty at MIT.

#### ***Plans for the next 12 months:***

TAMS is selecting the next class of first year students, who will graduate in May 2005. The number of applicants this year is 500, about 40% higher than usual. The program will continue to be rigorous, and the Academy staff will continue to evaluate standards and expectations so that we can better serve the students and our constituency.

Under consideration is a program that would involve use of the TAMS Summer Math Institute, a summer residential program, by 60 rising seventh and eighth graders as a vehicle for recruiting mathematics teachers. This program involves Mathematics Educators at UNT who are engaged in research projects that address issues related to the teaching and learning of mathematics.