



# NCAMP

Newsletter

NORTH CAROLINA ALLIANCE FOR MINORITY PARTICIPATION

North Carolina A&T State University • Prairie View A&M University • Southern University  
University of Michigan • Stanford University • University of Texas-Austin  
University of Washington

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## North Carolina Alliance for Minority Participation Creates Partnership Between HBCUs and Research Institutions

The North Carolina Alliance for Minority Participation (NCAMP), funded by the National Science Foundation (NSF), is based on a comprehensive, longitudinal plan which focuses on the enrollment and retention of undergraduate minority students in science and engineering. Attention is given to early identification efforts on both sides of the undergraduate experience -- between high school and community college to a four-year institution, and between undergraduate and graduate science and engineering programs. Community-building principles applied in this project form the underlying philosophy in the development of a more successful environment for minorities in science and engineering.

Each partner institution has unique capabilities and areas of expertise derived from individual, innovative responses to common challenges. The primary goals of the Alliance are: 1) to improve the quality of the learning environment for minority science and engineering students at all schools, 2) to substantially increase the numbers of minority students graduating with degrees in science and engineering, and 3) to develop and



*Chancellor Edward B. Fort from North Carolina A&T State University addresses AMP Executive Committee at the Spring Quarterly Meeting in Greensboro, North Carolina*

implement effective methods of attracting talented minority students who would otherwise not choose science or engineering as a career.

The Alliance emphasizes a variety of approaches to accomplish its major goals. Overall objectives are aimed at helping students develop a supportive community and presenting opportunities for students to grow academically, professionally, and personally through a collaborative learning approach. The learning approach includes group study and support; positive and sustained interaction with faculty, intensive interaction with other support persons at the university and in the wider community (alumni, parents, mentors from

industry, etc.), and hands-on experience in science and engineering. The hands-on experience that the students will receive includes not only intensive classroom projects, but internships with major industries, and undergraduate research opportunities as well.

The partner institutions, which include North Carolina A&T State University, Prairie View A&M University, Southern University, the University of Michigan, Stanford University, the University of Texas at Austin, and the University of Washington, form an Alliance with the capability to play a key role in producing minority research scientists and faculty to adequately address the workforce needs of America in the 21st Century.

## NCAMP MEMBER INSTITUTION ROSTER

### *North Carolina A&T State University*

*Dr. Harold L. Martin, Dean  
School of Engineering  
Executive Director, AMP*

*Dr. Vivian Harding Hampton  
AMP Coordinator*

*Dr. Lonnie Sharpe, Associate Dean*

### *Prairie View A&M University*

*Dr. John Foster, Dean  
College of Engineering and Architecture  
Mrs. Carolyne Oliver  
AMP Director*

### *Southern University*

*Dr. Thomas Henderson  
Interim Dean  
College of Engineering  
Dr. Eddie Hildreth  
Associate Dean*

### *University of Michigan*

*Dr. Michael G. Parsons  
Associate Dean  
Undergraduate Education  
College of Engineering  
Mr. Derrick E. Scott  
AMP Director*

### *Stanford University*

*Dr. Noe' Lozano  
Associate Dean  
School of Engineering  
Dr. Reginald Mitchell  
Professor, Mechanical Engineering*

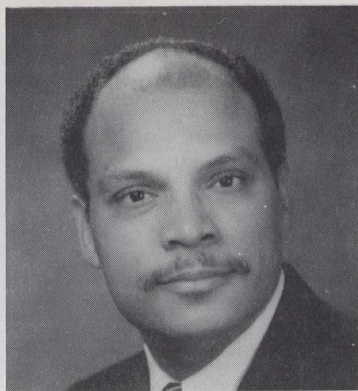
### *University of Texas - Austin*

*Ms. Sonia V. Konradi  
Director, EOE Program  
College of Engineering  
Mr. Samuel Moore  
Assistant Director, EOE Program*

### *University of Washington*

*Mr. Gene Magallanes, Director  
Minority Science and Engineering  
Mr. Scott Minnix  
Graduate Program Coordinator  
Minority Science and Engineering*

## EXECUTIVE DIRECTOR



**Dr. Harold Martin**

Involving minority students in the future of our country through their participation in greater numbers in the fields of science, engineering, and mathematics, simply put, is the primary goal of the National Science Foundation's Alliance for Minority Participation (AMP) programs. The AMP program, the brainchild of Dr. Luther Williams, Assistant Director of the Directorate for Education and Human Resources with the National Science Foundation, is currently in its second year. The program's goal is a most notable one that has resulted in a number of universities with parallel, and in some instances, different missions coming together to form such alliances. Currently, there are eleven alliances funded nationally, linking universities locally within the same state or within the same region of the country. Such universities have inherently similar concerns and resources. However, this is not the case with the

North Carolina Alliance for Minority Participation (NCAMP) which includes North Carolina A&T State University, Prairie View A&M University, Southern University, the University of Michigan, Stanford University, the University of Texas at Austin, and the University of Washington. As can be seen, our alliance partners consist of three Historically Black Colleges and Universities (HBCUs), and four majority universities. Each of our partners has a long and successful track record of recruiting and graduating minority students in the science, engineering, and mathematics fields. Moreover, each partner has further established highly successful models of academic enrichment and support programs. Hence, I am convinced that the formation of an alliance across our universities will serve to significantly enhance our individual successes and provide an opportunity for us to share our successes with one another.

We could not have assembled a more compatible group of partners. The level of commitment of the NCAMP partners to our goals is the key to our current and long term success. I anticipate that NCAMP will be a leader among the alliances nationally in enhancing the graduation of minority students in the fields of science, engineering, and mathematics.

Harold Martin, Ph.D.

Dean and

Executive AMP Director

## EDITORS

The North Carolina AMP Newsletter is published bi-annually. Comments and information for future publications should be submitted to:

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**NCAMP**

## CALENDAR OF EVENTS

- Sept. 12-13, 1993 - NSF/NCAMP Site Visit, NCA&T State University, Greensboro, N.C.
- Oct. 28-31, 1993 - NCAMP Staff/Student Participation, NSF Diversity in the Scientific and Technological Workshop, and Annual Project Directors' Meeting, Washington D.C.
- Nov. 8-9, 1993 - NCAMP National Advisory Board Meeting, NCA&T State University Greensboro, N.C.
- Nov. 8-9, 1993 - NCAMP Executive Committee Quarterly Meeting, NCA&T State University
- Feb. 7, 1994 - NCAMP Executive Committee Quarterly Meeting, UT at Austin, Austin, Texas

# PROJECT AREA UPDATES

Three major project areas have been chosen as critical focal points for achieving the qualitative and quantitative goals of the North Carolina Alliance for Minority Participation (NCAMP). The Alliance project areas, Academic Enrichment, Linkage/Outreach and Community College, and Industry Involvement, are specifically designed to meet the goal as set by the National Science Foundation to double the graduation rates of minorities in the fields of science, engineering, and mathematics over the next five years.

## **ACADEMIC ENRICHMENT** \_\_\_\_\_

There is an urgent need for universities and colleges across the country to focus on extending resources to increase the number of minority students acquiring bachelor's, master's, and doctoral degrees in science and engineering. The Academic Enrichment Committee was established to address this need by providing a coordinated and systemic approach to the manner in which Alliance members work towards increasing the number of minority students receiving engineering and science bachelor's degrees. The retention rates for Alliance partners currently range from 50 to 80 percent. Through academic enrichment projects, the Alliance partners will benefit from those who have strong programs and improve their retention performance. In addition, the Academic Enrichment Committee will work to improve the academic performance of minority under-

graduate students in science, engineering, and mathematics.

The Academic Enrichment Committee plans to meet its goals by identifying, enhancing, and modeling effective academic enrichment programs currently being conducted by an Alliance partner. Once these successful programs are modeled, they will be implemented at the other Alliance campuses to duplicate the successes achieved. The programs currently being studied are summer bridge, freshman supplemental instruction, computer-aided instruction, orientation courses, financial support, academic and summer research, and seminar courses. The intent of the Committee and Alliance is to develop a set of manuals which can also be used by other institutions interested in achieving similar results.

In order to achieve its goals, the Committee members plan to meet quarterly to share ideas and strategies. For more information, contact Sonia V. Konradi, University of Texas at Austin (512) 471-5953.

## **LINKAGE/ OUTREACH and COMMUNITY COLLEGE** \_\_\_\_\_

The Linkage/Outreach and Community College area focuses on facilitating a 100 percent increase in the number of minorities who enroll in and are graduated from undergraduate programs in science, mathematics, and engineering over the next five years. To achieve this goal, Project Area 2 is defined around three major efforts:

Recruitment, Linkage, and Bridge Programs. Target populations for these efforts are twelfth graders, community college students, and community college teachers. For more information on Project Area 2, contact Dr. Thomas Henderson, Interim Dean, Southern University (504) 771-3798.

## **INDUSTRY INVOLVEMENT** \_\_\_\_\_

Project Area 3, Industry Involvement, is designed to specifically utilize industry expertise to enhance curriculum and seminar development and delivery systems. Consequently, industry will become a more integral part of the educational environments of the partner institutions. In addition, significant training resources of companies will be tapped to further benefit students. Program implementation includes industrial scholarships/internships, co-op programs; a structured loan executive/visiting faculty program; a university/industry-executive seminar program; an Alliance-wide career receptions program; and student internships. For more information on Project Area 3, contact Michael Parsons or Derrick Scott, at the University of Michigan (313) 764-6497.

# AROUND THE AMP

## STANFORD UNIVERSITY

Stanford University, in conjunction with six other universities and with support from the National Science Foundation, is embarking on a five-year program to recruit, retain, fund, and graduate more minority students in engineering and the sciences.

Dr. Noe' Lozano, associate dean for student affairs and director for Minority and Affirmative Action Programs in the School of Engineering reports that, "we are expecting to decrease the number of minorities who 'switch' out of engineering into other majors, and increase the graduation rate for those who declare engineering as a major." Lozano, along with Professor Regional Mitchell, mechanical engineering, will oversee the program.

"All seven universities involved seek programs with the philosophy of community-building principles to develop stronger and long-lasting environments of support for minority students," stated Lozano.

Some of the programs Stanford plans to introduce include:

- Travel grants for recently admitted high school seniors who have expressed an interest in majoring in engineering.

- Mini-grants for summer sessions for recently admitted high school seniors who want to brush up on calculus, chemistry, physics or other courses at a local community college or state university before enrolling at Stanford.

- A possible summer "bridge" program.

- Special summer research experiences to solidify faculty and student mentoring relationships, where none have existed in the past.

- New approaches in mathematics, science, and engineering courses that focus on group study and support while using a collaborative learning approach and building on extra problem-solving analytical skills, particularly in "gatekeeper" courses.

Lozano and Mitchell will work out the details of implementing the programs with a group of faculty and administrators who are committed to making the AMP project a success.

## UNIV. OF WASHINGTON

The University of Washington has developed some important new initiatives and restructured critical retention programs as part of the NCAMP effort to dramatically increase minority participation in engineering, mathematics, and science. Adjunct classes in freshman calculus, chemistry, and physics have been redesigned to problem-solving workshops that focus on facilitator guidance and collaborative learning rather than instructors in a class setting. Facilitators are NCAMP-funded upperclass students who in-turn experience their first taste of teaching college material.

An undergraduate research program has also been initiated to allow science students to conduct summer research in bioengineering and engineering students to

participate. Other NCAMP activities involve industry programs that focus on scholarships and internships for students who are attempting to improve their GPAs to the 3.0 level. In addition, regular office hours have been established at local community colleges with significant minority populations to conduct academic counseling services and career planning. As NCAMP enters its second year at the University of Washington, new industrial partnerships and better communication/linkages with community colleges are areas of primary focus and concern.

## NORTH CAROLINA A&T

Developing strategies to enhance the retention and graduation rates of its students is viewed seriously by administrators and faculty of the science, engineering, and mathematics (SEM) programs at North Carolina A&T State University. With the aid of the National Science Foundation funded Alliance for Minority Participation (AMP) grant, the University plans to substantially increase the retention and graduation rates of its students. Additionally, the University will build upon its successes in developing innovative strategies in this area by sharing "best practices" with its outstanding partners in the Alliance. Administrators and faculty at North Carolina A&T expect to play a leadership role in developing successful programs which impact minority student participation in SEM programs.