

**CO-AMP  
Colorado Alliance  
for Minority Participation**

*Linking diverse students to educational opportunities  
in science, math, engineering, and technology*

**CO-AMP  
Governing Board Meeting  
September 18, 1997  
Denver Center  
Denver, Colorado**



Linking diverse students to educational opportunities  
in science, math, engineering, and technology

CO-AMP

## Colorado Alliance for Minority Participation

### AGENDA

#### GOVERNING BOARD MEETING

SEPTEMBER 18, 1997

COLORADO STATE UNIVERSITY DENVER CENTER  
110 SIXTEENTH STREET, ROOM 605

12:00pm - 12:30pm	Lunch and Get Acquainted
12:30pm - 1:00pm	Call to Order Welcome by Dr. Jud Harper, CSU Vice President for Research and Information Technology  Message from Governor's Office Mr. LaCharles Keesee  Remarks by Representative from NSF  CO-AMP Report by Dr. Omnia El-Hakim, Principal Investigator and Project Director
1:00pm - 1:45pm	Feedback Session Statements of Commitment, Needs & Impact of CO-AMP Programs by: <ul style="list-style-type: none"><li>• Presidents or Representatives of the Institutions</li></ul> Perceptions of CO-AMP Programs by: <ul style="list-style-type: none"><li>• Colorado Commission on Higher Education (CCHE)</li><li>• Tribal Representative</li></ul>
1:45pm - 2:00pm	General Question and Answer Session (ALL)
2:00pm - 2:15pm	Break
2:15pm - 3:30pm	CO-AMP Special Topics <ul style="list-style-type: none"><li>• Industry Involvement</li><li>• Social Behavioral Sciences Major (SBS)</li><li>• Curriculum Development</li></ul>

#### CO-AMP HEADQUARTERS

Dr. Omnia El-Hakim, Principal  
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#### CO-AMP SITES AND COORDINATORS

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Mr. Thomas Keyser  
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SEPTEMBER 18, 1997  
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DENVER, COLORADO**

**ATTENDEES**

Mr. Thomas Atcitty, The Navajo Nation  
Dr. John Bliss, /Board of Agriculture  
Mr. Ken Brakken/USDOE Rocky Flats  
Dr. Richard Byyny/University of Colorado-Boulder  
Dr. Hector Carrasco/University of Southern Colorado  
Dr. David Clark/Colorado State University  
Dr. Omnia El-Hakim/CO-AMP Director and Principal Investigator  
Dr. Joan Foster/Metropolitan State College  
Mr. Gary Fresquez/Trinidad State Junior College  
Mr. Jason Gavin, Bureau of Land Management  
Dr. Johannes Gessler/Colorado State University  
Mr. Dennis Gill/Los Alamos National Laboratory  
Dr. Tito Guerrero/University of Southern Colorado  
Dr. Jud Harper, Colorado State University  
Mr. LaCharles Keesee/Governor Romer's Office  
Ms. Brenda Martin/CO-AMP Program Manager  
Mr. John Matis/Bureau of Land Management  
Dr. Byron McClenney/Community College of Denver  
Mr. Ricky Newton/USDOE Rocky Flats  
Dr. R. German Nunez G./Colorado University-Boulder  
Dr. Dwayne Nuzum/Colorado Commission on Higher Education  
Ms. Peggy Poling/Metropolitan State College  
Dr. Rose A. Shaw/CO-AMP Evaluator  
Dr. Fred Smith/Colorado State University  
Dr. Fred Stein/Colorado State University  
Dr. James Sulton/Colorado Commission on Higher Education  
Mr. Abel Tapia/Abel Engineering Professionals Inc.  
Mr. Penfield Tate, III/Colorado State Representative  
Ms. Gabriela Weaver/University of Colorado-Denver  
Ms. Tatiana Wilson/Colorado University-Boulder  
Ms. Gina Williamson, Heritage Institute  
Ms. Marjorie Villani/Pueblo Community College  
Ms. Whitley Zephier/Storage Tek

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by Jan Cordova

# Opening OPPORTUNITIES

## Toward College, Careers, and Community

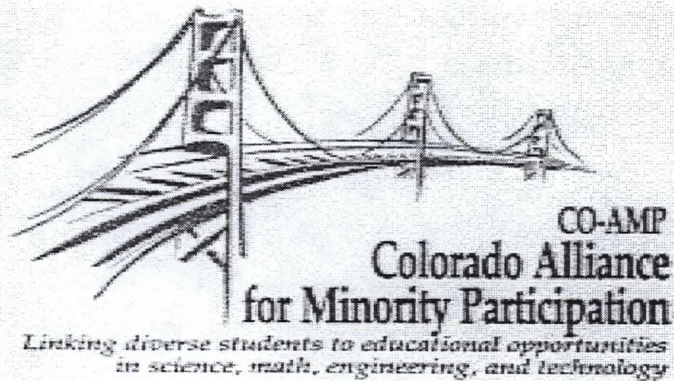
*"It is our hope that other colleges throughout the state, with the contribution of the alliance, will aid in our efforts to produce quality and accessible education to all minority students."*

As diversity continues to be an important issue in higher education and industry, it has become necessary to create programs which support and encourage those from under-represented groups. The Colorado Alliance for Minority Participation, CO-AMP, is one such program. Initiated at Colorado State University and Fort Lewis College, CO-AMP is geared toward recruiting African-Americans, Hispanics, and American Indians (Southern Ute Indian Tribe, Ute Mountain Ute Tribe, The Navajo Nation, and the Jicarilla Apache Tribe), who want to pursue degrees in engineering, science, mathematics, and technology fields.

A recently awarded \$5 million, five-year grant from the National Science Foundation to 11 institutions in Colorado and the Four Corners Region will help cover costs for the six four-year universities and the five two-year colleges that will participate in this program and have agreed to match funds. Colorado State University will administer the funds.

Omnia El-Hakim, professor of civil engineering at CSU and Fort Lewis College, is the CO-AMP grant principal investigator and project director. As director of the Minority Engineering and Science Program at Fort Lewis College, she is experienced and knows well the exciting possibilities and opportunities the grant will provide for under-represented students. "It is our hope that other colleges throughout the state, with the contribution of the alliance, will aid in our efforts to produce quality and accessible education to all minority students. The goal is to not only increase the quantity but also to increase the quality of education."

Because so many students, in particular those from public school, enter college minimally prepared in math and science, they have a higher potential for failure in freshman engineering and science courses. CO-AMP, by creating academic and cultural bridges between and among institutions, supports students throughout their educational careers. With such awareness and support, students are more likely to succeed and at the same time, receive a better quality education.



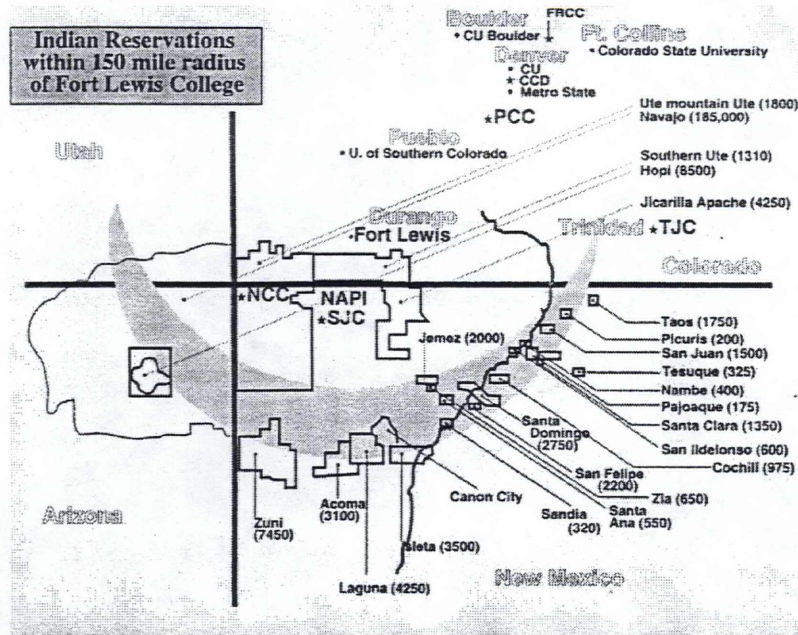
**PROGRESS REPORT**  
**Governing Board Meeting**  
**September 18, 1997**

# What is CO-AMP?

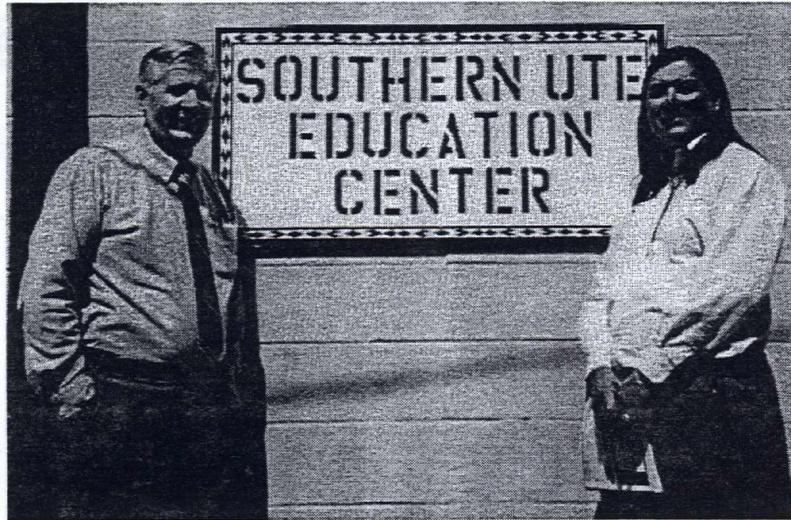
- A \$5 million, 5-year NSF cooperative agreement intended to double the numbers of baccalaureate degrees among underrepresented minority students in Colorado and the Four Corners region in Science, Math, Engineering, and Technology .

# What is CO-AMP?

- A unique statewide collaboration among 11 institutions, 4 tribal nations, and many corporations, government agencies, professional societies, and local communities.



# CO-AMP Partners



## ● Tribal Partners

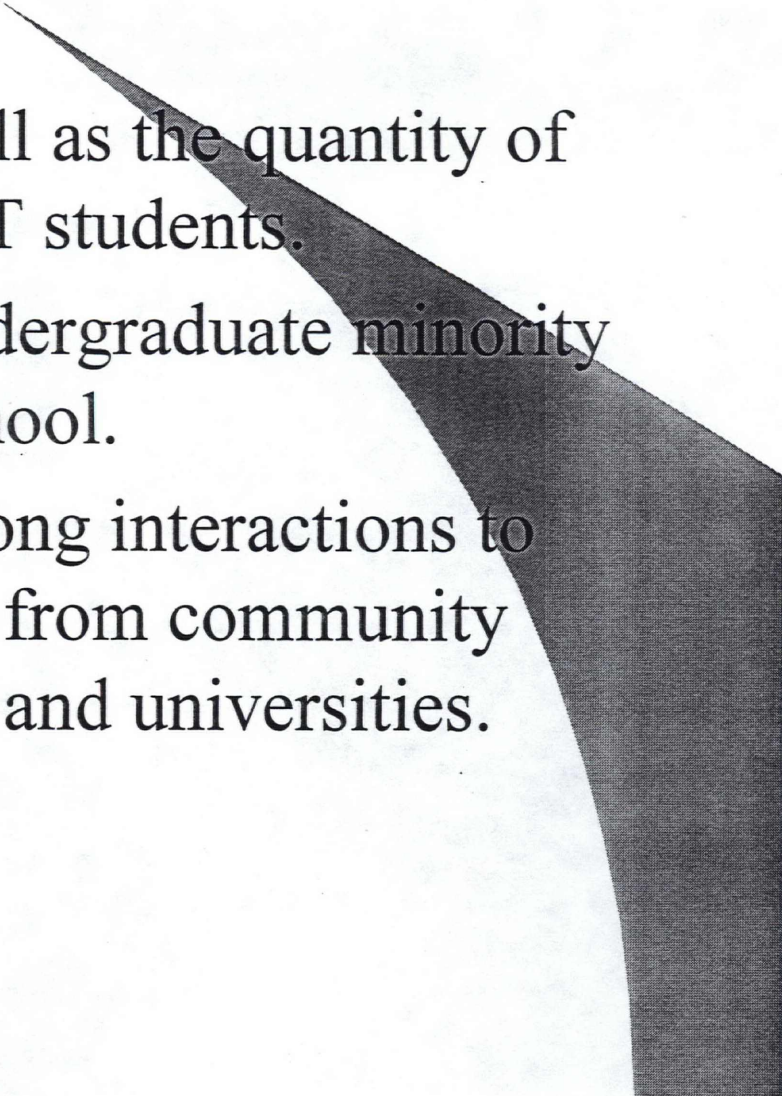
- Jicarilla Apache
- Navajo Nation
- Southern Ute Indian Tribe
- Ute Mountain Ute

## ● Institutional Partners

- Colorado State University
- Community College of Denver
- Dine College
- Fort Lewis College
- Front Range Community College
- Metropolitan State College of Denver
- Pueblo Community College
- Trinidad State Junior College
- University of Colorado-Boulder
- University of Colorado-Denver
- University of Southern Colorado



# Goals and Objectives

- To increase the quality, as well as the quantity of undergraduate minority SMET students.
  - To increase the number of undergraduate minority students entering graduate school.
  - To foster partnerships and strong interactions to facilitate the transition bridge from community colleges to four-year colleges and universities.
- 

# More Goals and Objectives



- To build and institutionalize CO-AMP programs and activities at each participating institution.
- To ensure effective programs and the infrastructure that will continue after the NSF funding expires, allowing for the opportunity of **ALL** students to participate in these programs and activities.

# CURRENT STRATEGY

**RETENTION!!!**

**RETENTION!!!**

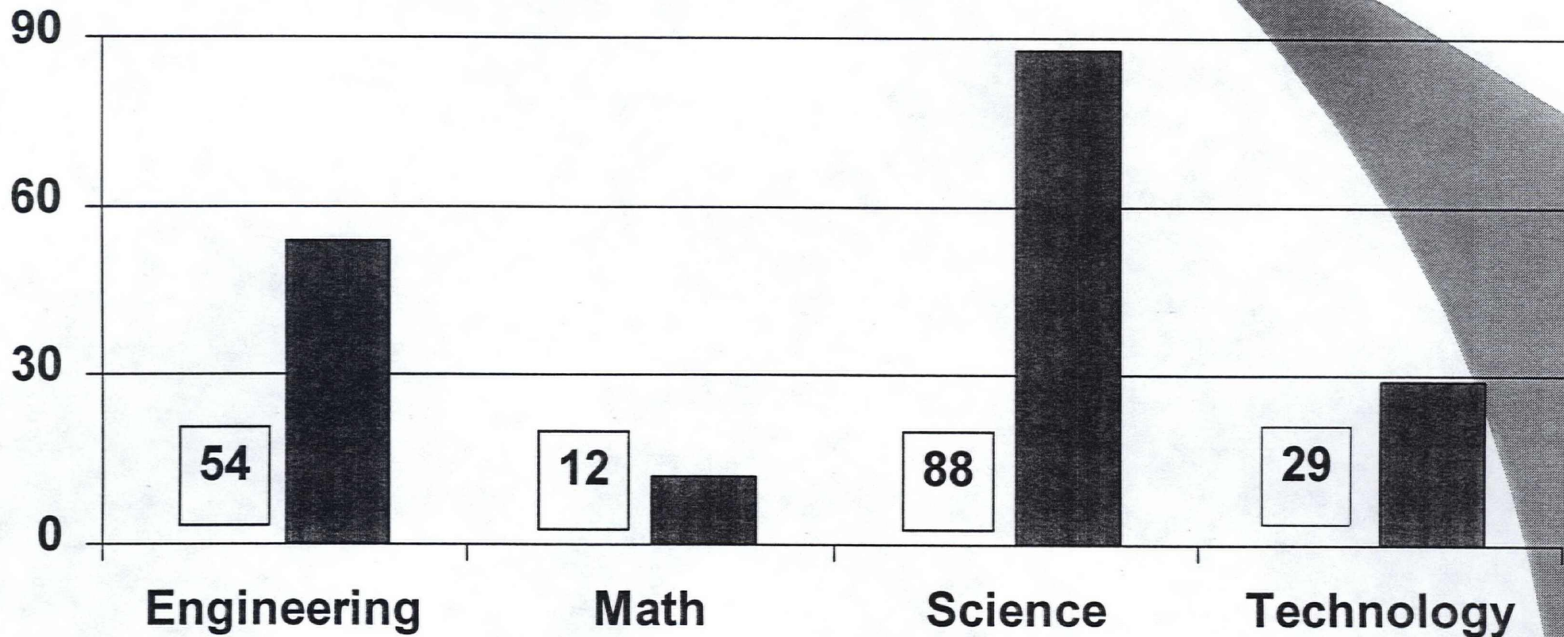
**RETENTION!!!**

**RETENTION!!!**



# Baseline Data

**SMET Bachelor Degrees Granted at Six 4-Year CO-AMP  
Institution (Summer '95, Fall '95, & Spring '96)  
Total Number of Graduates - 183**



# The Number of CO-AMP Students Involved in Activities To-Date

INSTITUTION	NUMBER OF LEVEL 1 STUDENTS	NUMBER OF LEVEL 2 STUDENTS	TOTAL NUMBER OF STUDENTS
Colorado State University	94	40	134
Community College of Denver	8	0	8
Diné College	15	25	40
Fort Lewis College	67	400	467
Front Range Community College	2	11	13
Metropolitan State College of Denver	16	57	73
Pueblo Community College	9	20	29
Trinidad State Junior College	12	0	12
University of Colorado- Boulder	54	175	229
University of Colorado- Denver	33	8	41
University of Southern Colorado	50	20	70
<b>Total</b>	<b>360</b>	<b>756</b>	<b>1,116</b>

# Accomplishments Programs & Activities

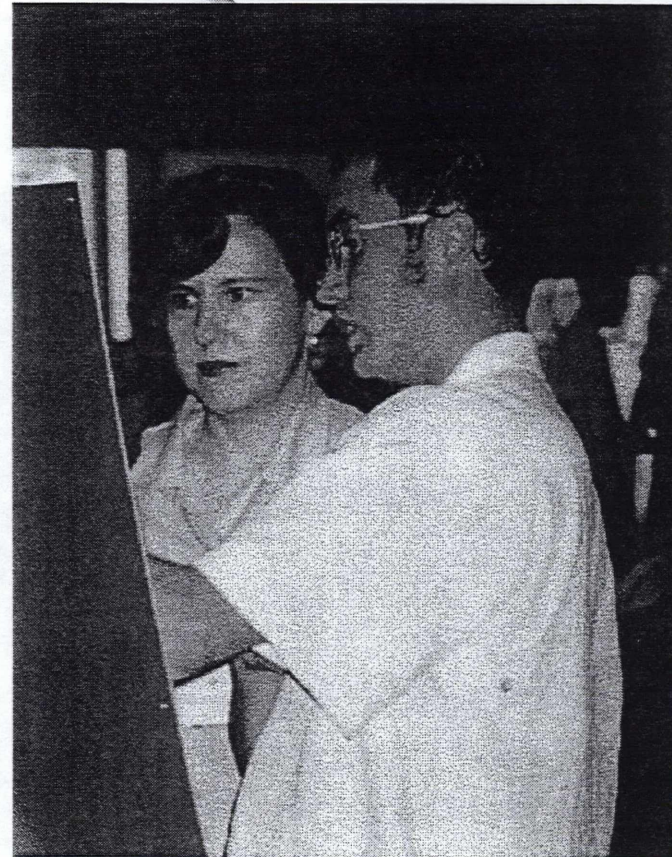
- **Tutoring and Mentoring** Activities during Spring and Fall semesters at all institutions
- **Scholarship** awards and/or **Stipends** given during Spring and Fall semesters at all institutions
- **Summer Bridge Programs** at the Community College of Denver, Dine College, Fort Lewis College, Pueblo Community College, University of Colorado-Boulder, University of Southern Colorado

# Accomplishments Programs & Activities (continued)

- **Faculty Diversity**  
**Workshops** at Fort Lewis College, Front Range Community College, University of Southern Colorado
  - **Undergraduate Research**  
opportunities at Colorado State University, Dine College, Fort Lewis College, University of Colorado-Boulder
  - **Curriculum**  
**Development** at Colorado State University (Mathematics), Dine College (Environmental Science), Fort Lewis College (English Composition), University of Colorado-Denver (Chemistry)
- 

# Accomplishments Programs & Activities (continued)

- **Academic Excellence and Leadership Workshops** at Dine College, Fort Lewis College, University of Colorado-Boulder, University of Southern Colorado





# Accomplishments - Grants

- **NSF Teacher Preparation Proposal (Pending)**
  - \$100,000/year for 5 years
  - Purpose is to increase the number of underrepresented minority teachers of SMET fields.
  - Will target Fort Lewis College and the University of Southern Colorado CO-AMP programs and students.
  - Proposal submitted in July to NSF AMP, and redrafted to submit to the NSF InService Teacher program in collaboration with CETP.

# Accomplishments - Grants

(continued)

- **EPA (Pending)**

- \$140,000/year for 3 years; in collaboration with CSU
- Purpose to conduct undergraduate research for at least 10 CO-AMP students in conjunction with CSU Civil Engineering Dept./Water Resources.

- **Colorado State University Diversity Fund (Pending)**

- \$92,900 for first year
- Purpose is to develop two model programs, one for recruiting and retaining underrepresented minority transfer students to CSU, and one to offer CSU faculty and staff professional development opportunities regarding topics of diversity.

# Accomplishments - Grants

(continued)

- **Department of Education Teacher Enhancement (Pending)**
  - \$225,000/year for 3 years in collaboration with InterComm International, Inc. of Denver, Principal Investigators.
  - Purpose to conduct research on the relationship between a teacher's level of receptivity toward the use of technology in the classroom as it relates to socio-economic status, culture, age, gender, and geographic influences, providing students research opportunities and curriculum development.
  - Will provide CO-AMP students undergraduate research opportunities, especially those in education and social and behavioral sciences.

# Accomplishments - Grants

(continued)

- **CCHE Center of Excellence (In Process)**
  - \$225,000/year for 5 years
  - Purpose is to provide additional funding to participating CO-AMP institutions to expand existing programs, activities, and scholarships, and to create more opportunities for more students.
  - CO-AMP is a unique collaborative effort to motivate underrepresented minority students in the state of Colorado and the Four Corners region to pursue higher educational opportunities and to graduate with a 4 year baccalaureate degree.

# Accomplishments - Grants

(continued)

- **U.S. West - Alliances of Learning and Vision for Underrepresented Americans (ALVA) (In Process)**
  - \$150,000/year - ongoing
  - Purpose is to link industry with universities through summer internships with underrepresented minority college freshmen and to provide calculus, problem solving skills, financial assistance, mentorship, and vision to CO-AMP students.
- **CSU Civil Engineering Dept, Egyptian National Water Research Center, & the Centre for Environment & Development for Arab Region & Europe (In Process)**
  - Undetermined amount at this time.
  - Purpose is to create an International Center for Environment (ICE) that will provide research and internship opportunities, and international work and living experiences for CO-AMP and other students.

# Accomplishments

## National Conferences

- **NSF Project Director and Teacher Preparation Conference, March 12-15, San Juan, Puerto Rico; attended by El-Hakim.**



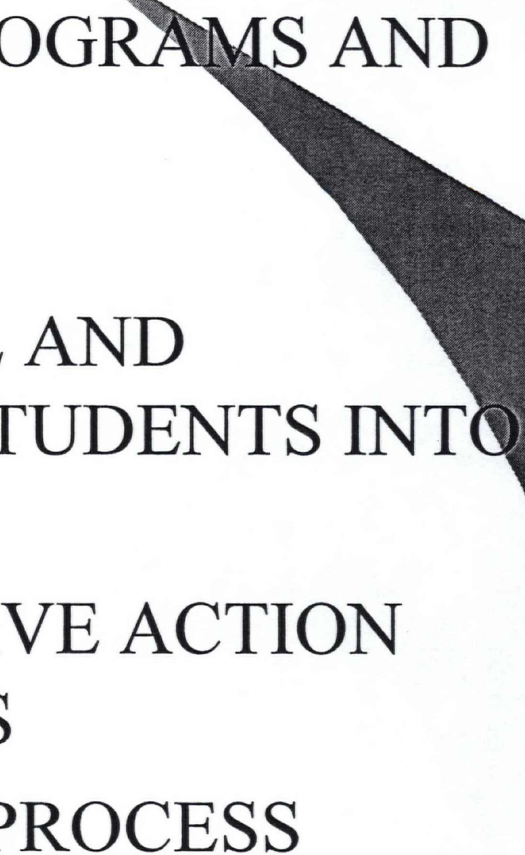
- **5th Annual NSF AMP Research Conference, July 23-27, Las Cruces, New Mexico; attended by 3 Fort Lewis College and 1 University of Colorado-Boulder student presenters, El-Hakim, and Martin (University of Colorado took 3rd place in Engineering Oral Presentation).**

# Accomplishments

## National Conferences (continued)

- **American Indian Science & Engineering Society (AISES)**, November 20-23, Houston, Texas; El-Hakim and Martin will attend.
- **National Diversity Conference on Race and Ethnicity in American Higher Education**, May 28-June 1, 1998, Denver, Colorado; El-Hakim and Martin will attend (hopefully Management Team, Site Coordinators, faculty representatives, and others involved with CO-AMP will attend!).

# Issues

- INSTITUTIONALIZING PROGRAMS AND ACTIVITIES
  - FUNDING
  - INCORPORATING SOCIAL AND BEHAVIORAL SCIENCE STUDENTS INTO CO-AMP
  - ADDRESSING AFFIRMATIVE ACTION QUESTIONS & CONCERNS
  - ONGOING EVALUATION PROCESS
- 



# Continued Need for:

- INTER-INSTITUTIONAL COOPERATION = VALUE ADDED PROGRAMS
  - STRATEGIC USE OF NSF RESOURCES
  - COHERENCE OF CO-AMP
  - NUMBER OF GRADUATES
  - STUDENT PERFORMANCE
  - ARTICULATION AGREEMENTS
  - STUDENT SUPPORT PROGRAMS
  - ACADEMIC PERFORMANCE
  - EVIDENCE OF INSTITUTIONALIZATION
  - TEACHER PREPARATION
  - COST SHARING
- 