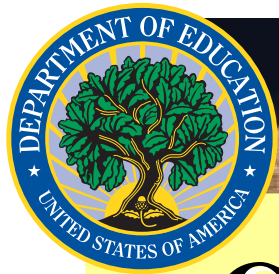


# Grant Strategies to Increase Minority STEM Graduates





# **Grant Strategies to Increase Minority STEM Graduates**

**White House Initiative on Tribal Colleges and Universities  
Technical Assistance Workshop  
*Strengthening Academic Competitiveness  
for Tribal Colleges and Universities***

**November 28-29, 2007  
Minneapolis, Minnesota**



# United States Department of Education

**Dr. Bernadette M. Hence**

**Program Manager,  
Minority Science and Engineering  
Improvement Program**

Office of Postsecondary Education  
Higher Education Programs

1990 K St. NW

Washington, DC 20006

Email: [Bernadette.Hence@ed.gov](mailto:Bernadette.Hence@ed.gov)

Office: (202) 219-7038



# **United States Government Accountability Office (GAO)**

October 2005 Report to the  
Chairman, Committee on Rules,  
House of Representatives

## **HIGHER EDUCATION**

**Federal Science, Technology,  
Engineering, and  
Mathematics Programs and  
Related Trends**



## **Factors Affecting Students' Decisions to Pursue a STEM Degree:**

---

- ✓ **Teacher Quality at the Kindergarten to 12<sup>th</sup> grades**
- ✓ **Math and Science Courses completed in high school**
- ✓ **Mentor, especially for women and minorities**



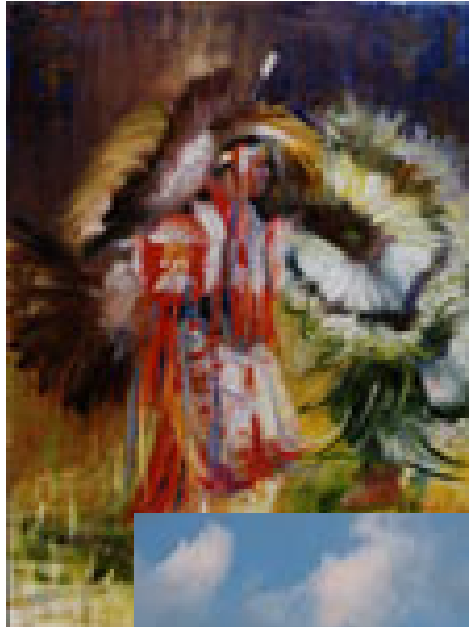


## **Suggestions to Increase the Pipeline: (GAO Report)**

---

- ✓ **Outreach activities**
- ✓ **Opportunities to engage in ‘hands-on math and science activities**
- ✓ **Providing advanced instruction in math and science**

# Tribal Colleges Awarded MSEIP



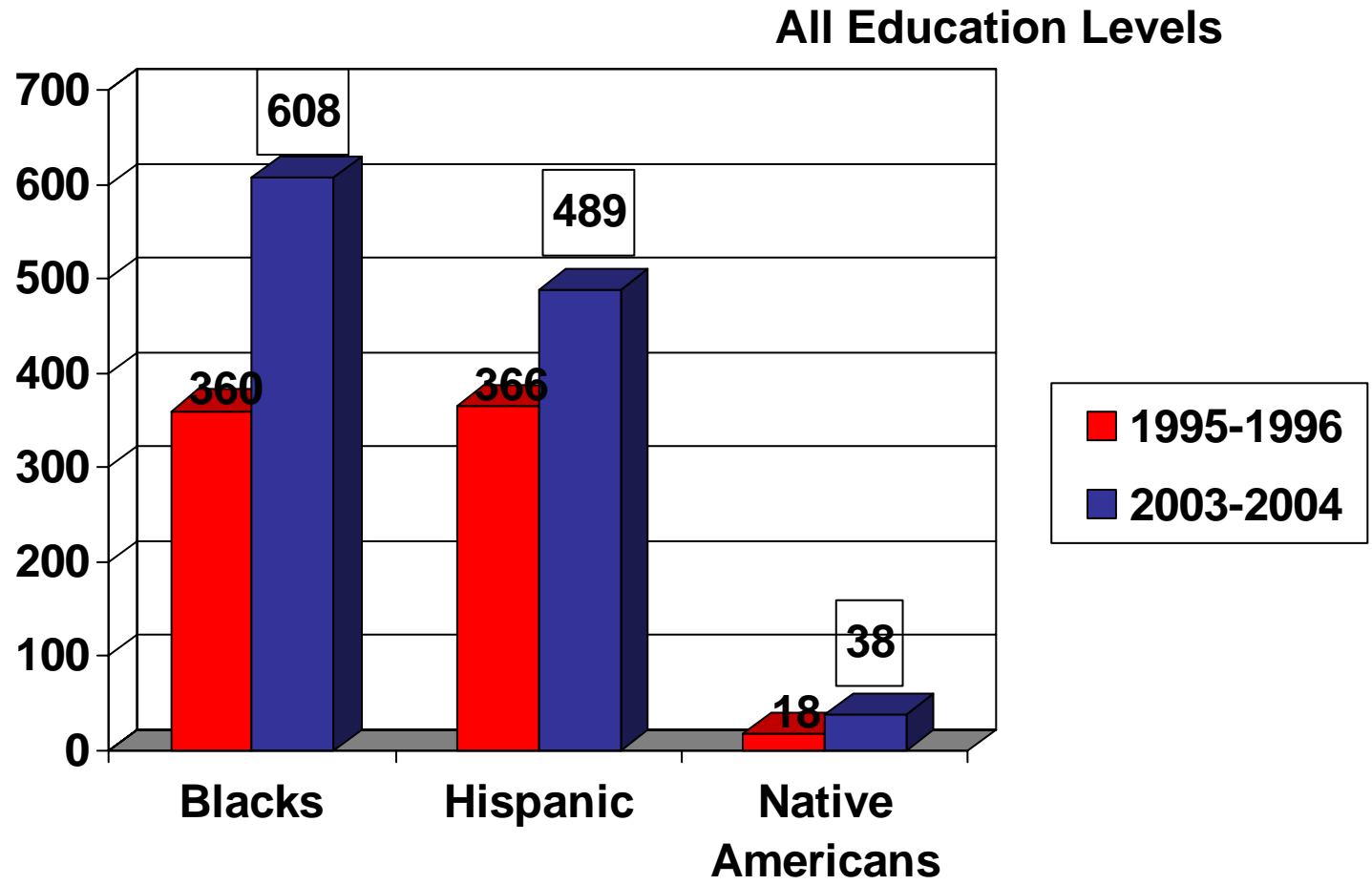
# Tribal Colleges Awards

	<b>Funds available for New MSEIP Awards</b>	<b>Applications Received</b>	<b>Total Number of New Applications Funded</b>	<b>Total number of TCCUs funded</b>
<b>FY 2007</b>	3,555,853	*72	29	2
<b>FY 2006</b>	3,296,058	95	23	0
<b>FY 2005</b>	3,748,484	99	38	1
<b>FY 2004</b>	4,530,138	118	37	4

\*Applications received calculation for FY 2007 is based on the number of eligible applications received in FY 2006 that were not funded (95-23 = 72).



# Changes in Numbers of Domestic Minority Students in STEM Fields





# Overview of the Minority Science and Engineering Improvement Program

**U.S. Department of Education  
Office of Postsecondary Education  
Higher Education Programs  
Institutional Development and Undergraduate  
Education Service**



# MINORITY SCIENCE AND ENGINEERING IMPROVEMENT PROGRAM GRANT

---

## PURPOSE

- To effect long range improvements in the science and engineering education programs of predominantly minority institutions
- To increase the participation of underrepresented ethnic minorities, particularly minority women, into science and technological careers.



# Activities Supported by MSEIP

---

- **ANY other activities designed to address specific barriers to the entry of minorities into science**

Pre-College Students

Upgrades of  
Institutional Facilities

Teachers

Curriculum/Degree  
Programs

Faculty

Stipend for  
Participants

# Minority Science and Engineering Program Grant (MSEIP) Supports:



**Teacher Quality  
Development**

**Mathematics and  
Science  
Preparation  
Programs**

**Outreach to  
underrepresented  
groups**



# Activities Supported by MSEIP

---

## Development of Pre-college enrichment activities in science

### Includes Kindergarten through grade 12 students

- Elementary school students
- Middle or junior high school students
- High school students





# Activities Supported by MSEIP

---

- **Advanced Science Seminars**
- **Science faculty workshops and conferences**
- **Faculty training to develop specific science research or educational skills**

**Elementary school teachers**

**Secondary school teachers**

**College faculty or instructional staff**

# Activities Supported by MSEIP (Minority Institutions)



**Long range  
improvements in  
science and  
engineering  
education**  
  
(curriculum,  
degrees, facilities  
renovation/upgrades)

# Eligibility of 4-yr Minority Institutions

**Institutions of higher education that:**

- Award baccalaureate degrees; AND
- Are minority institutions

**Eligible Grant Types:**

**Special Projects  
\$100,000/12 Months,**

**Institutional  
\$200,000/12 months**

**Cooperative**

**\$300,000/12 Months**



# Eligibility of Non-Minority Institutions

Institutions of higher education that award baccalaureate degrees that:

- Provide a needed service to a **group** of minority institutions; or
- Provide in-service training for project directors, scientists, and engineers from minority institutions

**GRANT  
TYPE**

**Eligibility:**

**SPECIAL  
PROJECTS**

**\$100,000/12  
Months**

# Eligibility of 2-yr Institutions

Award associate degrees AND

- Are minority institutions
- Have a curriculum that includes science or engineering subjects;
- Enter into a partnership with 4-yr institution that award baccalaureate degrees in science and engineering

Eligible Grant  
Types: **Special  
Projects**

**\$100,000/12  
Months,**

**Institutional  
\$200,000/12  
months**

**Cooperative  
\$300,000/12  
Months**



# MSEIP Grant Applications

- (At this time) More than one application can be submitted from an institution which has a different focus or target
- Carefully review: Formatting, Page Limitations (varies), Fonts, Spacing, Margins, Table/Charts, Letters of Support





# Minority Science and Engineering Improvement Program

Authorized  
under Higher  
Education  
Act of 1965,  
as amended

Section  
350





# Minority Science and Engineering Improvement Program

*Commonly  
referred to as:*

**Title III, Part E**





# Minority Science and Engineering Improvement Program

## Background:



Supports the  
*technological*  
and *economic*  
*competitiveness*  
of the United  
States

....by improving and expanding the scientific and technological capacity of the United States.



# Minority Science and Engineering Improvement Program



- ✦ Underrepresentation of minorities in science & technological fields *diminishes our Nation's competitiveness....*



Congress found that...

Minority institutions  
provide an important  
educational  
opportunity in  
science &  
engineering to  
minority students  
despite limited  
resources.





Congress found that...

More & better prepared  
scientist, engineers, and  
technical experts are  
needed to improve and  
expand the scientific  
and technological  
capacity of the United  
States.







# Minority Science and Engineering Improvement Program



**Strong  
Federal  
Interest** in  
improving  
science and  
engineering  
programs...



# Maximum Awards

✦ Institutional Project Grant:

\$200,000/12 month period.

✦ Special Project Grant:

\$100,000/12 month period.

✦ Cooperative Project Grant:

\$300,000/12 month period.

**Up to 36  
months**



# Grant Types



## Institutional Grants

include (but not limited to):

faculty development programs; or development of curriculum materials.

Maximum \$200,000 per 12 months



# Grant Types

Cooperative Grants include (but not limited to): assisting institutions in sharing facilities and personnel; disseminating information about established programs in science and engineering; supporting cooperative efforts to strengthen the institutions' science and engineering programs; or carrying out a combination of any of the activities in subparagraphs

**Maximum \$300,000 per 12 months**



# Special Project Grant Types

- (A) include (but are not limited to):
- A. advanced science seminars;
  - B. science faculty workshops and conferences;
  - C. faculty training to develop specific science research or education skills;



# Special Project Grant Types

- D. research in science education' programs for visiting scientists;
- E. preparation of films or audio-visual materials in science;
- F. development of learning experience in science beyond those normally available to minority undergraduate students;
- G. development of pre-college enrichment activities in science; or any other activities designed to address specific barriers to the entry of minorities into science.

**Maximum \$100,000 per 12 months**





# Definitions that Apply to MSEIP

❖ **Minority** - American Indian, Alaskan Native, Black (not of Hispanic origin), Hispanic (including persons of Mexican, Puerto Rican, Cuban, and Central or South American origin), Pacific Islander or other ethnic groups underrepresented in science and engineering.

(Not defined by Gender)



# Definitions that Apply to MSEIP

❖ **Minority institution** – an accredited college or university whose enrollment of a single minority group or a combination of minority groups exceed fifty percent of the total enrollment.

(Unduplicated Headcount including credit and non-credit students)



# Eligible Applicants

Consortia of organizations that provide needed services to one or more minority institutions



# COMMUNITY COLLEGE ELIGIBILITY

- Public or private nonprofit institutions that --
- Award associate degrees; and are minority institutions that—
- Have a curriculum that includes science or engineering subjects
- Enter into a partnership with institution that award a baccalaureate degree in science or engineering.



# Other Eligible Applicants

Nonprofit science-oriented organizations, professional scientific societies,

AND

all nonprofit, accredited colleges and universities which provide a needed service to a group of eligible minority institutions or provide in-service training for project directors, scientists, and engineers from eligible minority institutions.



# COMPETITION PRIORITIES

## Competitive Preference Priorities

5 points added to the score of applications from eligible applicants that have not been awarded a MSEIP grant in the last 5 years.

*(Based on FY 2006 application requirements.)*



# What is an Invitational Priority?

An invitational priority is an expression of **interest** by the Department of Education in a particular **strategy,** **approach, or results of projects** funded under the program.

***No additional points awarded if invitational priority met.***



# MSEIP *Invitational Priority*

1

1. Applications that focus on **bridge programs targeting pre-freshman entering into STEM fields.**

*(Based on FY 2006 application requirements.)*





# MSEIP *Invitational Priority*

2

2. Applications that focus directly on student learning that encourage and facilitate **implementation of pedagogical approaches** such as web-based course strategies or interactive modules to increase retention.

*(Based on FY 2006 application requirements.)*



# MSEIP *Invitational Priority*

3

3. Applications that focus on **mentoring programs** designed to increase the number of underrepresented student graduates with STEM undergraduate majors.

*(Based on FY 2006 application requirements.)*



# Minority Science and Engineering Improvement Program

**\*MSEIP Website:**

<http://www.ed.gov/programs/idadesmsi/index.html>

**\*Minority Science and Engineering Improvement Program Grant Website**



**GUIDE**

**TO**

**U. S. DEPARTMENT**

**OF EDUCATION**

**PROGRAMS**



# Website

<http://web99.ed.gov/GTEP/Program2.nsf>

**CFDA (Catalog of Federal Domestic Assistance) - 84.120A**

**<http://www.ed.gov/programs/gtep/index.html>**



# Grant Field Readers

- Independently read and evaluate applications submitted to the Department requesting federal funds

**Interested parties should register at:**

**<http://webprod.cbmiweb.com/edfrs/>**



# Contact Information

Dr. Bernadette Hence

Bernadette.Hence@ed.gov



**(202) 219-7038**





Questions,  
Comments,  
Concerns???



# Grant STRATEGIES to INCREASE the Minority STEM Graduates



...Increase the Pipeline

