

## Program Personnel:



### Project Director:

*Dr. Rafic (Ray) Bachnak*  
Chair/Professor  
Ph: (956) 326-2408  
rbachnak@tamiu.edu



### Co-Principal Investigator:

*Dr. Rohitba Goonatilake*  
Associate Professor  
Ph: (956) 326-2588  
harag@tamiu.edu



### Co-Principal Investigator:

*Dr. Juan Lira*  
Regents Professor/Associate Provost  
Ph: (956) 326-2601  
jlira@tamiu.edu



### Co-Principal Investigator:

*Ms. Conchita Hickey*  
Executive Director of Programs for  
Academic Support and Enrichment  
Ph: (956) 326-2134  
chickey@tamiu.edu

Program Mailing Address:

STEM RRG Program  
C/O: Dr. Ray Bachnak  
Texas A & M International University  
Department of Engineering, Mathematics, and Physics  
5201 University Blvd.

Email: stem-rrg@tamiu.edu

Web Site:

<http://www.tamiu.edu/~rbachnak/STEMRRG/index3.html>



**Students during a presentation given by a speaker from NASA.**



**Students touring the Engineering Lab**



**Students working in the computer lab**

**For more information visit us at:**

<http://www.tamiu.edu/~rbachnak/STEMRRG/index3.html>



## *STEM Recruitment, Retention, and Graduation*



2008-2009 Academic Year



**TEXAS A&M  
INTERNATIONAL  
UNIVERSITY™**

# STEM RRG at TAMU



## Objectives:

- Recruit Hispanic and other minority students into STEM majors at TAMU
- Provide summer enrichment workshops to Hispanics and other minority students
- Provide internships and research assistantship opportunities for Hispanics and other minority students
- Provide professional development activities to TAMU STEM faculty who teach introductory science courses, including mathematics, engineering, physics, and biology
- Provide tutoring and supplemental instruction opportunities to Hispanics and other minority students in College Algebra courses
- Develop a model transfer system that builds on our current articulation agreement with LCC to increase the transfer of Hispanics and other minority students in STEM fields
- Provide advising and counseling to Hispanics and other minority students
- Establish a STEM endowment that provides Hispanics and other minority students a continuous source of scholarships
- Create STEM cohorts and learning communities and provide advising to Hispanics and other minority students in these cohorts

## For TAMU Students:

### • STEM Research Experiences to Enhance Retention

This project offers real-world learning experiences to outstanding Hispanics and other minority students in the STEM majors at TAMU. The program awards internships and research assistantships to highly qualified students. Interns will be placed in private industry or government agencies. Research assistants will be supervised by faculty members conducting research in computer science, mathematics, biology, physics, or engineering.

### • College Algebra Support Project

The main goal of this project is to increase the return rate in College Algebra. The approach is based on the belief that students learn mathematics by doing it. Homework and laboratory projects will be used to help students understand concepts and build problem solving skills.

### • Counseling Support Services

A series of 12 outreach modules will be made available to STEM students. These modules will deal with different ways of overcoming school related anxiety and will teach STEM students means of using meta-cognition in learning situations. Fully accredited clinical support and consultation will be available to STEM students to address extreme complications in personal and social identity and adjustment issues.

### • Endowment

STEM-RRG will establish a \$500,000 endowment fund to provide scholarships to TAMU students pursuing degrees in STEM programs.



## For High School Students:

### • STEM Recruitment and Enrichment Project

The goal of this project is to improve the recruitment and preparation of Hispanics and other minority students through participation in summer workshops and a follow-up science and engineering exhibit.

### • Pre-Engineering Cohort

The purpose of this project is to create a pre-engineering cohort to improve the recruitment and retention of highly motivated Hispanics and other minority students. Students will participate in an enrichment program at TAMU.

### • Mathematics Education/Physical Science Education Cohort

This project creates a mathematics education/Physical science education cohort to improve the recruitment and retention of highly motivated Hispanics and other minority students from area high schools.

### • Mathematics Enrichment Project

This project offers a pre-freshman camp for incoming Hispanics and other students to help these students make connections between mathematics and science, to succeed in freshman chemistry and physics courses, to develop more sophisticated understanding of their own study skills and strengths, and to develop learning communities of peers.

## Other Projects:

- High School Recruitment
- Faculty Professional Developmental
- Transfer Agreement and Students Advising

# STEM

