



**NEW YORK CITY
COLLEGE OF TECHNOLOGY**
The College of Technology
of The City University of New York



Hostos Community
College

Research and STEM Education Through NASA Initiatives

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CIPAIR: Curriculum Improvement
Partnership Award for Integration of
Research

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PARTNERSHIP

CIPAIR: Curriculum Improvement
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Partnership with NASA Centers

Flight Center (MD), and Marshall Space Flight
Center (AL)

- ❖ Every summer two professors and four students will spend 6 – 10 weeks in NASA center working closely in a NASA active research.
- ❖ NASA CIPAIR will pay students stipend (4k + travel).

This is a one week program, end of May, to prepare

The program will be offered only for students who are going for internship in the summer and is mandatory.

- ❖ students get small stipend for participation, in this program (\$200 – 300)
- ❖ The program contains lectures by faculties, researchers, industry partners and site visits

Partnership with New York City Research Initiative (NYCRI)

- NYCRI is sponsored by NASA education office
- Students from City Tech and HCC will be working in a NASA project within New York City area or New Jersey
- 5 – 8 students will be working during the summer, Stipend will be paid to students by NASA CIPAIR (3 – 4 K)
- NASA CIPAIR will collaborate with the Robotics and Mechatronics Program in the department (NSF-ATE grant)

Partnership with CUNY LSAMP

- CUNY-LSAMP objective is to increase the number of minority students in STEM (NSF funded)
- Students working in LSAMP projects during the school year are most likely be selected for NASA internships
- LSAMP will help NASA CIPAIR in financial cost of internships.

Articulation between City Tech and Hostos

- Departments of Mechanical and Electrical Engineering at HCC will be articulating with the departments at City Tech.
- The articulation will ease the transfer of HCC students to City Tech.
- Dr. Angulo is in charge of this articulation.

TRADITIONAL SCHOOLS

- more than 100 students participate in the summer program every year.
- An aerospace curriculum and project will be prepared by NASA CIPAIR for a faculty member to teach that during the summer program.

research projects in the end of august every year, starting from 2011.

- Some students will make oral presentations and the rest in poster presentation.

CURRICULUM

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the City Tech

- **Engineering. Simulation and Presentation (IND2420),**
- **Materials Testing Lab (MECH2420),**
- **Comp. Applications in Mechanical Engineering (MECH1240)**

➤ **Linear Algebra (MAT320).**

NEW COURSES

- Introduction to Research & Project Management (Prof. Gailani and Berri)
- Introduction to Remote Sensing (Prof. Reggie and Vladutescu)

updating the curriculum and the curriculum of the new courses

- Students participation in the discussion of the curriculum will enhance their experience and will be inspiring.

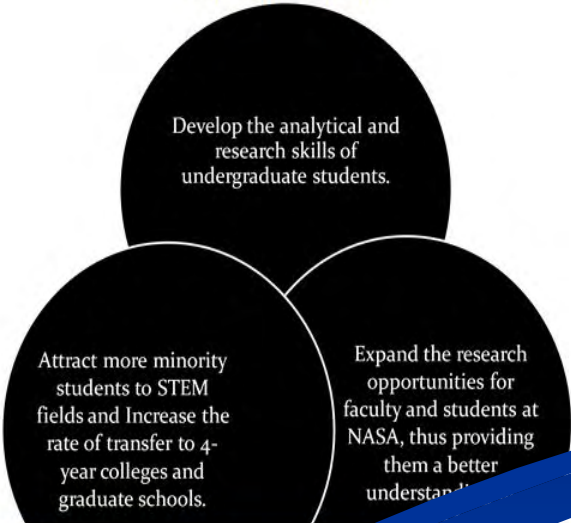
present in regional and national conferences.

- In April 2011 students will participate in the Research Ethics in Biomedical Engineering at Polytechnic University.

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Achieving Proficiency in Engineering Research & STEM Education through NASA Initiatives

Project three(3) major goals:



Anticipated Outcomes

The anticipated outcomes of this collaboration are: increasing the number of minority students in STEM to more than 40%, increasing the transfer to bachelor degree programs and graduation at least by 50%, and exposure of students to research work and opportunities in NASA.

Program Evaluation

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EVALUATOR

- C. J. Quill & Associates, Inc. is hired to evaluate the program. They will assess whether the project is being carried out as planned
- Joy Quill has 25+ years in federal government and 15 years as evaluation consultant.

THANK YOU FOR YOUR ATTENTION



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- Adding two new courses. The courses will be an introductory to STEM research and introduction to remote sensing
- Adding research components to existing courses including Eng. Siml. and Prsnt. (IND2420), Materials Testing Lab (MECH2426), Comp. Appl. in Mech. E. (MECH1240), Differential Equations (MAT360), and Linear Algebra (MAT320).

Cont.

- Linking the project with existing industries and organizations whose mission is closely related to STEM research and education and NASA missions, including NASA's New York City Research Initiative (NYCRI), Alliance for Minority Participation (AMP) in CUNY. Proeyecto Access in HCC, NOAA CI at CCNY which will result in more opportunities for the project to grow,