H-AGEP

CCNY UTEP

The Hispanic Alliance for the Graduate Education and the Professoriate on Environmental Sciences and Engineering

Yajaira Mejia
CCNY

2020 AHSIE Annual Conference

March 9, 2020

Miguel Velez-Reyes
UTEP

Dugwon Seo
Queensborough CC

LaGuardia · Queensborough Community College CUNY · UTEP · El Paso Community College · The City College of New York

H- AGEP Alliance

Senior Colleges

- The City College of New York
- University of Texas El Paso

Texas CCs

El Paso community College

CUNY CCs

- Queensborough Community College
- LaGuardia Community College

H-AGEP Team: Four-Year Institutions


Jorge E. Gonzalez


Fred Moshary


Joseph Barba


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Kyle McDonald


Richard Steinberg

the City College of New York


Miguel Velez-Reyes


Ivonne Santiago


Harry Meeuwsen


Irma Torres-Catanach


Craig Tweedie

UTEP

H-AGEP TEAM

Dugwon Seo
Queensborough CC

Yasser Hassebo
LaGuardia CC

Jeffrey Sivils
El Paso CC

Mariano Olmos
El Paso CC

Jose Pacheco-Lucero
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Teachers College Columbia University
External Evaluator

Dawn Horton
UMASS Amherst
Research Lead

H-AGEP MAIN GOAL

Develop, implement and study a model for training and transitioning Hispanic STEM doctoral students,

- who have completed all coursework and
- who are dissertating,

as they transition to STEM instructional faculty or staff positions at community colleges or other associate degree granting institutions.

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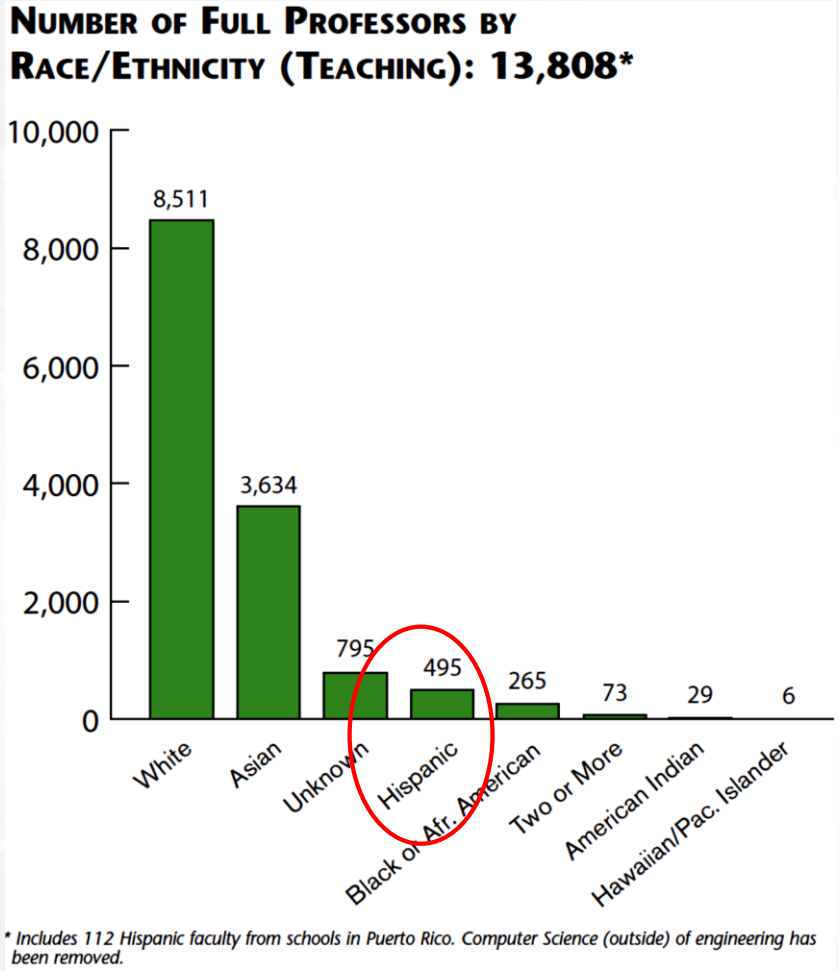
Why H-AGEP?

- Hispanic faculty on campus has a positive impact on Hispanic student success
  - Role modeling and mentorship are critical factors in the college careers and experiences of Hispanic and other URM students.
- According to the National Center of Educational Statistics data (2017), Hispanics comprised only 5% of all full-time faculty in degree-granting postsecondary institutions.
  - Hispanic undergraduate student enrollment, which made up 24% of all undergraduate students.
- 52% Hispanic undergraduates attend community college (CC).
- Research studies have shown that differences in class retention rates and grade performance between white and URM students are reduced by 20 to 50 percent when the course is taught by an URM instructor at community college.
  - These interactions also affect longer-term outcomes such as subsequent course selection, retention, and degree completion.
- Doctoral student training is primarily focused on research-centered careers in academia and industry.



FT-Full Professors in Engineering in US (ASEE, 2019)

H1: While there is a large pool of Hispanic students interested in pursuing graduate studies in emerging STEM fields, for many the motivation to pursue academic careers decreases over time. Addressing root causes and solutions will lead to a significant increase in aspiring faculty.

H2: Hispanic Serving Institutions have the capabilities to increase the pool of available highly qualified Hispanic faculty in STEM.

Hypotheses

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H-AGEP OBJECTIVES

- Develop a strong mentorship and networking program to support *H-AGEP* Fellows during their transition to academic careers in community colleges and in their professional life.
- Develop Fellows' skills in traditional and innovative technology-based teaching and in cutting-edge interdisciplinary research.
- Build Fellows' soft-skills and provide mentoring training critical to success in academic careers.
- Enhance Fellows' research skills to become effective and contemporary researchers in ESE fields, and better teachers by incorporating real ESE problems into the classroom.
- Contribute to the knowledge base and literature on the career decision-making and success of Fellows, particularly focused on barriers that affect Hispanic doctoral student selection of academic career.

H-AGEP Program Overview

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H-AGEP MODEL STRUCTURE

Research and Evaluation

PHASE I

***H-AGEP* Fellow Mentorship Program**

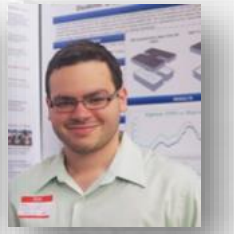
- *Dissertation Advisor*
- *Community College mentor*
- *Teaching Coach*

PHASE II

***H-AGEP* Fellows Academic and Professional Training**

- *Training in Effective Teaching in Environmental Sciences and Engineering*
- *Cutting-Edge ESE Research and Mentorship*
- *Professional Development Program*

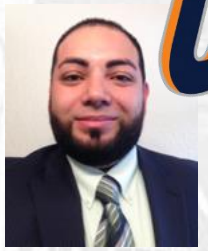
Cohort Recruitment

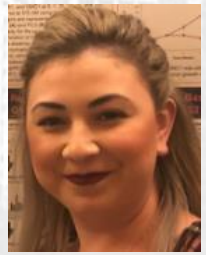





- First Cohort
  - Adrian Diaz, Electrical Engineering, CCNY
  - Natalia Quinteros, Biology, CCNY
  - David Melecio, Mechanical Engineering, CCNY
  - Eric Galvan, Electrical and Computer Engineering, UTEP
  - Anna Pina, Ecology and Evolutionary Biology, UTEP
  - Joanne Moyer, Civil Engineering, UTEP
- Second Cohort
  - Joan Gomez, Mechanical Engineering, CCNY
  - Eder Hernandez, Earth and Environmental Sciences, CCNY
  - Alana Menendez, Earth and Environmental Sciences, CCNY
  - Jane K Martinez, Ecology and Evolutionary Biology, UTEP
  - Ashley N Payan, Biological Sciences, UTEP
  - Katalina Salas, Environmental Science and Engineering, UTEP
  - Victor M Garcia, Civil Engineering, UTEP
- Onboarding process
  - H-AGEP Team kick-off meeting (in-person and virtual)
  - Memorandum of Understanding






PHASE I: *H-AGEP* Fellow Mentorship Program		
Dissertation Advisor	***Community College mentor***	***Teaching Coach***

- **Dissertation Advisors**: They provide knowledge and support in research projects; provide guidance in academic career directions; monitor and evaluate their academic, research and career progress, and, most importantly, serve as a role model.
- **Community College mentors**: Faculty from community colleges provide teaching mentoring, introduce the H-AGEP Fellows to the culture of the Community Colleges, and help them understand the challenges and rewards of academic careers at their institutions.
- **Teaching coaches**: Faculty who develop and deliver the teaching training program. They also serve as teaching mentors to the Fellows.

Informal mentoring: H-AGEP faculty engages with fellows in research and in professional advising on demand.

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H-AGEP PHASE II
H-AGEP Fellows Academic and Professional Training

Teaching Training	Fellows participate in teaching training based on CIERP – An Introduction to Evidence-Based STEM Undergraduate Teaching	Fellows are provided opportunities for shadowing and teaching selected modules at a Community College
Training in Research Mentoring	Fellows are trained in best practices on research mentoring of undergraduate students	Fellows mentor undergraduate students in research at Community College
Professional Development	Fellows participate in Professional Development Workshops	Fellows are mentored in the transition to faculty careers at Community College

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H-AGEP Fellows Academic and Professional Training

Spring & Fall 2018

- Fellows were assigned to teaching coaches and participated in the teaching training program
- Fellows were assigned to Community College mentors
- Fellows taught at Community College supervised and guided by Community College faculty mentors

Spring 2019

- Fellows participated in various professional development workshops
- Fellows participated in the H-AGEP Annual Conference held in March 28th, 2019
- Some fellows participated on a second teaching experience at CC

Fall 2019

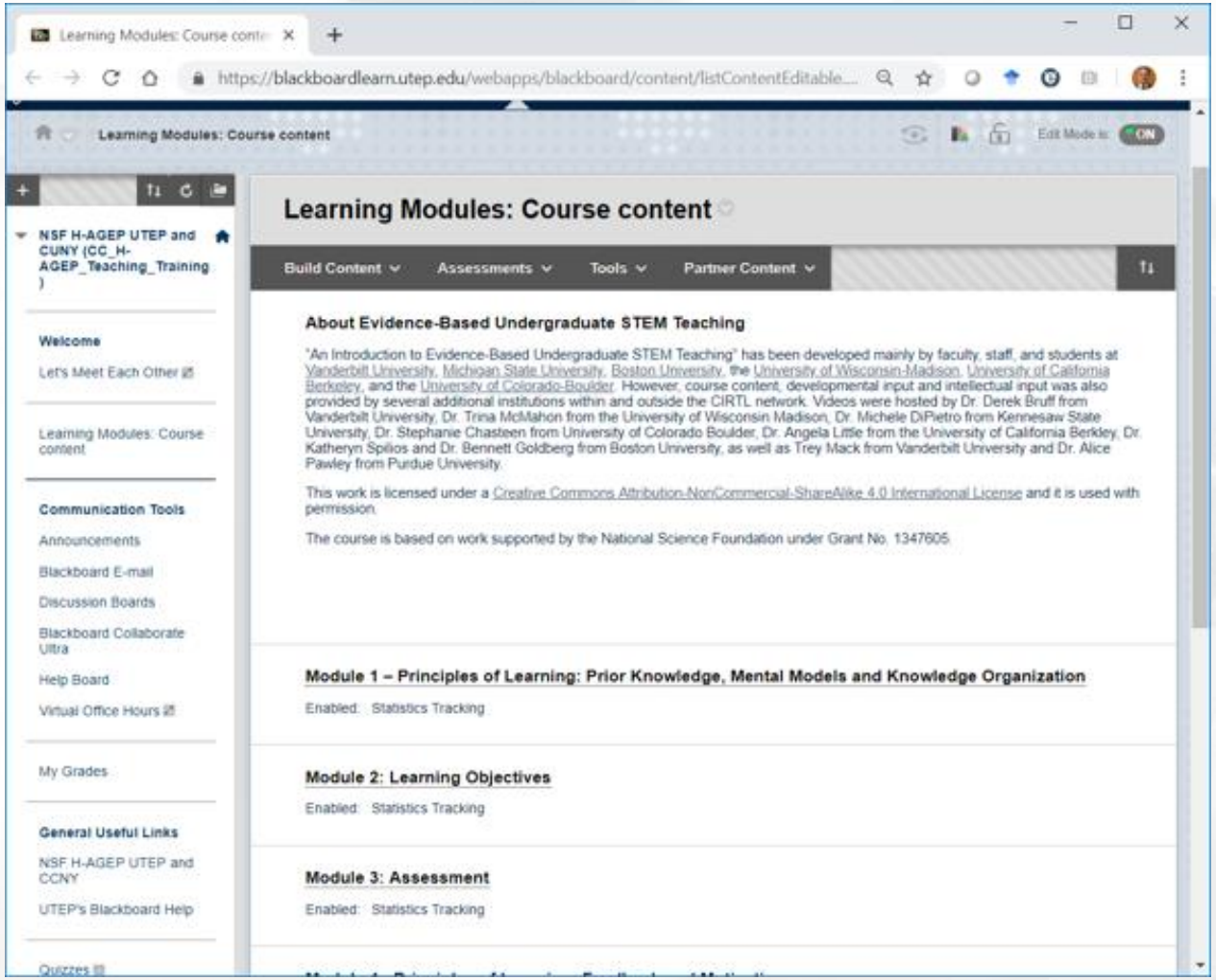
- Fellows participated in various professional development workshops
- Some fellows participated on a second teaching experience at CC
- The second cohort was recruited. Students onboarding process was implemented

Spring 2020

- Cohort 1 students transitioning to the professional life
- Cohort 2 students were assigned to teaching coaches and are participating in the teaching training program
- H-AGEP team is working on logistic for the NSF Site Visit, Advisory Board meeting, and H-AGEP Annual Conference

H-AGEP PHASE II
Activity 1: Training in Effective Teaching

- Defined teaching training curricula.
  - Self-passed modules based on the MOOC “An Introduction to Evidence-Based Undergraduate STEM Teaching” developed by the Center for the Integration of Research, Teaching and Learning (CIRTL) [7] under NSF Grant No. 1347605.
- Modules made available via Blackboard.
- Weekly discussion and homework facilitated by the teaching coaches.



H-AGEP PHASE II
Training in Effective Teaching – Fall 2019 Changes

The first offering of the program was in Spring 2018. The second offering is in Spring 2020 adjusted based on students, advisory board and NSF Panel feedback.

- The blackboard content has been reduced to the most relevant videos.
- The fellows are asked to develop a teaching philosophy they need to post on blackboard
- The fellows are asked to complete the workbook exercises related to the modules and post them for review/discussion.
- The fellows are working on their teaching assignments now and will teach while they are also completing the didactic modules on the blackboard site.
- Fellows are given instant feedback on their lesson plans as they are doing the practicum and teacher mentors are doing class observations.
- This year, UTEP students had the opportunity to join the Team-Based Learning workshop.

H-AGEP PHASE II
Activity 1: Training in Effective Teaching

Teaching experience in the classroom: Fellows were assigned to a Community College (CC) mentor. A course was selected for them to co-teach with their CC mentors allowing some independent teaching responsibilities. Students delivered about 25%-30% of the course lectures (approx. 3-4 lectures), and devoted approximately 10 hours in each lecture.

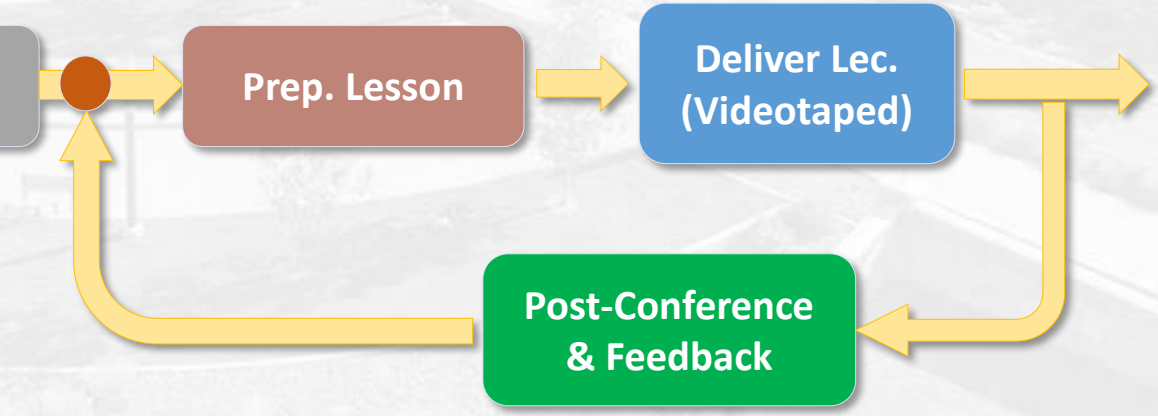
Cohort I – Students who completed the teaching training program

Fellow	Community College	Community College Mentor	Course
Adrian Diaz	LaGuardia	Prof. Yasser Hassebo	Fundamentals of Algebra
Ana Pinna	El Paso	Prof. Jeffrey Sivils	General Biology
David Melecio-Vázquez	Queensborough	Prof. Dugwon Seo	Computer Aided Analysis for Electrical Engineers
Eric Galvan	El Paso	Prof. Stephen Marek	Intro. to Electrical Engineering
Joanne Moyer	El Paso	Prof. Mariano Olmos	Statics
Natalia Quinteros	LaGuardia	Prof. Yasser Hassebo	Earth System Science & Engineering

The second cohort of students are going through the teaching training and teaching experience simultaneously.

In-Class Teaching Experience

LaGuardia CC



AGEP fellow's In-Class-Teaching Experience at Queensborough Community College

Fellow name: David Melecio-Vazquez, CCNY

Community College Mentor: Dr. Dugwon Seo, Queensborough CC

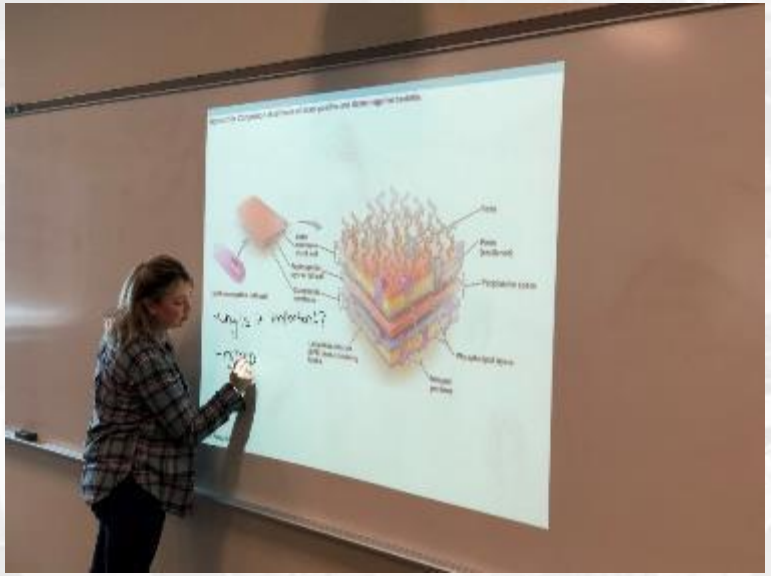
Date	Nov 11, 2019
Class time	9:00 AM – 12:00 PM
Period	3 hrs
Course Title	Computer Aided Analysis for Electrical Engineers
Course Number	EE 103 (Lecture + Lab)
Subject	Probability, Statistics, and Interpolation using Matlab programming
Class size	14 students

Focused on:

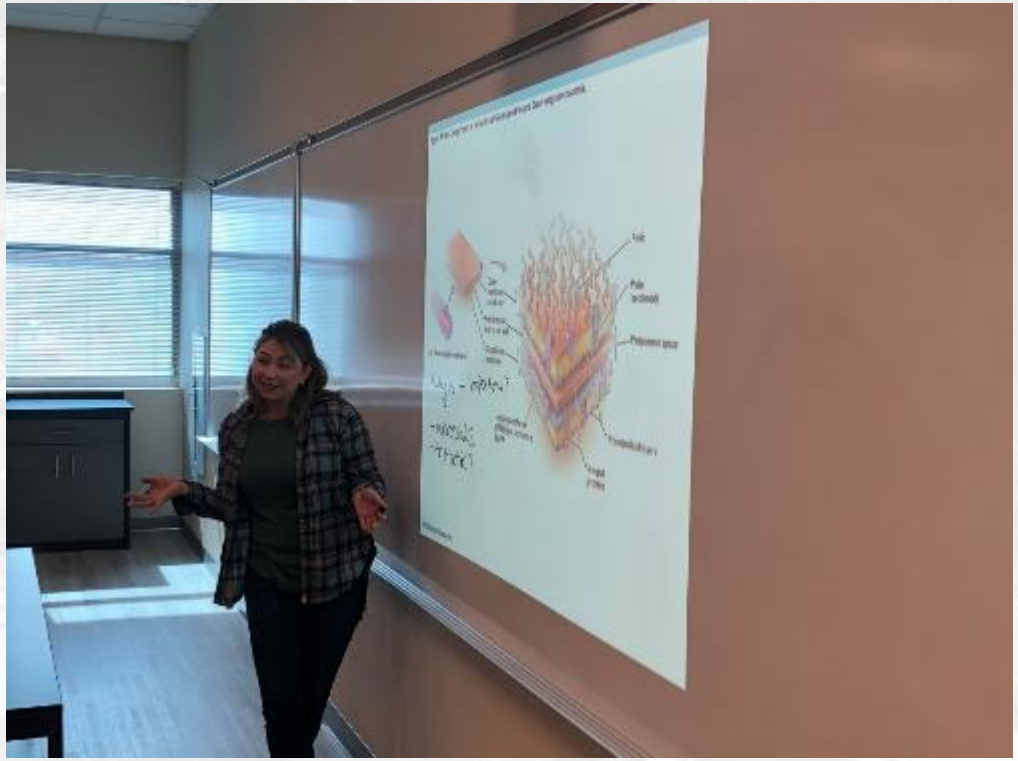
Pedagogical techniques about student-centered approach and active learning in lecture + lab type of class

AGEP fellow's In-Class-Teaching Experience at El Paso Community College

Fellow name: Ashley Payan, UTEP (Cohort 2)
Community College Mentor: Dr. Jeff Sivils, EPCC



Date	**Feb. 2020**
Class Time	**Lect. 8:30-9:20 TR** **Lab. 9:30-10:50 TH**
Period	**Lect. 3 hrs. / Lab. 3 hrs.**
Course Title	**Micro Biology for Non-majors**
Course Number	**2420**
Subject	**How microbes interact with humans and and the envirmonent**
Class Size	**24 Students**



- Ms. Payan mentors EPCC students during a microbiology laboratory.

AGEP fellow's In-Class-Teaching Experience at Community College Cohort II

Date	Feb. 2020
Class Time	Lect. 8:00-8:50 MFW Lab. 11:00-1:40 M
Period	Lect. 3 hrs. / Lab. 3 hrs.
Course Title	General Biology
Course Number	1306/1106
Subject	Survey of general biology topics
Class Size	15/15 Students

Fellow name: Jane Martinez, UTEP
Teaching Mentor: Dr. Jeff Sivils, EPCC

Date	Feb. 2020
Class Time	Lect. 10:00-10:50 MWF Lab. 11:00-1:40 M
Period	Lect. 3 hrs. / Lab. 3 hrs.
Course Title	General Biology part 2
Course Number	1307/1107
Subject	Survey of general biology topics
Class Size	16 / 16 Students

Fellow name: Katalina Salas, UTEP
Teaching Mentor: Dr. Jose Pacheco, EPCC

Date	Feb. 2020
Class Time	Lect. 2:30-3:50-8:50 TR
Period	Lect. 3 hrs.
Course Title	Mechanics of Materials
Course Number	2332
Subject	Mechanical properties of Material
Class Size	15 Students

Fellow name: Victor Garcia, UTEP
Teaching Mentor: Prof. Mariano Olmos, EPCC

Date	Feb. 2020
Class Time	M and W :11:30 AM- 1:30 PM Tu and Th: 10:30 AM- 12:30 PM
Period	Lect. 2 hrs.
Course Title	Fundamentals of Algebra
Course Number	MAT099
Subject	
Class Size	

Fellow name: Joan Gomez, UTEP
Teaching Mentor: Prof. Yasser Hassebo, La Guardia CC

H-AGEP PHASE II
Activity 2: H-AGEP Fellows Training to Become Research Mentors

- Fellows are trained in best practices on mentoring of undergraduate students in research
- Community College mentors share their experience in doing research and mentoring students in research and academic related topics.
- Student are encouraged and mentored in networking.
  - We take advantage of opportunities that arise due to workshops, seminars and conferences at each campus. Also provide some support for national conferences in their area of specialization.
  - Students attend conferences to expand their networking with CC (New)
    - American Association of Community College (AACC): https://aaccannual.org/
    - League for innovation in the Community College: https://www.league.org/inn2020

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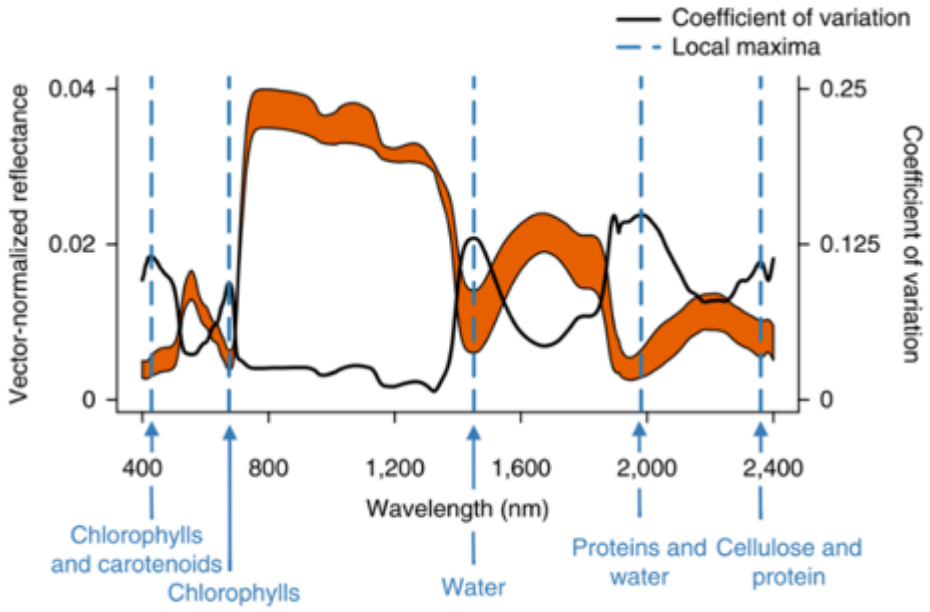
Mentoring Training Process

- Drs. Moshary and Hassebo conducted a workshop to provide the AGEP fellows with tips and related skills about mentoring undergraduate students in research projects.
- A strategic plan was developed to approach UG students at LaGCC.
- Natalia visited Dr. Hassebo classes several times and introduced her research project.
- Dr. Hassebo motivated the UG candidates to participate.
- Dr. Hassebo recommended several students to Natalia.
- Students submitted applications, resume, and statement to Dr. Hassebo and Natalia.
- Natalia interviewed and selected two candidates.
- Dr. Hassebo assisted the AGEP fellow to devise a research mentoring plan.

Mentoring Training: UG Research

Spectral Signature



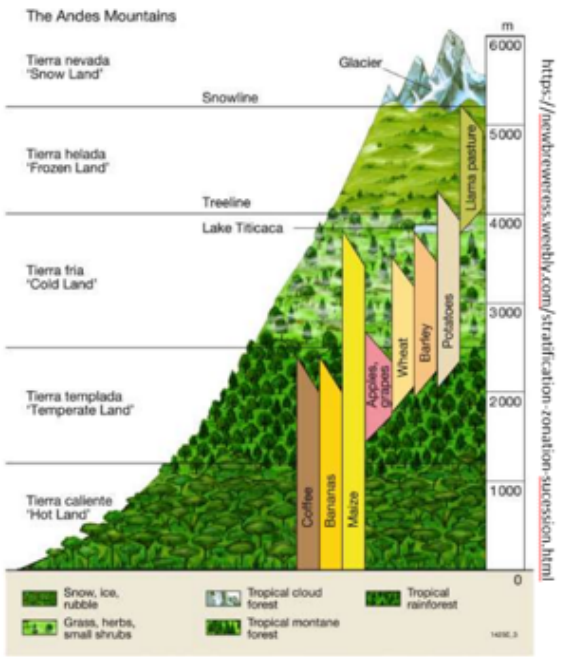
Schweiger et al. 2018 Nature

Can Functional Traits Tell Us About Ecological Differences Between Mountain And Lowland Tropical Species?

Where do these species live?

What functional traits can we derive from spectra?

What functional traits, derived from spectra, are more similar in species distributed in mountains and in the lowlands?



Research findings were presented to the Research Experience for Undergraduates Programs (NSF-REU) in the summer of 2019.

H-AGEP PHASE II
Activity 3: Professional Development Program

Professional Development Program

A series of workshops to support skill development and prepare the Fellows for the diverse responsibilities of the professoriate

Workshop	Speakers	Duration	Date
How to start and maintain an awesome career?	Dr. Raymond Rumpf Professor, Department of Electrical and Computer Engineering, UTEP	1.5hr	December 4, 2019
Getting an academic job at Community Colleges	Prof. Aparicio Carranza – Associate Prof. at CityTech Prof. Jalil Moghaddasi - Chair of the Engineering, Physics and Technology at BCC Prof. Reggie Blake – Professor at City Tech Prof Jeff Jiang – Assistant Professor at HCC Mr. Wayne Wauters – Manager,Talent Acquisition Human Resources at San Jacinto College	2hr	October 5, 2019
All-Inclusive Classrooms	Prof. Yolanda Flores Niemann, Department of Psychology, College of Arts and Sciences, UNT	1.5hr	March 28, 2019
Mentoring Students	Prof. Fred Moshary Prof. Yasser Hassebo	1.5hr	March 27, 2019
Developing STEM Research and Educational Programs	Prof. Craig E. Tweedie	1.5hr	March 5, 2019
Time Management	Prof. Joseph Barba Prof. Jorge Gonzalez Prof. Miguel Velez-Reyes Prof. Karin Block	1.5hr	January 31, 2019
Successfully Negotiate a Job Offer	Ms. Sara Laschever	4.5hr.	November 3, 2018
Faculty Careers at Community Colleges	Prof. Yasser Hassebo Prof. Dugwon Seo Prof. Jeffrey Sivils	1.5hr.	CCNY: October 19th, 2018 UTEP: August, 2018
Diversity and Inclusion	Prof. Ivonne Santiago	1.5hr.	March 27, 2019

H-AGEP ANNUAL CONFERENCE

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Hispanic Alliance for the Graduate Education and the Professoriate (H-AGEP) Program
AGEP Annual Conference
Amsterdam Meeting Room – NAC Building
March 28th, 2019
8:30:AM- 5:15PM

8:30AM – 9:00AM	Breakfast
9:00AM – 9:15AM	Welcome Remarks Dr. Jorge E. Gonzalez, H-AGEP CCNY Principal Investigator Dr. Doris Cintron, CCNY Senior Associate Provost
9:15AM – 9:30PM	NSF H-AGEP Program Manager Dr. Mark H. Leddy
9:30AM – 10:15AM	***Invited Speaker*** Teaching Best Practices Dr. Lueny Morell , Vice Dean of School of General Engineering, Beihang University, China
10:15AM-– 10:30AM	*Coffee Break*
10:30AM -11:15AM	Transition from Community Colleges to Senior Colleges Facilitators: Profs. Fred Moshary (CCNY Faculty) and Dugwon Seo (Queensborough CC Faculty) Panel: CCNY Alumni
11:15AM–12:00PM	NSF Funding Opportunities: Advanced Technological Education (ATE) and Improving Undergraduate Education STEM Education: Hispanic Serving Institution Programs Panel: Celeste Carter (ATE) and Minerva Cordova (HSI) Facilitator: Dr. Mark H. Leddy
12:00PM – 1:00PM	*Lunch*
1:00PM – 1:30PM	***Invited Speaker*** Education and Training Programs at Jet Propulsion Laboratory (JPL) Jenny Tieu, NASA JPL
1:30PM – 3:00PM	***Invited Speaker*** All-Inclusive Classrooms Dr. Yolanda Flores Niemann, Professor, Department of Psychology, College of Arts and Sciences
3:00PM – 3:30PM	*Poster Presentations & H-AGEP Fellow Introductions* *Coffee Break*
3:30PM – 4:15PM	Best practices for mentoring graduate students for classroom instruction Facilitators: Profs. Richard Steinberg (CCNY Faculty) and Harry Meeuwsen (UTEP Faculty) Panel: Profs: Yasser Hassebo (LaGuardia Faculty) and Jeffrey Sivils (EL Paso CC Faculty), UTEP Fellow: Anna Pina, and CCNY Fellow: Adrian Diaz Fortich
4:15PM – 5:00PM	Understanding and Planning Your Career Path Facilitators: Profs. Miguel Velez-Reyes (UTEP Faculty & H-AGEP PI) and Joseph Barba (CCNY Faculty) Panel: H-AGEP Fellows
5:00PM - 5:15PM	Adjourn

H-AGEP ANNUAL CONFERENCE

H-AGEP Program Evaluation

Dr. Fenot Aklog

Center for Technology and School Change

Teachers College, Columbia University

H-AGEP Logic Model (2nd Iteration)

ASSUMPTIONS

Hispanics lack role models in academia.

URMs and Hispanic doctoral students in STEM do not pursue faculty careers in STEM at sufficient numbers.

URMs and Hispanic STEM doctoral students do not have enough mentorship experiences.

URMs and Hispanic doctoral students need experiences and exposures that will prepare them to successfully gain employment in academia.

There is a need for more research on Hispanic doctoral students' career decision-making.

INPUTS

AGEP Funding

Implementation Team

- City College of New York
- Unv. of Texas at El Paso
- LaGuardia Community College
- Queensborough Community College
- El Paso Community College

Social Science Research Study Team, UMass, Amherst

Program Evaluation Team CTSC Teachers College, Columbia University

Internal Advisory Board

External Advisory Board

ACTIVITIES

Mentorship Program
Assign mentor team comprised of a dissertation advisor, teaching coach and community college faculty.

Academic & Professional Training

1) Teaching Training
   - training in undergraduate STEM pedagogy
   - STEM teaching opportunities at community colleges

2) Research Mentorship Training
   - training in undergraduate mentoring in STEM research.
   - student mentoring opportunities at community colleges

3) Professional Development
   - workshops and mentoring in effective strategies for networking and apply to and securing academic jobs

Social Science Research Study

Project Evaluation

OUTPUTS

Fellows receive mentoring in preparing for and transitioning into community college faculty positions.

Fellows receive 30-40 hours of instruction in undergraduate STEM instruction.

Fellows provide ~40 hours of instruction in STEM courses at a community college.

Fellows provide mentoring to community college student researchers.

Fellows participate in career development and networking activities

Fellows apply to community college faculty positions.

Data and feedback from the social science research and evaluation for program & model improvement.

Dissemination of model and research findings.

OUTCOMES

Increased Fellows' knowledge of and capacities for implementing best practices in undergraduate STEM instruction and mentorship.

Expansion of Fellow's professional networks within and outside of their home universities.

Increased Fellows' knowledge of and interest in community college faculty careers.

Fellows secure employment as instructional faculty or staff at community colleges or other associate degree granting institutions.

Contribution to the knowledge base on Hispanic STEM doctoral student career decision-making processes, including factors that facilitate and hinder selection of faculty careers.

IMPACTS

Increased quantity and quality of Hispanic STEM faculty, mentors and role models at community colleges or other associate degree granting institutions.

Reduction of barriers (social, cultural, and institutional) to Hispanic STEM doctoral students pursuing and securing faculty positions at community colleges or other associate degree granting institutions.

Replicable model for training and mentoring Hispanic doctoral students in STEM to prepare for and transition into the professoriate at community colleges or other associate degree granting institutions.

Evaluation Purpose and Questions

Formative To document and provide feedback on H-AGEP activities and model implementation.

How is the H-AGEP being implemented?

- What are Fellows and mentors perceptions of and experiences with the program?
- How is the model and/or activities evolving or changing?
- How are program research and evaluation findings being used to inform activities and model development?

Summative To assess the extent to which H-AGEP is achieving its intended outcomes.

What is the impact of H-AGEP on participating Fellows?

- To what extent does H-AGEP broaden and strengthen Fellows' (i) undergraduate STEM teaching and student mentoring skills; (ii) professional networks and career-development related skills; (iii) interest in and pursuit and acquisition of faculty or academic careers at community colleges or other associate degree granting institutions?
- How do the faculty mentors contribute to the intended outcomes for Fellows ?
- In what ways have H-AGEP alumni serving in faculty positions at community colleges applied their H-AGEP experiences?

H-AGEP Cohort 1 Fellow: One-Year Outcomes

H-AGEP's Role in Developing Fellows' Undergraduate Teaching Skills

"The students, they seemed to really like my teaching style….[T]hey would ask me if I was going to teach a course. I felt very honored by that."

Cohort 1 Fellow

"Being able to interact with the students and to get to know them better and really see how they differ from university students, that was kind of the big take away from this."

Cohort 1 Fellow

"I feel good at what I'm teaching. I look at myself a year back, before the [H-AGEP] fellowship, I do see a big difference, because I do know how to apply things now; how to teach better." *Cohort 1 Fellow*

"I think she [H-AGEP Fellow] did really well. I did an informal poll at the end of the semester with the students: what they liked. Several of them were like, 'You know, oh, she was great.' She interacted really well with the students. They were respectful of her."

Community College Faculty Mentor

"Several of the students seemed excited or interested when I mentioned that he [the H-AGEP Fellow] was going to be back in this course. Some of my students were in my class last semester, so some of them already knew him and … seemed somewhat excited when I told them that he was going to be helping this semester, too."

Community College Faculty Mentor

Cohort 1 Fellows: One-Year Outcomes

H-AGEP's Role in the Expansion of Fellows' Professional Networks

"I did meet a lot of people while I was at the community college. At the community college here, to get into a teaching position, it is about who you know.... [My H-AGEP community college faculty mentor] was really good about going around and introducing me to all the people that we would run into."

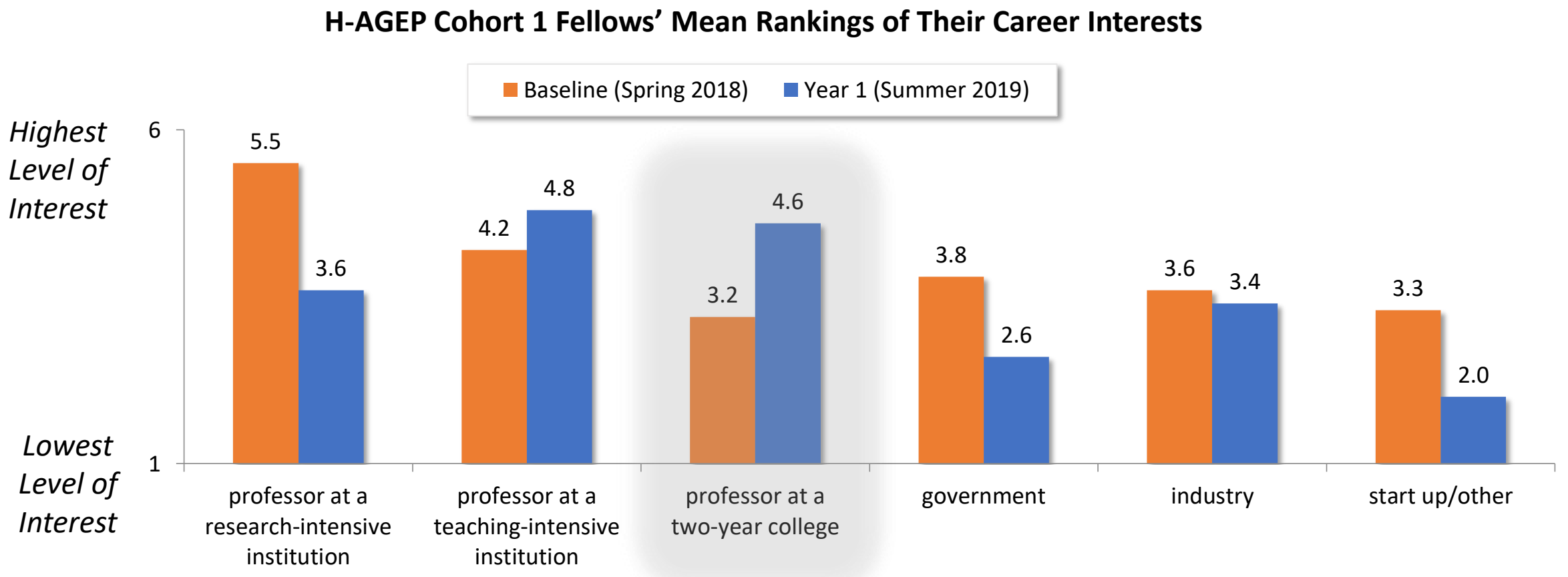
Cohort 1 Fellow

"We had to work with professors from different departments, that was a good networking opportunity; also when we went to the annual [H-AGEP] conference--being able to talk to the other Fellows there in person, meeting the other faculty members."

Cohort 1 Fellow

Cohort 1 Fellows: One-Year Outcomes

Career Interests



Cohort 1 Fellows: One-Year Outcomes

H-AGEP's Role in Developing Fellows' Interest in Faculty Careers at Community Colleges

"I learned that teaching in community colleges [is] actually very positive…. I learned oh! there are tenure track positions! Oh! The pay is commensurable …its competitive!"

Cohort 1 Fellow

"My interest wasn't primarily [in] community colleges. I didn't have a particular specific interest in that. Not that I was uninterested; It was more of an indifference. What I would like to do is work in industry. I saw that there's several professors that work in industry and teach at the community college. Community college has the flexibility. I had the chance to talk to a couple of professors that do that and, to me, that [is] appealing because you get to have the experience of working in the industry, but also you still have the opportunity to teach. You don't lose that skill…. So that's something that I kind of want to follow because I like teaching. "

Cohort 1 Fellow

"I do like the teaching aspect of it. I like the way, when I was shadowing … and teaching the classes, the students were all attentive. They're there because they want to learn. I think they value the education. Whereas, at the university, it's different. I do realize at community college sometimes there's challenges because you have people of all ages, people that have just gotten out of high school, people who need a refresher. But they're all interested in learning, or the vast majority are. So I really enjoyed the environment at community college. It's challenging, but yet it's also rewarding."

Cohort 1 Fellow

Cohort 1 Fellows: One-Year Outcomes

H-AGEP's Role in Developing Fellows' Interest in Faculty Careers at Community Colleges

"[H-AGEP] made me realize how different [the community college] is from both high school and university settings. But it didn't deter me in any way from possibly teaching at a community college. I do feel like it would be a good place for me since I do like teaching and it's a place where you can also integrate some research but not really heavy research.... It made me realize that I would like to teach at a community college."

Cohort 1 Fellow

"I came from a private undergrad … [which] created my biases towards community colleges. We had [an H-AGEP] discussion regarding community college careers….[My community college mentor] made himself available to just answer all our questions. That was a huge benefit. That definitely opened my eyes to the community college as an option more. It was definitely helpful to see [his] perspective, his interaction with students….I decided to kind of check my own biases…."

Cohort 1 Fellow

H-AGEP Research

Dr. Dawn Horton

University of Massachusetts, Amherst

Graduate Assistant Ms. Irma Torres-Catanach, UTEP

Research Questions

- What is the process by which Hispanic Ph.D. students decide on their career goals and what factors influence that decision-making process?
- How do the H-AGEP interventions affect Fellows' decision-making about their careers?
- What concerns about the professoriate have especially detrimental effects on persons considering this career path? How can these concerns best be addressed?
- How do different Hispanic populations, e.g. Mexican origin and Caribbean origin, perceive academia as a career choice? Do the *H-AGEP*'s interventions affect these populations differently?

Planned Outputs from Research

- Knowledge about the career decision making of Hispanic STEM doctoral students, in particular information about decisions that encourage or discourage them from seeking employment as faculty at 2 year institutions

✓ What factors have supported/led them to select a STEM career?

✓ What careers are they considering during their Doctorate?

✓ What is the decision making process of Hispanic STEM doctoral students? (influences of families, identities, experience)

✓ What specific factors have led them to select to (or not to) work as faculty at teaching intensive or two-year colleges?

✓ Do student intersectionalities show differential career decision making concerns, outcomes, or program impacts?

Planned Outputs from Research

- What can currently practicing Hispanic STEM faculty at two-year colleges tell us about their experiences to inform this work?

✓For Hispanic STEM doctoral students who actually choose this career (e.g. practicing faculty) how did they come to select this career?

✓What concerns did they have as they were making this decision?

✓What supports or barriers existed/exist in pursuing this career path?

Planned Outputs from Research

- Data and feedback from the social science research and evaluation for program & model improvement.
- Dissemination of model and research findings.

✓When considering the evaluation data and student career decision making, do aspects of the H-AGEP program increase/decrease the likelihood of students entering academia? Of teaching at a two-year institution?

✓What lessons have been learned that are valuable to share with other institutions working to increase the numbers of Hispanic STEM professors at their institutions?

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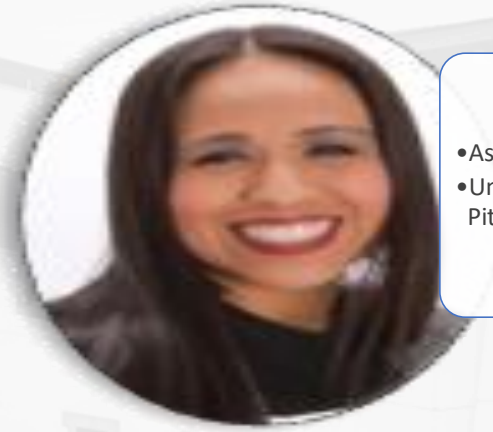

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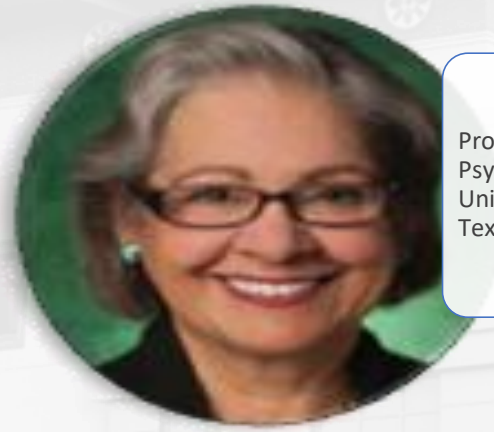

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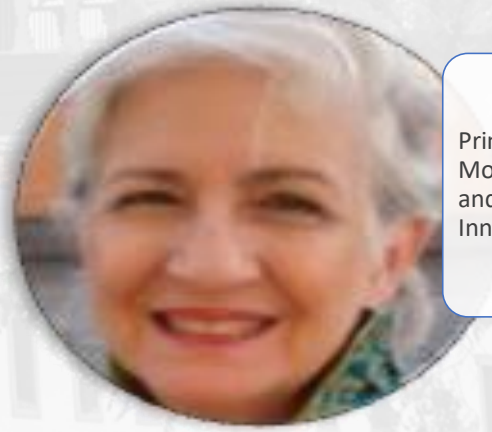

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