

2021
COLLEGE CHANGES EVERYTHING[®]
CONFERENCE



Identity as an Asset in STEM: How community programs can support student diversity within the field of STEM



ISTI

An education nonprofit focused on preparing the future workforce through programs that prioritize mentoring, skill building, and allowing students to see themselves in STEM fields.

The undercurrent of all of our programs is equity - in program delivery, content, and opportunity.

Intentionality

- Diversity is more than demographics
- Reflection and action
 - The Darkest Horse
- ISTI hosts 4 educational programs geared at high school students from across IL

Diversity as an outcome

- Diversity in thought, background, and perspective is a strength in problem solving.
- The diversity desired for the future workforce is an outcome and a result of the work our communities do now, with the youth in our programs.
- How do we get there?

Access

- Removing Baseline Barriers
 - Connecting experts in the field with students in the classroom
 - Leveraging skills based volunteering
- Intentional Training on Accessibility
 - What happens when a mentor and a student collaborate?
 - Creating safe spaces, valuing voices, leading with trauma informed practices
 - “Walking through the door safely and successfully”

Equity

- Setting a foundation for students
 - Teacher training
 - Human Centered Design
 - Calling out Supremacy culture
 - Mentor Training and Expectations
 - Level setting and scaffolding
 - Defining variants of success
- Research and Content
 - Inviting student perspectives with an emphasis on others
 - Empathy design

Inclusion

- Program Design
 - Mentors as Teammates
 - Student autonomy, voice, and choice
 - Stakeholders of the solution
- Feedback and Growth
 - Real world skills
 - No one way to solve a problem or BE in STEM
- Identity
 - Representation within mentor pool
 - Confidence in STEM



Latin@s Gaining Access to Networks for Advancement in Science





Latin@s Gaining Access to Networks for Advancement in Science

- Established in 2016 by a Hispanic Serving Institution STEM (Science, Technology, Engineering, and Mathematics) Title III part F grant from the US Department of Education.
- Developed to ensure that STEM Latinx students succeed at UIC.
- Seeks to increase retention and graduation of STEM Latinx students, increase the number of Latinx students attaining degrees in STEM fields; provide financial assistance to student participants, and foster a community where they see their cultural heritage as an asset in the laboratory/research project.
- Supports the whole student; both their strong ties to their heritage as Latin@s as well as their emerging identity as scientists/researchers.



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Overarching Goals

INCREASE
SCIENCE
IDENTITY

PROMOTE
SENSE OF
BELONGING

REDUCE
IDENTITY
CONFLICT



INCREASE
RETENTION

INCREASE
PERSISTENCE

INCREASE
GRADUATION



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Latin@s Gaining Access to Networks for Advancement in Science

INCREASE SCIENCE IDENTITY

- Research Fellowship includes introduction to research culture, norms, ethics and community. Research Fellows are placed in long-term research projects and receive a laboratory coat
- Cultural Dialogues engage students as scientists in training
- Mentoring con GANAS hosts events to engage mentoring dyads with STEM professionals



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SENSE OF BELONGING

- Entre con GANAS uses transition coaches to educate incoming students of their obligations and introduce them to other campus resources
- Cultural Dialogues facilitate conversations around STEM history and contributions within Latino culture and community
- Research Fellowship supports students as they share their findings within and outside the UIC science community
- Mentoring con GANAS pairs incoming students with successful continuing students who will introduce them to student-led resources



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REDUCE IDENTITY CONFLICT

- Cultural Dialogues address identity conflict + imposter syndrome head-on
 - Unpack the history of science in Latino communities and to Latino communities
- Research Fellowship highlights Latinx STEM faculty + personal narratives
- Mentoring con GANAS connects incoming students to successful continuing students - some who are in the research fellowship



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THEORY OF CHANGE

L@s GANAS operates with the belief that student success is dependent on each student understanding they have a place in the STEM community and that their life experiences are assets, not things to leave at the laboratory door.

Learn More

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Emily Cooper ecooper@istcoalition.org