


# TRUE GANAS: How Canada College's GANAS Program is Transforming the Institution

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# Outline

- About Cañada College
  - Institutional Capacity Building Grants
  - Introduction to Cañada College's GANAS Grant
  - Five Best Practices for Institutionalization
    - Examples from Cañada College's Experience Institutionalizing GANAS
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# Cañada College

## Redwood City, CA

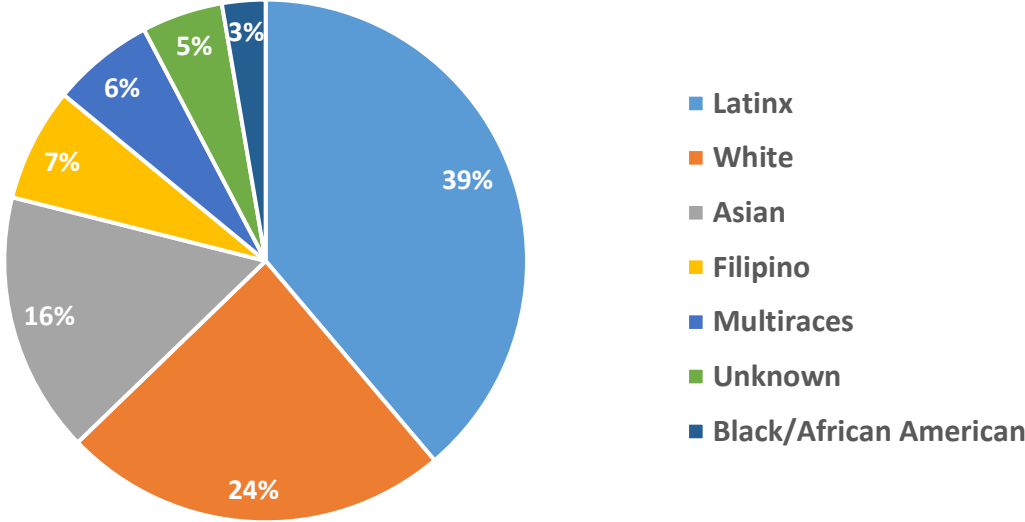


**Climate Best  
by Government Test**

# About Cañada College

- One of 116 California community colleges
- One of three colleges in the San Mateo Community College District

Student Demographics



2020-2021  
Unique Headcount: 10,775

# California Community College STEM Pipeline

- General pipeline to 4-year schools:
  - 31% of UC, 52% of CSU grads are CC transfers
  
- STEM Pipeline:
  - 48% of UC STEM grads are CC transfers

# Federal Capacity Building Grants


## Goal of Title III & Title V HSI Grants:

Strengthen the capacity of *institutions* that disproportionately enroll Latino students to improve Latino students' access and completion in higher education



# GANAS: Generating Access to Navigate and Achieve in STEM

## Project Goals:

- A) Increase the success rate for underrepresented students in foundational courses that are key to STEM pathways. (Student)
  - B) Decrease the time to transfer by increasing the success in STEM pre-requisite courses with pre-semester and in-semester academic and study-skill assistance for students (Student)
  - C) Improve STEM faculty effectiveness in the classroom through pedagogies and strategies that promote student engagement and improve learning.(Faculty)
  - D) Strengthen relationships and articulation with 4-year universities. (Institution)
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# GANAS Activities Overview

## **Objective A: Increase Success in Foundational Math**

- A1. Difference Education
- A2. STEM Explorers & STEM Retention
  - Peer Mentoring
- A3. Pathways to Calc. (MATH 225)
- A4. STEM Success Course (LCTR 810)
- A5. Honors Transfer Essentials Course (CRER 110)



## **Objective B: Decrease the time to transfer by increasing the success in STEM prerequisite courses with pre-semester and in-semester academic support for continuing students.**

- B1. EPIC
- B2. Physics/Chem Jam



# GANAS Activities Overview

**Objective C: Improve STEM faculty effectiveness in the classroom through pedagogies and strategies that promote student engagement and improve learning.**

- C1. Faculty Professional Development (Mindset, On-Course, Reading Apprenticeship)
- C2. Faculty Community of Practice

**Objective D: Strengthen relationships and articulation with 4-year universities.**

- D1. Strengthen articulation agreements and develop major pathways.
- D2. Expand university experiences and relationships that help students explore majors, 4-year campuses and resources for incoming transfer students.
  - D2a. Develop relationships at 4-years and create a transfer map of resources
  - D2b. University visits and STEM Days
  - D2C. Application support to competitive STEM transfer programs & universities
  - D2D. Speaker Series

# GANAS – Project Scope

Over the 5-year grant period, we served **2,219** unique students, including...

- **1,279** students who received one-on-one tutoring
- **782** students who participated in EPIC sessions
- **268** students who visited universities
- **1,464** students who participated in speaker series
- **210** students who were matched with a peer mentor

# Institutionalization: Best Practice #1

## Create a 5-Year Plan that Incorporates Institutionalization

Year 1	Planning & Building
Year 2	Piloting & Evaluating (Formative)
Year 3	Scaling, Refining & Evaluating (Formative)
Year 4	Implementing, Evaluating (Summative) & Disseminating
Year 5	Institutionalizing & Disseminating


# Best Practice #1: Faculty Community of Practice

- **DESCRIPTION:** Cohort of STEM faculty study and implement research-based best practices. These groups participate in professional development activities together, while supporting each other in the continual “lesson study” process associated with lasting changes to teacher practice.
- **GOAL:** Improve STEM faculty effectiveness in the classroom through pedagogies and strategies that promote student engagement and improve learning.
- **EVALUATION:** "This experience has been the single most inspiring professional learning that I've encountered in my years at Cañada. Over the course of a semester, as a group we learned what educational research teaches us about the importance of learning conversations, how to leverage students' prior knowledge and to bring about conceptual change, how to help students develop expertise, and how to motivate learning, foster a growth mindset and avoid stereotype threat."
- **BEST PRACTICES:** Pay adjuncts to attend professional development; create cohorts of faculty from different departments and disciplines; allow for a third semester for cohorts to meet and discuss implementation experiences
- **CAMPUS PARTNERS/INSTITUTIONALIZATION:** Institutionalized in 2019 through Instruction & Center for Excellence and Innovation in Teaching and Learning



# Institutionalization: Best Practice #2

## Align Programs & Activities with College Strategic Priorities & Initiatives

- 1) Assembly Bill 705 (AB705)
    - Requires CA Community Colleges to **maximize the probability that a student will enter and complete transfer-level coursework in English and math within a one-year timeframe**
  - 2) Guided Pathways
    - Reorganizing community colleges to **streamline a student's journey through college by providing structured choice, revamped support, and clear learning outcomes**
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# Best Practice #2: STEM Explorers

- **DESCRIPTION:** STEM Exploration week at beginning of FYE – intro to STEM majors, success workshops
- **GOAL:** Expose STEM Explorers to the rigorous demands of STEM pathways, while simultaneously facilitating their “sense of belonging” as first-year, first-generation college students.
- **EVALUATION:** An evaluation of COLTS-CON participants, including STEM Extended Orientation participants (N=331), found statistically significant positive differences for participants compared to a control group. Students who attended Colts-Con had a higher success rate, retention rate, GPA and fall-to-spring persistence rate than those the control group of students who did not attend COLTS-CON.
- **BEST PRACTICES:** “Make-up Explorers” – Friday afternoons during the semester, Asynchronous COLTS-CON
- **CAMPUS PARTNERS/INSTITUTIONALIZATION:** Partnered with LC and Promise to create COLTS-CON, Institutionalized in 2020 as a Guided Pathways FYE Program



# Best Practice #2: STEM Explorers

Title III, Part F/STEM Center	Title V Grant/Learning Center	Guided Pathways
First Year Experience – Introduction to Cañada College, STEM major pathways and skills and STEM resources for meeting college academic expectations	Colts 1 (incoming students) & Colts 2 (students on probation)	First Year Experience for Colts 1 – Introduction to Cañada College, interest area pathways and skills and resources for meeting college academic expectations; Reinforcement of study skills and resources for Colts 2
COLTS-CON (with STEM track) planned and implemented through a collaboration of the STEM Center, Learning Center, Promise and other programs	COLTS-CON- planned and implemented through a collaboration of the STEM Center, Learning Center, Promise and other programs	COLTS-CON - planned and implemented through Guided Pathways – especially interest area leads. STEM track is integrated into the S & T interest area
STEM track owned by STEM Center staff – faculty invited to present during STEM Explorers	COLTS-CON owned by Learning Center staff – faculty invited to present during STEM Explorers	Guided Pathways faculty leads and success teams involved in planning, student recruitment and faculty recruitment and execution of activity
Separate evaluation plan for STEM Explorers	COLTS 1 & COLTS 2 evaluation	COLTS-CON evaluation for all interest areas

# Institutionalization: Best Practice #3

## Create & Engage an Advisory Committee



- Engaging Administration, Faculty, Staff & Students
- Review Progress Towards Grant Goals
- Share Grant Data – Successes & Challenges
- Ensure that Grant Programs & Activities are Aligned with College Strategies & Priorities
- Gain Advice & Buy-In for Institutionalization Of Grant Programs & Activities



# Best Practice #3: Prioritizing Activities for Institutionalization

The Advisory Committee plays a major role in prioritizing what programs/activities to institutionalize based on:

- Effectiveness Data
  - Alignment to College Goals & Strategic Initiatives
  - Cost
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# Best Practice #3: STEM Retention

- **DESCRIPTION:** Retention Specialist, or “Navigator”, will be responsible for designing a series of programs that will support students in STEM pathways, from first-year courses to majors and transfers.
- **GOAL:** Increase success, retention and persistence of STEM majors
- **EVALUATION:** An analysis of students who had contact with a STEM retention specialist vs. students who did not interact with a STEM retention specialist found statistically significant differences in terms of persistence. 96% of students who had contact with a retention specialist persisted fall-to-spring as compared to 87% of students who did not have contact with a STEM retention specialist. 72% of students who had contact with a retention specialist persisted fall-to-fall as compared to 61% of students who did not have contact with a STEM retention specialist.
- **BEST PRACTICES:** Funneling students to counselor, creating relationship-building opportunities, intrusive support
- **CAMPUS PARTNERS/INSTITUTIONALIZATION:** Guided Pathways



# Institutionalization: Best Practice #4

Focus on Activities Not Positions

**E** **P** **I** **C**  
Embedded Peer Instruction Cohort

# Best Practice #4: EPIC/Drop-In Tutoring

- **DESCRIPTION:** This EPIC leader attends class with the students and then runs three hours of study sessions outside of class every week. The aim of the study sessions is to facilitate students working together, help disseminate knowledge of how to successfully navigate the course, and offer a forum to practice extra problems. EPIC incorporates Reading Apprenticeship to help students to better access the textbooks.
- **GOAL:** Decrease the time to transfer by increasing the success in STEM prerequisite courses with pre-semester and in-semester academic support for continuing students
- **EVALUATION:** In spring 2019, we undertook a quasi-experimental design study of the Embedded Peer Instruction Cohort (EPIC) program. Using Propensity Score Matching (PSM) and advanced coding and indexing methodology, we found that student who participated in EPIC for Calculus 1 had statistically higher success rates than a comparison group of students who did not participate in EPIC (83% vs. 64% respectively)
- **BEST PRACTICES:** Faculty referrals for EPIC Leaders; “Tutements”
- **CAMPUS PARTNERS/INSTITUTIONALIZATION:** During the transition to online tutoring (3/20), we effectively combined LC and STEM tutoring. In addition, we are merging our training efforts, including ACLA Certification for fall 2022.



# Institutionalization Best Practice #5

## Magnify the Impact





THE STEM  
CENTER

at  
Cañada  
COLLEGE



Thank You!

# Special Recognition



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