

ACADEMIC INNOVATION

ANNUAL REPORT

2018 - 2020

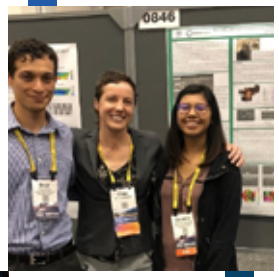
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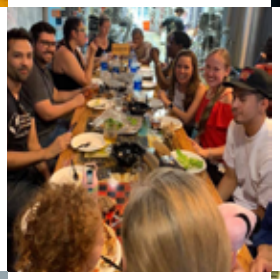
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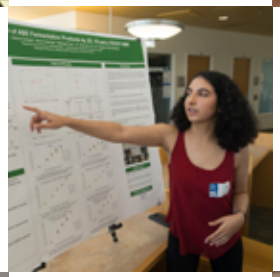
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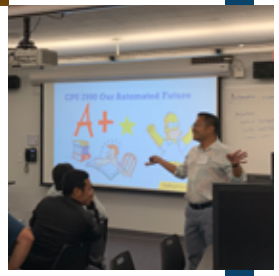
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A Culture of Innovation in Teaching & Learning

Letter from the Assistant Vice President

Dear friends of AI,

Welcome to the inaugural Annual Report of the Office of Academic Innovation (AI). AI was founded in August 2018 to foster a culture of innovation in teaching and learning and to institutionalize the Learn Through Discovery (LTD) Initiative which aims to provide every Cal Poly Pomona student a signature polytechnic experience (PolyX) and enable them to articulate the experience. We have had two consecutive successful years which would not have been possible without your support. We thank all the faculty, students, staff, and external partners who have collaborated with us to ensure the successful launch of AI.

AI has done a lot in a short period of time. The following pages will tell the story of our accomplishments. An important part of our story is that we were made up of units which had previously not worked together. We have gone from being individual separate units to becoming the AI team which consists of the Center for Community Engagement, Kellogg Honors College, Student Innovation Idea Lab, Office of Undergraduate Research, and CPP NSF I-Corps Program. We continue to build and strengthen our team through bi-annual AI retreats, AI happy hours, and AI team building activities. The success of AI lies in the strength of its team.

In our first year we launched the Projects Hatchery as an example of a PolyX to support students from every major through the project design and implementation processes and also provide them funding to successfully launch their projects for the betterment of an identified community. Also, in our first year the LTD Task Force was constituted to inventory existing curricular and co-curricular PolyX. The Task Force defined PolyX and developed a process for submitting and evaluating PolyX. The Steering Committee was constituted of academic leaders to guide the implementation of the LTD initiative. We also launched the faculty/staff summer institutes which provide professional development opportunities around innovative curricula and faculty/staff sandboxes which provide opportunities for multidisciplinary collaboration.

Our second year saw the expansion of the Projects Hatchery, the addition of faculty/staff winter institutes, the implementation of a pilot program to incorporate PolyX into First Year Experience courses, and the launch of the inaugural multidisciplinary pop-up course, our automated future. Our second year also saw the advent of a global pandemic, Cal Poly Pomona going virtual during the spring 2020 semester and the delivery of AI programs virtually including a successful 2020 virtual faculty/summer institute. Year two also saw AI becoming part of the Office of Student Success, Equity, and Innovation and the growth of the AI team to include the Office of Undergraduate Research.

We thank you for your continued support and look forward to being an integral part of Cal Poly Pomona's aspiration to be the epicenter of creativity, innovation, and discovery!

Olukemi Sawyerr

Olukemi Sawyerr, Ph.D. | AVP Academic Innovation



Mission

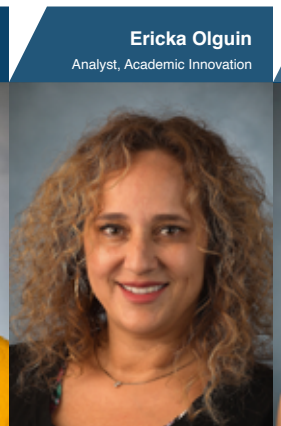
The Office of Academic Innovation (AI) cultivates student success by fostering a culture of innovation in teaching and experiential learning; advancing and promoting a vision of innovative education; and collaborating with faculty, staff, and students to cultivate innovative curricular and co-curricular strategies aimed at nurturing life-long learning in the Cal Poly Pomona community.

Vision

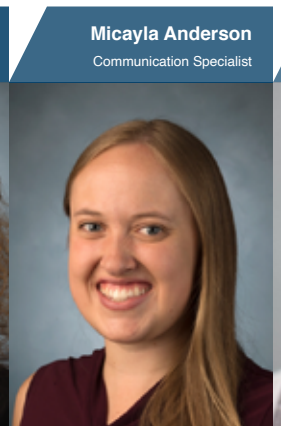
By the year 2025 the office of Academic Innovation (AI) at Cal Poly Pomona will be the catalyst for developing innovative and transformative educational experiences that prepare students for the future of work and human and civic engagement.



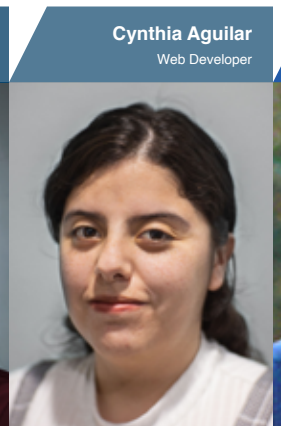
Olukemi Sawyerr
Asst. VP Academic Innovation



Ericka Olguin
Analyst, Academic Innovation



Micayla Anderson
Communication Specialist



Cynthia Aguilar
Web Developer



Sinan Cakir
Student Assistant



Judy Nguyen
Student Assistant



AI Strategic Initiatives

1

Institutionalize the Learn Through Discovery (LTD) Initiative which aims to provide EVERY Cal Poly Pomona student at least one signature polytechnic experience (PolyX) and enable them to articulate that experience.

- Create awareness/ structure for LTD
- Develop PolyX Inventory
- Develop a PolyX badging system
- Create PolyX pathways for students
- Expand the LTD Projects Hatchery
- Provide professional development for faculty/staff
- Develop robust AI marketing plan

2

Provide strategic leadership, oversight and guidance to CCE, KHC, SIIL and OUR; support the formulation and implementation of CCE, KHC, SIIL and OUR's strategic goals/priorities as well as their program evaluation and assessment plans; and build a strong, high functioning, highly collaborative team culture across all AI units.

- Bi-annual reviews of strategic goals
- Annual reviews of program/ assessment
- Provide professional development for AI team
- Create data-driven decision culture
- Create collaborative culture
- Bi-annual AI retreats and team building



3

Create infrastructure to support faculty in developing and launching innovative curricular.

- Collaborate to create innovative curricula
- Support faculty/staff to obtain funding





AI OFFICES AND PROGRAMS

LEARN THROUGH DISCOVERY

KELLOGG HONORS COLLEGE
A Community of Scholars

CENTER FOR COMMUNITY ENGAGEMENT

Office of Undergraduate Research

STUDENT INNOVATION IDEA LABS

CORPS
NSF Innovation Corps



About Learn Through Discovery (LTD)

The Learn Through Discovery Initiative at Cal Poly Pomona ensures that all students will have at least one Signature Polytechnic Experience (PolyX) before they graduate, and be able to articulate that experience. LTD also engages faculty and staff through institutes and sandboxes that promote multidisciplinary collaboration.





Olukemi Sawyerr
Asst. VP Academic Innovation



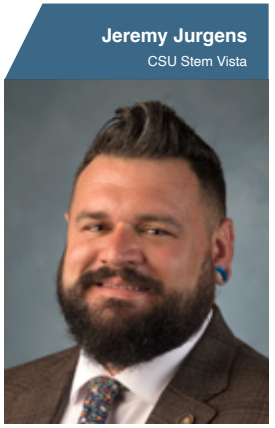
Winny Dong
Faculty Director, LTD Initiative



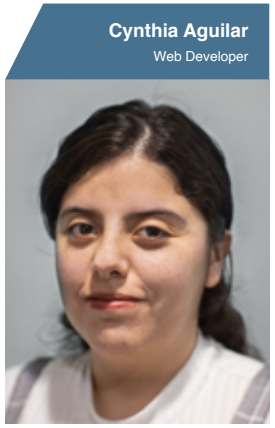
Ericka Olguin
Analyst, Academic Innovation



Karina Gigliotti
Program Coordinator



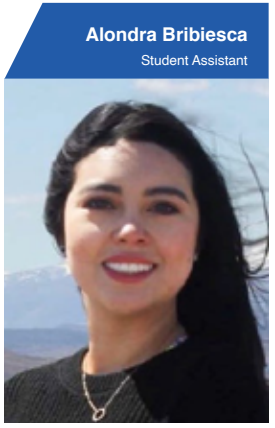
Jeremy Jurgens
CSU Stem Vista



Cynthia Aguilar
Web Developer



Micayla Anderson
Communication Specialist



Alondra Bribiesca
Student Assistant



Shae Lender
Student Assistant

LTD Highlights I
LTD Projects Hatchery

The LTD Projects Hatchery is a PolyX that focuses on helping students discover their passion and create their impact. In the Hatchery, students will turn meaningful and innovative ideas into fully realized projects. The Hatchery team will guide students through every phase of development, from conception to implementation to completion.

2019-2020 AY Project Examples

Team Food Justice

We aim to examine how the Pomona Valley Certified Farmer's Market contributes to the development of socioecological community and addresses food access and insecurity in the City of Pomona.

Team Veteran's Nutrition

The goal of our study is to determine whether nutrition education and using motivational interviewing can improve nutritional intake and body compositions within a student veteran community.

Team Super eMoto

Our project is developing a user-friendly kit that can convert a gas-powered dirtbike to an electric one.

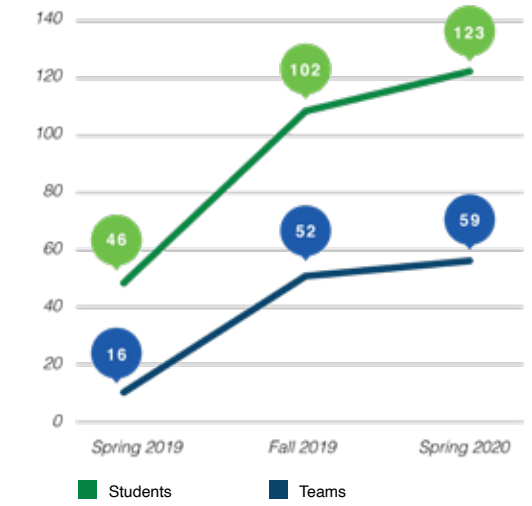
Team Trichomonas Lab

Our project uses CRISPR gene-editing to study how immune-cells kill the sexually-transmitted parasite Trichomonas vaginalis

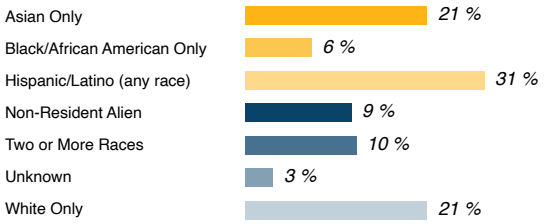




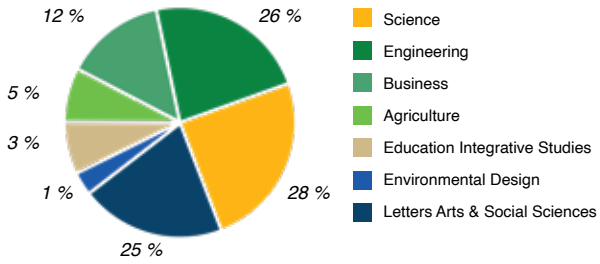
Growth Trends



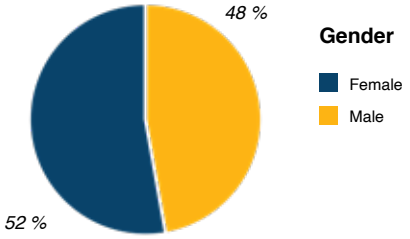
Ethnicity

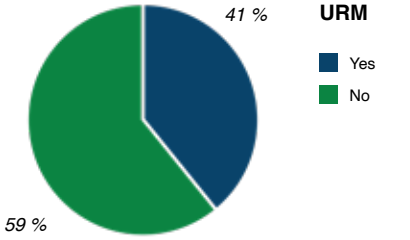


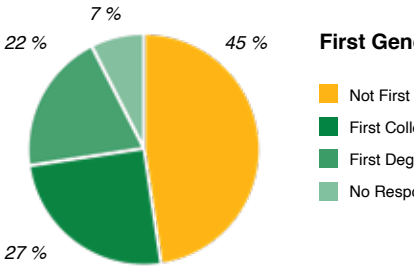
Percentage of students per college



Student Demographics









" I think doing the LTD FYE challenge was a worthwhile experience because it taught me how to present a research proposal without getting too nervous"

- Cesar A. Valdovinos, LTD FYE Challenge Participant

LTD FYE Challenge

LTD encourages all first-year students to engage in a PolyX based on the FYE Common Read. Students who participate in the LTD FYE Challenge read the book and develop innovative solutions to an opportunity or problem in the book that they can launch in an impacted community.



Fall 2018 Challenge

Date 11.03.2018

Book *So You've Been Publicly Shamed* by Jon Ronson

Number of Participants 10 (3 Teams)

Winning Team #SHHHAME: A Campaign to End Public Shaming

Judges Kenneth Lamb and Jessica Perez

Fall 2019 Challenge

Date 11.15.2019

Book *Becoming* by Michelle Obama

Number of Participants 14 (3 Teams)

Winning Team Fistbump: The App That Gives Students Hope

Judges Bryant Fairly, Kenneth Lamb, and Shirli Driz



Signature Polytechnic Experiences (PolyX)

Signature polytechnic experiences (PolyX) at Cal Poly Pomona promote students' discovery of the opportunities and challenges within the field and the development of creative and innovative solutions to those conditions. Through collaborative learning and intense mentoring, PolyX engages students beyond the class-room and prepares them for professional and civic success.



"The Hatchery allowed us to work on our project in a way that would not have been possible before, through providing campus resources, connections, and financial support."

- Marmar Tavsol, Student, Hatchery Team "Cut the Bias"

PolyX Inventory

- HRT3830 - Food & Beverage Operations **Jason Y. Zhang**
- Learn Through Discovery Projects Hatchery **Winny Dong & Jeremy Jurgens**
- Market Analysis in the Lodging Industry **Linchi Kwok**
- National Model United Nation (NMUN) **Marc Scarcelli**
- New Food Product Development (FST 4290L) **Gabriel Davidov-Pardo**
- PolyPet Spa Day and Vaccine Clinic **Joanne Sohn**
- Professional Work Experience Course **Ann Lara**
- The Poly Post (news lab) **Jason Turcotte**



Summer Institue 2018

Date 6.12.2018 - 6.14.2020
Topic Design Thinking
Number of Participants 25
Facilitators AJ Juliani

" The LTD institutes provide a great learning environment where instructors from different disciplines can meet and exchange ideas."

- Joanne Sohn, Associate Professor, Program Director, Animal Health Science



Summer Institue 2019

Date 8.13.2019 - 8.15.2019
Topic The Innovative Classroom: Beyond the 4 Walls
Number of Participants 28
Facilitators Marisol Morales and Elaine Ikeda

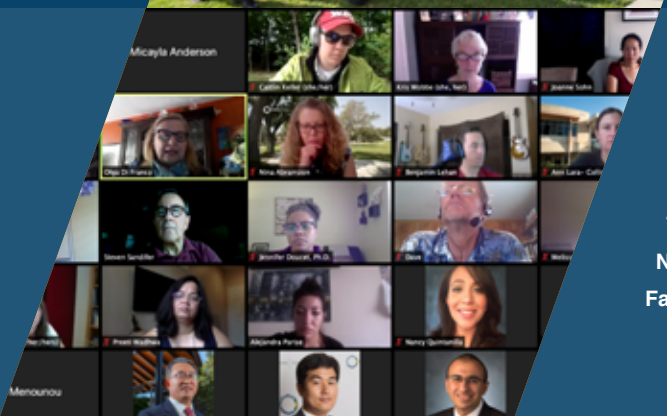
LTD Highlights | LTD Faculty / Staff Institutes

The winter and summer institutes provide faculty and staff with professional development opportunities.



Winter Institue 2020

Date 1.14.2020 - 1.16.2020
Topic Reinventing the First Year Experience 1.0
Number of Participants 14



Summer Institue 2020

Date 6.02.2020 - 6.05.2020
Topic Reinventing the First Year Experience 2.0
Number of Participants 52
Facilitators Kristin Wobbe and Caitlyn Keller

" I was truly impressed how these new First Year Experience (FYE) students did research in their first year at CPP."

- Ben Dewald, Professor, Collins College



Fall Sandbox 2019

Date 9.10.2019
Topic Proactive Procrastination
Number of Participants 32
Location Maker Studio/Library

"The interaction and energy during the LTD Sandbox events was contagious. I met new faculty and staff each time I attended and left with new knowledge."

- Michelle Lyn Elrod, Director, EODA



Spring Sandbox 2020

Date 02.27.2020
Topic Research Collaboration
Number of Participants 32
Location Collins College/ HRT

LTD Highlights | LTD Sandboxes

Sandboxes are opportunities for faculty and staff to network on campus.
Different themes and locations are chosen to encourage multidisciplinary collaboration.



Spring Sandbox 2020

Date 04.09.2020
Topic Virtual Research Mentoring 1
Number of Participants 9
Location Online

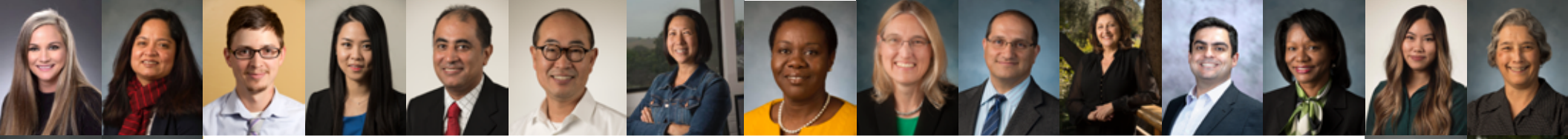


Spring Sandbox 2020

Date 04.27.2020
Topic Virtual Research Mentoring 2
Number of Participants 16
Location Online

" LTD Sandboxes are the only planned opportunity on campus for networking between administrators, staff and faculty. Through this experience I have met many people that I would have otherwise not known worked at CPP."

- Seema Shah-Fairbank, Associate Professor, Civil Engineering



Wall of Fame

LTD Steering Committee

Sep Eskandari
Laura Massa
Terri Gomez
Alison Baski
Olukemi Sawyerr
Winny Dong
Aaron DeRosa
Sarah Meyer
Gina Johnson
Tari Hunter

LTD Task Force

Joanne Sohn
Olukemi Sawyerr
Winny Dong
Kenneth Lamb
Nina Abramzon
Hyounae Min
Barry Lehrman
Christine Ortega
Julie Chen
Shonn Haren
Jason Lu
Teresa Lloro-Bidart
Michael Millar

Institute Planning Group

Preeti Wadhwa
Joanne Sohn
Nina Abramzon
Dora Lee
Olukemi Sawyerr
Winny Dong
Ericka Olguin
Micayla Anderson

Sandbox Planning Group

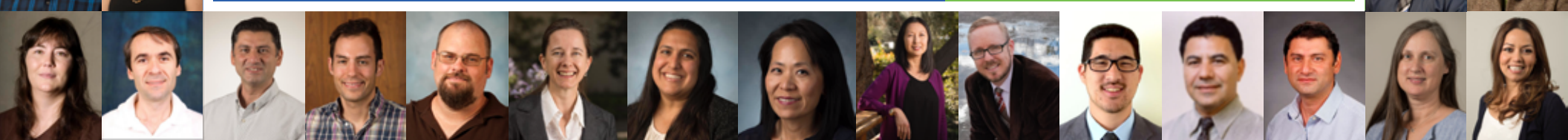
Victoria Bhavsar
Kenneth Lamb
Seema Shah-Fairbank
Olukemi Sawyerr
Winny Dong
Michelle Elrod
Ericka Olguin
Micayla Anderson

" I am so fortunate to be a part of the LTD initiative which not only aims to ensure that all CPP students engage in a PolyX (signature polytechnic experience), but also creates opportunities to showcase and celebrate these learn by doing experiences and accomplishments of our students."

-Preeti Wadhwa, Associate Professor, Management & Human Resources Department

Hatchery Mentors

Jill Adler-Moore
Kevin Anderson
Steve Archambault
Kevin Autry
Zeynep Aytug
Elke Azpeitia
Robert Blumenfeld
Scott Boskovich
Carlos Castro
Eduardo Corpuz
Amy Dao
Adrian Gonzalez
Mehrdad Haghi
Hyung Chul Han
Analena Hassberg
Kyung In Huh
Mariappan Jawaharlal
Juanita Jellyman
Jae Min Jung
Seth Ketron
Mehrdad Koohikamali
Trayan Kushev
Ann Loomis
Alex Madva
Frances Mercer
Sean Monemi
Sergio Maldonado
Norali Pernalete
Jascha Polet
Peter Ross
Ertan Salik
Zahra Sotoudeh
Kiem Tsong
Nolan Tsuchiya
Rosa Vasconez Jimenez
Edmond Wu
Farbod Khoshnoud
Randy Stein
Stephen Osborn
Andrea Bonisoli-Alquati



"The KHC continues to be the strong academic community where students strive for excellence in a supportive and nurturing environment."

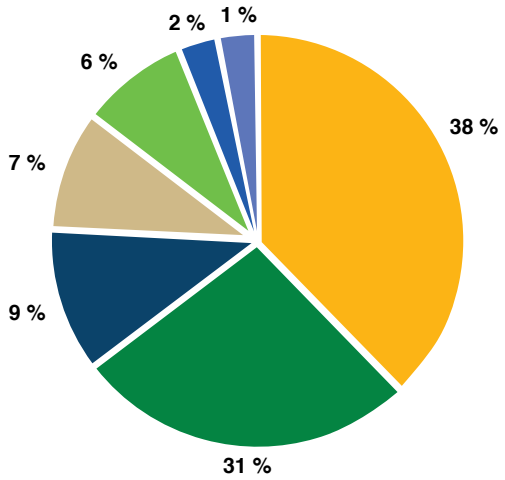
- Suketu Bhavsar, Director, Kellogg Honors College

Mission

The Kellogg Honors College cultivates students' many forms of talent in an academically enriching environment within an inclusive and nurturing community. We motivate and prepare intellectually curious, civically engaged, lifelong learners.

Vision

We will be a college that fosters an environment, community, and foundation where personal growth, self-awareness, and professional confidence are coupled with academic excellence, innovation, and career readiness to prepare self-aware, civically engaged, visionary, global citizens.



Total number of the students

339

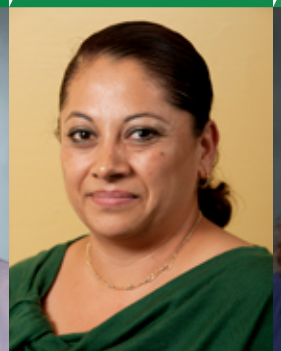
Percentage of students per college

- Engineering
- Science
- CLS
- Agriculture
- Business
- Collins
- Environmental Design

Suketu Bhavsar
Director



Claudia Garcia-Des Lauriers
Interim Director



Sandra Harper
Administrative Coordinator



Won Choi
Academic Coordinator









7th annual
2019 Freshmen Retreat

08.17 - 08.19 | Pali Retreat | 34 students

5th annual
2019 Sophomore Retreat

08.11 - 08.14 | Yosemite | 19 students

2020
Honors Convocation

Due to the COVID-19 pandemic, the in-person Honors Convocation in May 2020 was cancelled. However, the KHC still prepared a video celebration of the achievements of their graduating seniors. Watch here.

2020
Capstone Symposium

The Capstone Symposium was also held virtually in May 2020. Graduating KHC student submitted pdf posters and video presentations for their Capstone projects. View Posters & Videos.







Showcase of Excellence

After a one-year hiatus, the Showcase of Excellence returned! The KHC invited a group of high school seniors from the top 15% of applicants to come to campus with their families and learn more about CPP, along with encouraging them to apply for the KHC.

02.01
2020

517 total attendees
225 students
292 family members

CPU 2990H

This 7th annual course for new KHC freshmen was co-taught by Suketu Bhavsar and Won Choi. Course topics included: FYE common read, time management, study skills, research, scholarships, alumni speakers, study aboard, and grad school prep.

Fall 2019

34 students

Civic Engagement (CE) Events

2019 - 2020

- Volunteering in City of Pomona
- Feeding the homeless
- Elementary school gardening
- Community outreach events

45 community service opportunities

CENTER FOR COMMUNITY ENGAGEMENT

" The CCE inspires students to "learn by doing good" through encouraging students to embrace the opportunity to learn and explore solutions, and empowering students to make an impact."

- Bryant Fairley, Director, Center for Community Engagement

Mission

The Center for Community Engagement (CCE) strives to enhance learning, encourage career exploration, inspire civic engagement and empower students with meaningful community engaged learning experiences that have a positive impact on our local community, region and world.

Vision

To engage, empower, and encourage students to become civically minded graduates; reflecting the impact of an experiential education to inspire students to learn by doing good.

BRONCO STAMPEDE OF SERVICE
LEARN BY DOING GOOD

Learn by Doing Good

Cooperative Education Testimonials

"Co-Op students not only gain valuable hands-on experience with industry professionals who can become great mentors, but they also develop professionalism, good communication, and networking skills."

- Rafael Reyes, CPP Co-Op Student at CalFire

Bryant Fairley
Director



Queenie Du
Cooperative Education Coordinator



Alec John Boyle
Internship Coordinator





Engaged Learning Course-Based Outcomes

Service Learning

AY 2019-2020
Number of Service Leaning Courses
100

Student Participants
911

Hours
19,753

Average hour per student
20

Academic Internships

AY 2019-2020
Number of Internship Courses
225

Student Participants
328

Hours
81,368

Average hour per student
88

Cooperative (Co-Op) Education

AY 2019-2020
Number of Co-Op Courses
18

Student Participants
26

Hours
17,160

Hour / week during school
20

Hour / week during summer
40







CPP KARES

CPP KARES (Kids Activities and Resources for Educational Support) is a website developed by Cal Poly Pomona students providing So Cal parents/caregivers of kids aged 0-12 with access to educational activities and resources that can assist with educating kids at home.

Website
bit.ly/CPP-KARES

Website Visits
650 +

Number of Activities
130 +

MLK Day Beautification Project

CPP students, staff, faculty and family members joined the local community in a LA Works-hosted beautification project, in honor of Dr. Martin Luther King. Volunteers built benches, painted murals and lockers, and beautified a playground at a local LA middle school.

1000 + Total Volunteers
40 CPP Volunteers

01.20.2019

Los Angeles, CA

Welcome Back Service Project with Habitat for Humanity

The CCE partnered with Pomona Valley Habitat for Humanity and the City of Upland to refurbish a relocated historic 1914 Craftsman home for a deserving family. CPP students, staff, and faculty kicked off the spring semester with this volunteer project.

38 CPP Volunteers

01.25.2019

Upland, CA

Office of Undergraduate Research

Mission

The mission of the Office of Undergraduate Research (OUR) at Cal Poly Pomona is to increase the awareness of, participation in, and opportunities for undergraduate research across the disciplines and for students who are traditionally underrepresented in research: lower-division, first-year transfer, under-represented, and first-generation students. The OUR also supports faculty members who mentor undergraduate student researchers. As an umbrella office, OUR coordinates efforts of programs that provide undergraduate research opportunities.

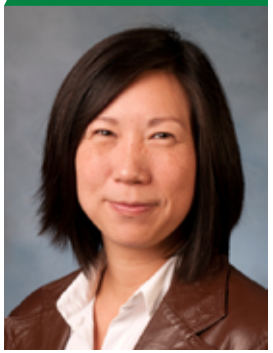
Vision

The vision of the Office of Undergraduate Research at Cal Poly Pomona is to support a diverse culture of experiential learning, discovery, and innovation by ensuring access to research for every undergraduate student.

"OUR programs provide both a launching point and a nurturing environment where students from all backgrounds can be successful in undergraduate research"

- Winny Dong, Faculty Director, Office of Undergraduate Research

Winny Dong
Faculty Director



Elisa Mitchell
Program & Assessment Coordinator



Everardo Barraza
Program & Acdemic Coordinator



Ashish Hingle
Information Systems Analyst



Lauren Bernal
Lead Graphic Designer & Assistant Program Coordinator



Micayla Anderson
Communications Specialist



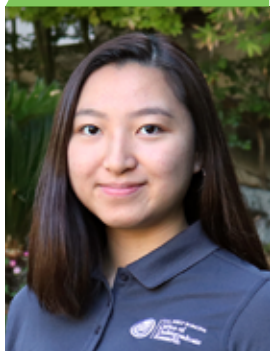
Rosa Ramirez
Marketing & Communication



Sophia Baroz
Office & Outreach

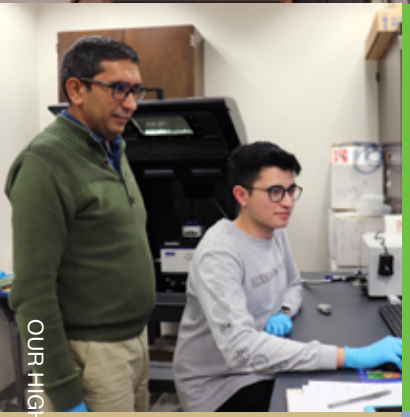


Lyn Yeoh
Graphic Design









Student Research, Scholarship, and Creative Activities (RSCA) Conference

563 students participated

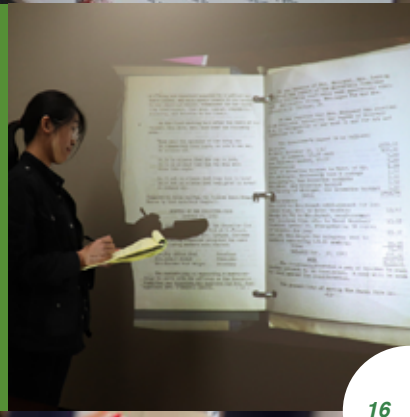
March 2020

Students Served by the OUR

Workshops I Fellowships I Office Visits

968 unique students served

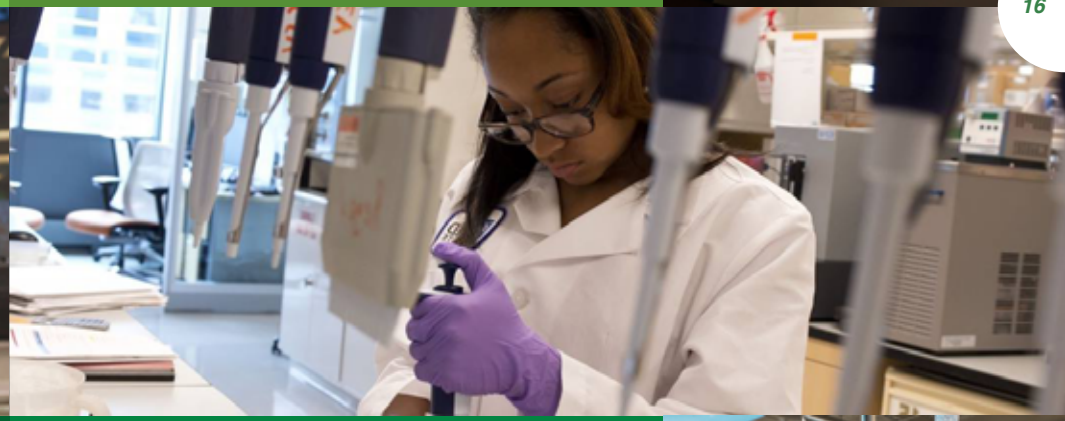
2019 - 2020



All OUR Programs

- Achieve Scholars Program (ASP)
- OUR GRAD
- Summer Undergraduate Research Experience (SURE)
- Research Scholars Association
- Faculty Mentor STARS
- Student Conference Presentation Awards
- Creative Activities & Research Symposium (CARS)
- RSCA Conference
- OUR research workshops





Weekly Summer Seminars

Summer 2020

50 participants per seminar

Over 110 students participated

7 seminars

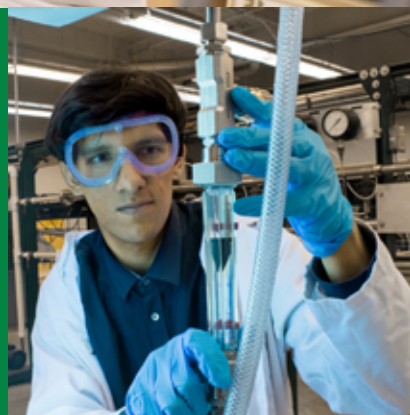
Scholarship and Fellowships

Disbursed nearly

$100,000

in scholarships and fellowships.

to students



STUDENT INNOVATION
IDEA LABS

“ What we hope the Innovation Idea Labs provides to students, whether in person or virtually, is the confidence that each person can be creative and innovative regardless of your position of influence.”

- Kenneth Lamb, Director of Student Innovation Idea Labs

Mission

The mission of the Cal Poly Pomona Student Innovation Idea Labs (SIIL) is to create and maintain an ecosystem that fosters creativity, innovation, and entrepreneurship.

Vision

The vision of the Student Innovation Idea Labs is to be a catalyst for innovation through the establishment of strategic partnerships with internal and external stakeholders on the Cal Poly Pomona campus and throughout the greater Pomona Valley region.











Focus Areas for Our Strategic Plan

- Maintain maker spaces to support student innovation and creativity
- Disseminate creative and entrepreneurial knowledge
- Ensure safe and secure access to equipment
- Celebrate the innovative process in its entirety

Event Highlights

SIIL Celebration Week (March 2 – 5) celebrated 10 years of the ESTEAM class and 5 Years of the Student Innovation Idea Lab.

The events included:

- Learning to create molds to cast chocolate
- Building the best foam airplane
- Creating custom tote bags by learning to use the vinyl cutter
- And the CPP Maker Fair and SIIL-ebration event!







" If you're passionate about research and dream about bringing the results to the market, then I-Corps program is for you! It's an exciting journey from start to finish! "

- Olive Li, Associate Professor, Nutrition and Food Science Department

About CPP NSF I-Corps

Since its inception in spring 2019, the CPP I-Corps Site program has successfully recruited and trained 34 teams through 4 cohort offerings. These teams consist of 54 students, 21 faculty members, and 5 local entrepreneurs in a total of 80 participants. Thirteen teams were granted to move forward by attending the next-step training BOOM program by Innovation Network – Los Angeles I-Corps Node (regional program management site). One team, Vistendo, has been awarded a $250K SBIR Phase 1 grant from the Defense Health Agency, team LV Bottle is in licensing talks with LOOP, and team Azuza Beverage won $10K in the 2020 Big Bang Competition hosted by UC Davis for the category of Food and Agriculture sector. It has been a great experience with the 8-person teaching faculty team from multiple disciplinary fields when interacting and assisting these teams to develop and enhance their bud/seed ideas.









Cohort 1

Date Spring 2019

Number of Teams 7

Number of Participants 24

Cohort 2

Date Summer 2019

Number of Teams 9

Number of Participants 21

Team Summary - Cohort 2: Azuza Beverage

Azuza Beverage is a technology startup which addresses the increasing market preference for alcohol-free adult beverage options, while offering superior quality non-alcoholic beer in contrast to today's competitors.







Cohort 3

Date Fall 2019

Number of Teams 21

Number of Participants 42

Cohort 4

Date Spring 2020

Number of Teams 8

Number of Participants 19

Team Summary - Cohort 4: QUIC

The Quickly Universally Integrated Concept Cube Satellite helps academic and civil researchers who want to get their research in Low Earth Orbit by reducing the complexity and lead times while also enabling on-demand delivery for quick returns and rapid response.

Pop-Up Course

What is a Pop-Up Course?

Pop-up courses provide students with the opportunity to learn about important new developments in society and the latest innovations and happenings across academia that are critical to their professional success.

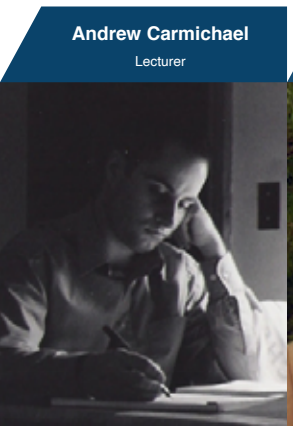
Inaugural Pop-Up Course

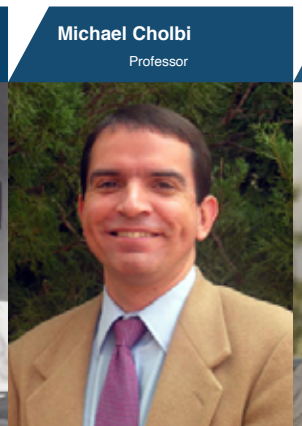
Fall 2019 I Our Automated Future

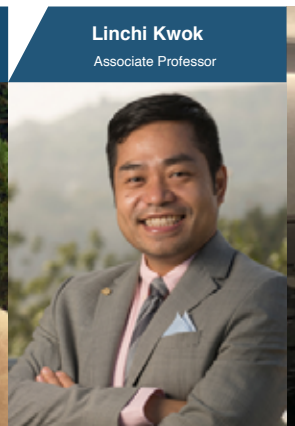
This pop-up course focused on automation from three different perspectives: Technology, Ethics, and Service Business

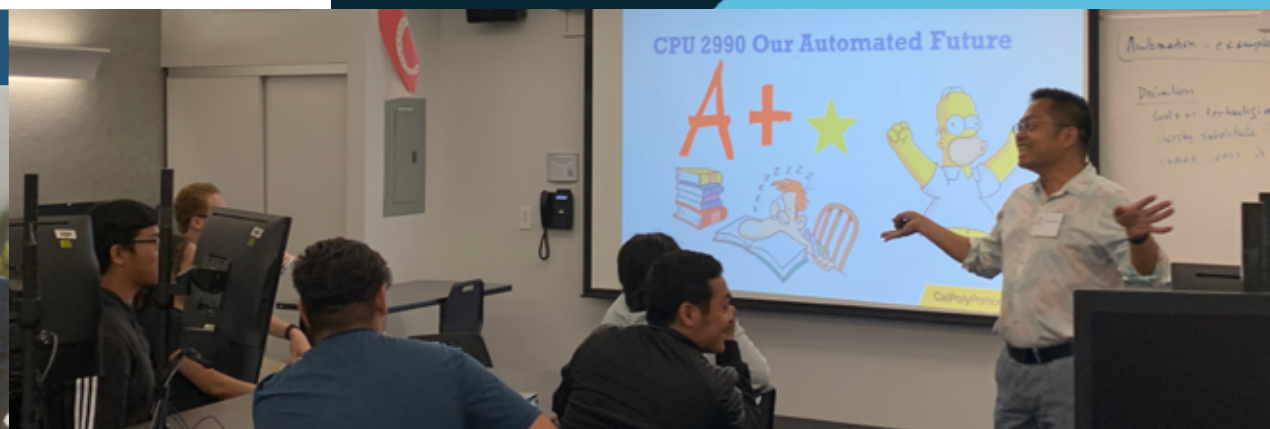
> *"A pop-up course format gives faculty the flexibility to cover new developments quickly. Faculty can then innovate the curriculum and test ideas that may eventually become permanent parts of the curriculum."*
>
> *- Olukemi Sawyerr, AVP of Academic Innovation*











ACADEMIC INNOVATION

DESIGNED BY VIOLA WU & MICAYLA ANDERSON

