Welcome to AIMS² 2.0(HSI-STEM Grant)
Bridging the Gap: Enhancing AIMS² for Student Success

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S. K. Ramesh, Ph.D.

Project Director and Professor of ECE

August 28, 2020

•***AIMS² Peer Mentors: Photo Courtesy Armando***

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Disclaimer

- Supported by the AIMS^2 Program and funded by the United States Department of Education FY 2016 Title III, Part F, Hispanic-Serving Institutions (HSI) STEM and Articulation Program five-year grant, Award Number P031C160053, CFDA Number 84.031C.
- However, the contents of this presentation do not necessarily represent the policy of the US Department of Education, and you should not assume endorsement by the Federal Government.

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AGENDA

- Welcome and Introductions
  - Project Faculty and Staff
  - Cohort 5 students
- Overview of Program – Dr. Ramesh, Project Director
- Activities
  - Research Projects for Cohort Students
  - Cohort Meetings w/faculty mentors
  - Tutoring/Peer Mentoring
- Panel Discussion with Peer Mentors
- Open Forum

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The AIMS^2 Project team (2016-21)
Attract, Inspire, Mentor, and Support Students

Faculty and Staff from CSUN and partner Colleges

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External Advisory Committee

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¡EX! RECOGNIZED EXAMPLE of EXCELENCIA

WHITE HOUSE INITIATIVE on EDUCATIONAL EXCELLENCE for HISPANICS
25 Years of Fulfilling America's Future

Project Website
www.ecs.csun.edu/aims2

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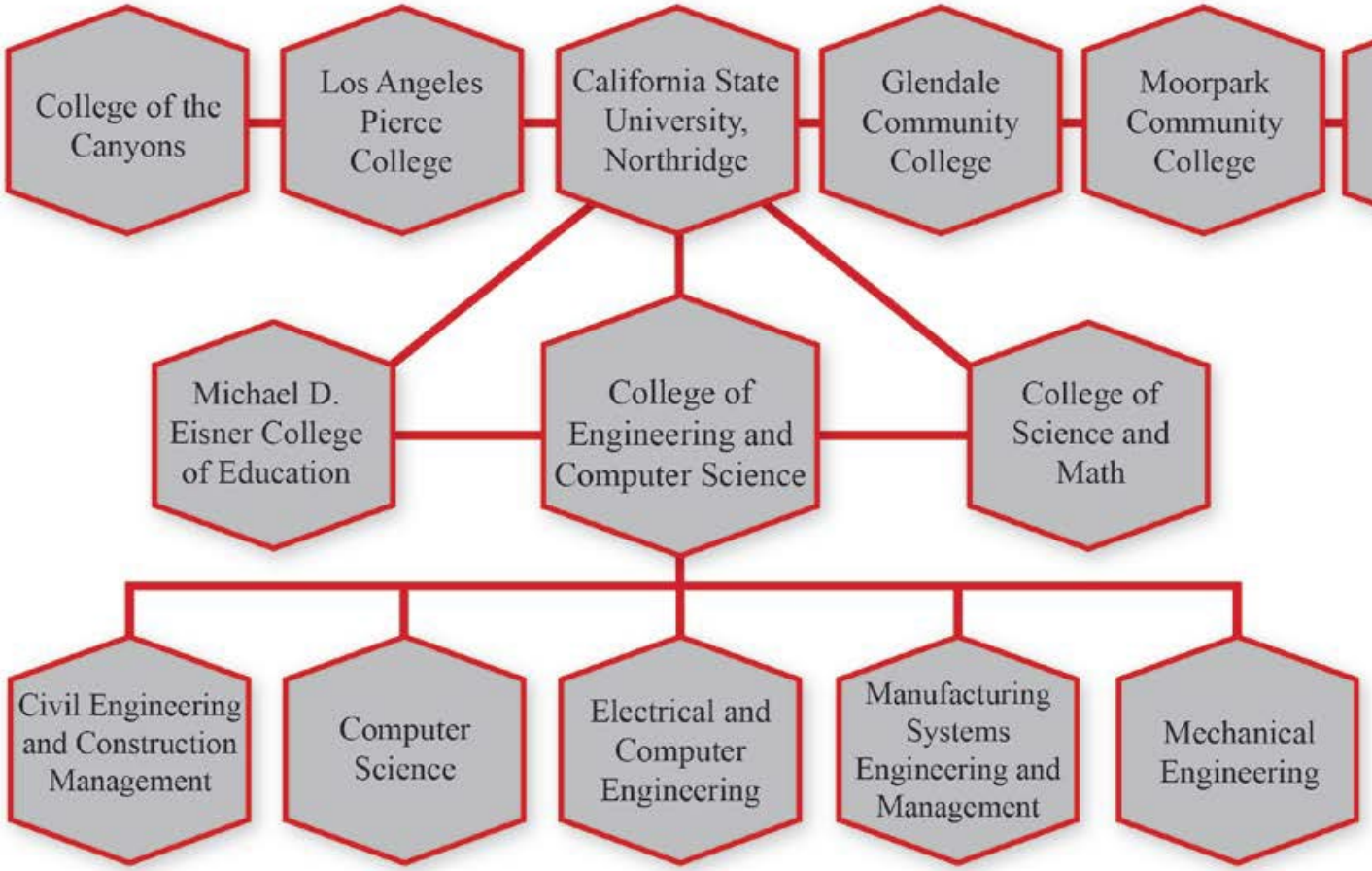

Organization – Bridging the Gap: Enhancing AIMS² for Student Success

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Project Web Site

www.ecs.csun.edu/aims2

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CSUN COHORT 2020 – 2021

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CSUN | AIMS² » | Program Information » | Student Resources » | Mentor Resources » | Staff Resources » | Announcements »

CSUN COHORT 2020 – 2021

CSUN COHORT 2020 - 2021

Faculty Mentor	First Name	Last Name	Cohort	Cohort start	Major
Ali Amini	Freddy	Nunez	F-1	Fall 2016	Computer Engineering
Ali Amini	Luis	Rivera	F-2	Fall 2017	Computer Engineering
Ali Amini	Sopuruchukwu	Udeh	F-2	Fall 2017	Electrical Engineering
Ali Amini	Elvis	Chino-Islas	F-3	Fall 2018	Computer Engineering
Ali Amini	Kimberly	Ortiz	F-3	Fall 2018	Mechanical Engineering
Ali Amini	Lavar	Watkins II	F-4	Fall 2019	Computer Engineering
Ali Amini	Francisco	Oropeza	T-2	Fall 2017	Mechanical Engineering
Ali Amini	Marian	Giron	T-3	Fall 2018	Electrical Engineering
Ali Amini	Giovanni	Martinez	T-3	Fall 2018	Electrical Engineering

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8/25/2020

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CSUN COHORT 2020 – 2021

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Ali Amini	Alireza	Bahmanabadi	T-2	Fall 2017	Construction Management
Ali Amini	Mehi	Miri	T-5	Fall 2020	Computer Engineering
Ali Amini	Sabrina	Motto	T-5	Fall 2020	Computer Engineering
Ali Amini	Javier	Valle	T-5	Fall 2020	Electrical Engineering
Ali Amini	Mario	Giron	T-5	Fall 2020	Electrical Engineering
Ali Amini	Suzanne	Fisher	T-5	Fall 2020	Electrical Engineering

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canvas.csun.edu/courses/75511

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AIMS^2 2020-21 Cohort › Syllabus

Special Sites

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Conferences
Collaborations
Chat
Follett Discover
Record Name

AIMS^2 2020-21 Cohort

Jump to Today

August 26, 2020

Greetings AIMS^2 students,

Welcome to the 2020-21 AIMS^2 program! I hope everyone is safe and healthy and you are all set for the fall 2020 semester ahead. If you are a continuing student from Cohorts 1-4, congratulations! You have demonstrated your commitment and persistence through your academic performance and through your active involvement in all the AIMS^2 program activities. If you are a Cohort 5 transfer student welcome aboard! You are joining over 100 returning students from Cohorts 1-4 as we enter the fifth and final year of our program that is supported with an HSI-STEM grant from the US Department of Education. Our program has been recognized nationally and internationally for the work we do to support student success. We were recognized as the national program of the year with the 2019 Example of Excelencia award in the baccalaureate program category. See http://www.ecs.csun.edu/aims2/celebrating-student-success-the-aims2-program-at-cal-state-northridge/ and https://www.youtube.com/watch?v=510LhaL5NyI

View Course Stream
View Course Calendar
View Course Notifications

To Do

AIMS2 Cohort 5 Orientation
Aug 28 at 3pm |

August 2020

26	27	28	29	30	31	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31	1	2	3	4	5

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AIMS^2 2020-21 Cohort › People › Groups

Special Sites

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Syllabus

Outcomes

Rubrics

Quizzes

Modules

Everyone | Prof. Ali Amini's Group | Prof. Anwar Alroomi's Group | Prof. Aram Khachatourians Group | Prof. Behzad Bavarian's Group | Prof. Bingbing Li's Group | Prof. Bruno Osorno's Group | Prof. John Valdovinos Group | Prof. Kyle Dewey's Group | Prof. Ramesh's Peer Mentor Group | Prof. Ruting Jia's Group | Prof. Tzong-Ying Hao's Group

+ Group Set

+ Group

Unassigned Students (136)

Search users

- Beatriz Acuna
- Emilio Aguilar
- Tracy Albers
- Caesar Albizures
- Debbie Altamirano
- Joshua Alvarado

Groups (1)

Prof. Ali Amini's Group — 16 students

Alireza Bahmanabadi	Elvis Chino-Islas	Suzanne Fisher
Marian Giron	Mario Giron	Ashley Kuhnley
Giovanni Martinez	Mehdi Miri	Sabrina Motto
Freddy Nunez	Kimberly Ortiz	Luis Rivera
Gloria Santamaria	Gift Udeh	Javier Valle
Lavar Watkins		

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Student Selection : CSUN

- To be eligible, STEM majors must be an individual who has faced or faces social, cultural educational or economic barriers to careers in STEM and be a US Citizen or Permanent Resident. Complete an online application.
- **Enroll and complete a minimum of 24 units/year and pass all courses with grades of C or better.**
- **Participate in peer mentoring program** (**Mandatory** for students in Cohort 5).
- **Attend all scheduled meetings with designated faculty mentor.** Selected students eligible to participate in paid UG research activities starting spring 2021.
- All students eligible to receive bi-annual textbook awards of $ 500 (at the end of fall/spring semesters) upon meeting requirements.
- Tutors and Peer Mentors.
- RA's and Tutors paid at $ 15/hour. Peer Mentors paid $ 17/hour.

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Cohort 5 Recruitment

- Over 410 eligible FTT students invited to complete online application. Application open from June 5 – July 15
- Received 83 applications
- Selected 37 FTT and invited to submit signed contract
- Assuming all students accept we will have a total of 150+ students in Cohorts 1-5 beginning fall 2020

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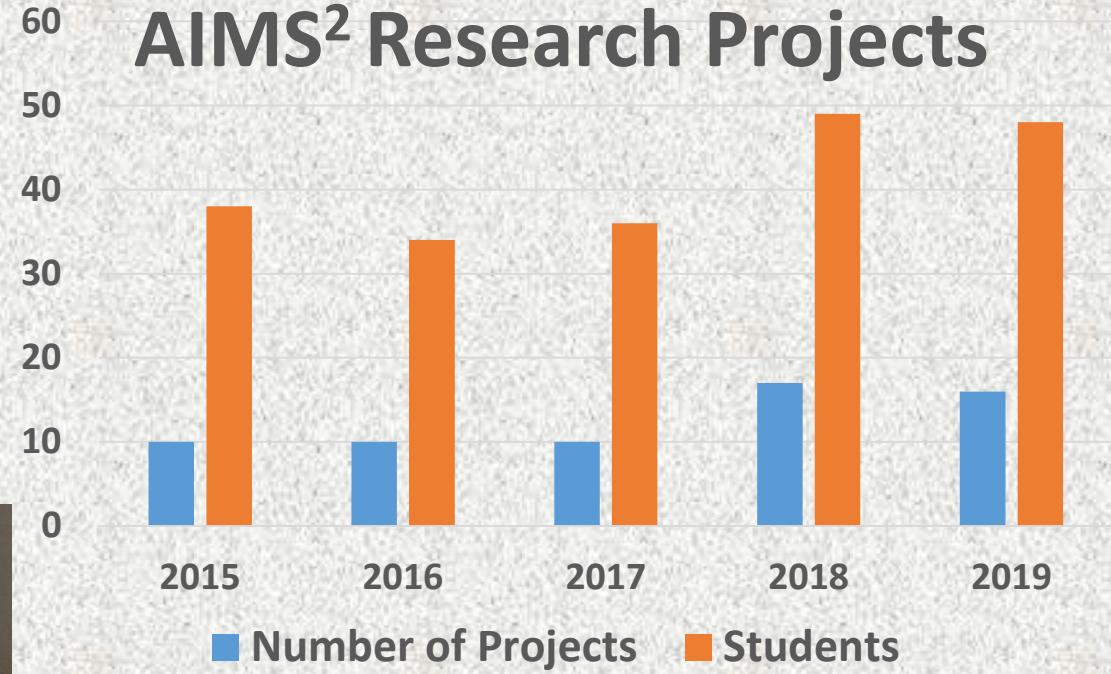
Research and Mentoring →Keys to student success



- Number of projects – **63**
- Number of students – **205**
- Number of faculty – **57**
- Approximate # of hours of paid research – **37,000**

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What works for Latinos in Higher Education:
2019 Example of Excelencia in the Baccalaureate degree program category

- **Increased persistence and completion** (3 Year Transfer Graduation rate of 70 % for transfers. Cohort Persistence rate of 86 %)
- **Increased completion of gateway courses** (67 % - 80% across partner institutions)
- **Increased Latino degree completion in CECS** (Tripled # of graduates from 57 to 171 in five years)
- **Fostered positive career outlook** (100 % of cohort students felt prepared compared to 63 % of other students.

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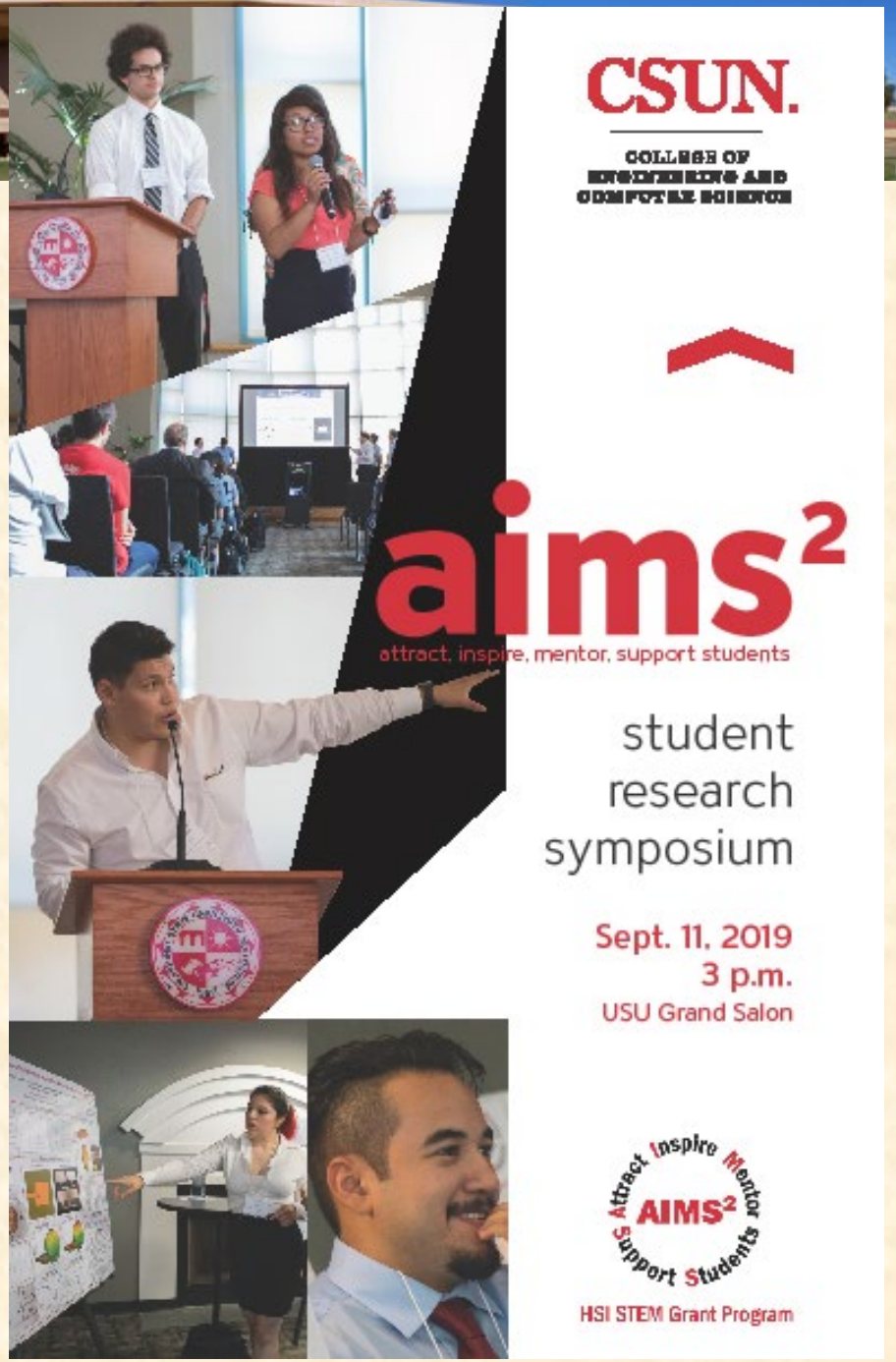
Fall 2020 - Spring 2021 Research Projects with CSUN Faculty Mentors

Project Title	Professor	Project Information
Corrosion protection of Aluminum alloys used in Automotive Industries	Dr. Behzad Bavarian & Prof. Lisa Reiner	Click here for information.
Improving the durability of packaging materials using environmentally friendly vapor phase corrosion inhibitors	Dr. Behzad Bavarian & Prof. Lisa Reiner	Click here for information.
Digital Design and Topology Optimization of Harley Davidson Engine CAM Support for Metal Additive Manufacturing	Dr. BingBing Li	Click here for information.
Modeling and Simulation of Electric Vehicles-Solar Energy-Battery systems	Prof. Bruno Osorno	Click here for information.
Evaluating Test Suite Generation Techniques for Introductory Computer Science Assignments	Dr. Kyle Dewey	Click here for information.
Sentiment Analysis of Tweets	Dr. Kyle Dewey	Click here for information.
Adding Features to the Proteus Programming Language	Dr. Kyle Dewey	Click here for information.
Numerical Models of Magnetocardiogram Field Sensors	Dr. John Valdovinos	Click here for information.
Analysis of Strong Ground Motions and its Application to Earthquake Early-Warning Systems	Dr. Tzong-Ying Hao	Click here for information.



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Research Projects

AIMS² STUDENT RESEARCH SYMPOSIUM

September 11, 2019
3:00 - 8:00 p.m.
University Student Union (USU), Grand Salon

CIVIL ENGINEERING & CONSTRUCTION MANAGEMENT

- A Mobile Construction Management Risk Assessment Model
- Virtual Labs – Learning Engineering Mechanics and Dynamics with Virtual Hands-on Experiments
- Geotechnical and Earthquake Engineering Research: Active Earth Pressure on Retaining Walls & Soil-Structure Interactions on Building Structures
- Earthquake Engineering Research: 3D Modeling & Simulation of Passive Water Dampers

COMPUTER SCIENCE

- Automated Testing for Introductory Computer Science Assignments
- Validating Machine Learning

ELECTRICAL & COMPUTER ENGINEERING

- An Evolutionary Approach to DoS Defense
- A Particle Swarm Optimization Approach for Route Planning
- Energy Storage and Environmental Impact of Electric Vehicles
- Electric Transportation and PWM (Pulse with Modulation) Speed Drives

MANUFACTURING SYSTEMS ENGINEERING & MANAGEMENT

- Corrosion Inhibition Using Bio-friendly Packaging Materials
- High Strength Aluminum Alloys in Aerospace and Automotive Applications
- Reverse Engineering and Topology Optimization of Cam Support Plate for Harley Davidson Milwaukee 8 Engine in Metal Additive Manufacturing
- Wireless Keyboard Powered by Piezoelectric Effect
- Educated Future
- Hydrosól - a Solar Powered, Portable Charging Hydroflask Cap

First Name	Last Name	Email	Dept.	Courses
Jesus	Cruz	jesus.cruz.4@my.csun.edu	CHEM	Chem 100, 101, 102, 103, 104, 321, 333, 334
Dhivya	Pushpa	dhivyapushpa.meganathan.276@my.csun.edu	CHEM/PHYS	PHYS 100, 220, 225, 227, 420; MATH 102, 105, 150, 250, 262, and 280
Zaid	Abdalkarim	zaid.abdalkarim.498@my.csun.edu	CS	CS 110, COMP 182 and COMP 122
Ashley	Kuhnley	ashley.kuhnley.474@my.csun.edu	EE	ECE 240 and 320; MSE 227 and 304
Snehi	Pachchigar	snehi.pachchigar.813@my.csun.edu	CS	Comp. 110, 182, 222, 256, 282 122, 322, 310; MATH 105, 140, 150A, 310; CIT 384
Redhwan	Ahmed	redhwan.ahmed.359@my.csun.edu	CS	Comp. 110 and 182
Tracy	Albers	tracy.albers.97@my.csun.edu	CS	Comp. 380/L and Math 482
Gabriel	Gomez	gabriel.gomez.283@my.csun.edu	CE	ECE 320, ECE 450, Comp. 110 and 182 and MSE 304
Christian	Torres-Rodriguez	christian.torresrodriguez.599@my.csun.edu	ME	MATH 105, 150A/B, 250; PHYS 220B/L; ME 186/L, 209

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Meetings with faculty mentors

- Be sure to attend all group meetings with your faculty mentor – **Very Important!!**
- For discipline specific questions you can connect with a faculty mentor from your department/program
- Monitor your progress, study skills, time management etc.,

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2020-21 Peer Mentors

Returning Peer Mentors	
Diego Barreto	Mechanical Engineering
Elvis Chino-Islas	Computer Engineering
Alan Cruz	Mechanical Engineering
Marian Giron	Electrical Engineering
Tiffany-Ziba Haghighi	Mechanical Engineering
Jake Lyon	Computer Science
Christian Mariscal	Mechanical Engineering
Meyer Millman	Computer Engineering
Aaron Palacios-Romero	Mechanical Engineering
Eileen Quiroz	Computer Science
Garabed Simitian	Mechanical Engineering
Fernando Vargas	Computer Science

New Peer Mentors	
Tracy Albers	Computer Science
Ashley Kuhnley	Electrical Engineering
Kathleen Molina	Civil Engineering
Megan Ngo	Computer Engineering
Kimberly Ortiz	Mechanical Engineering

Returning Alumni Mentors
Melissa Flores
Marcelo Rodel-Carlos
Pablo Casas
Anthony Ortiz
Michael Perez

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Questions?