

# Welcome to AIMS<sup>2</sup> 2.0(HSI-STEM Grant)

## Bridging the Gap: Enhancing AIMS<sup>2</sup> for Student Success



*S. K. Ramesh, Ph.D.*  
*Project Director and Professor of ECE*

*Thousand Oaks  
Room  
Aug 30, 2019*



## *Disclaimer*

- Supported by the AIMS<sup>2</sup> 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.



## *AGENDA*

- Welcome and Introductions
  - Project Faculty and Staff
  - Cohort 4 students
- Overview of Program – Dr. Ramesh, Project Director
- Activities
  - Research Projects for Cohort Students
  - Cohort Meetings w/faculty mentors
  - Tutoring/Peer Mentoring
- View AIMS<sup>2</sup> Video for 2019 Examples of Excelencia Finalist
- Panel Discussion with Peer Mentors
- EMS Survey
- Open Forum



# Project Web Site

[www.ecs.csun.edu/aims2](http://www.ecs.csun.edu/aims2)



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## **The AIMS<sup>2</sup> Project team (2016-21)** **Attract, Inspire, Mentor, and Support Students**



**Faculty and Staff from CSUN and partner Colleges**



• Cohort 5



- Cohort based model
- Collaboration between CSUN and CCC's
- High Transfer Achievement
- GPA, Persistence, and Graduation
- Served over 240 transfer students (approximately 67 % Latino/a).

For more information

Visit [www.ecs.csun.edu/aims2](http://www.ecs.csun.edu/aims2)

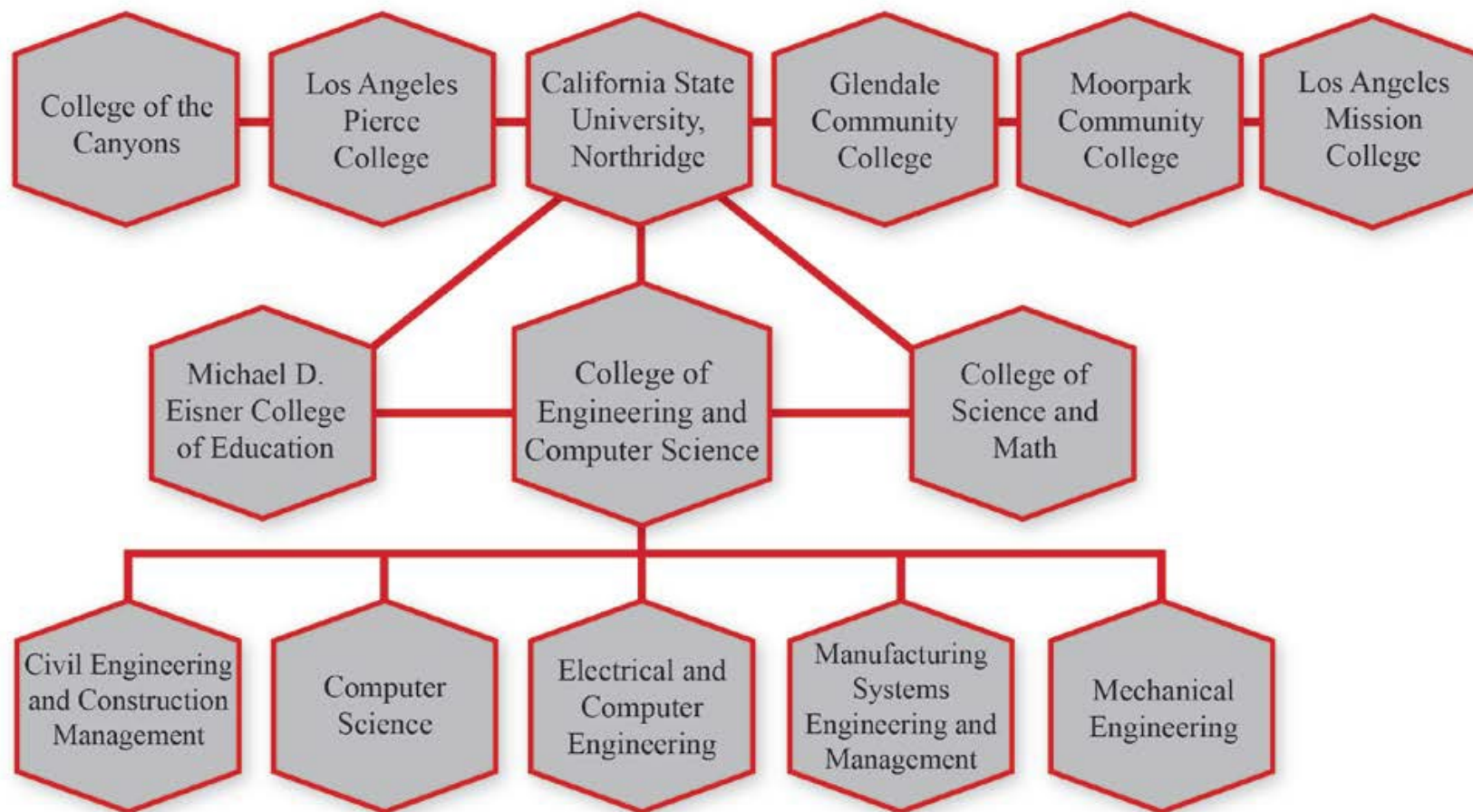


**WHITE HOUSE INITIATIVE**  
*on EDUCATIONAL EXCELLENCE for HISPANICS*  
*25 Years of Fulfilling America's Future*

# AIMS<sup>2</sup> Program – Nationally recognized

Funded by USDE : 2011-2016 (\$ 5.5 M), 2016-2021 (\$ 6 M)





**Organization – Bridging the Gap: Enhancing AIMS<sup>2</sup> for Student Success**





## *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.
- Online application
- **Enroll and complete a minimum of 24 units/year and pass all courses with grades of C or better**
- All students eligible to receive bi-annual textbook awards of \$ 500 (at the end of fall/spring semesters) upon meeting requirements
- Selected students eligible to participate in paid UG research activities (30-32/year)
- Tutors and Peer Mentors (Up to 10/year)



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## *Major activities in AIMS<sup>2</sup> grant*

- Undergraduate research
- Tutoring
- Mentoring (Faculty and Peer Mentoring)



Research Internships

Not secure | ecs.csun.edu/aims2/student-resources/research-internships/

**CSUN** **AIMS<sup>2</sup>** **Program Information** **Student Resources** **Mentor Resources** **Staff Resources** **Announcements**

Student Resources

## Research Internships

### Summer 2019 Research Projects with CSUN Faculty Mentors

Project Title	Professor	Project Information
A Mobile Construction Management Risk Assessment Model	<a href="#">Dr. Anwar Alroomi</a>	Click <a href="#">here</a> for information.
Virtual Labs – Learning Engineering Mechanics and Dynamics with Virtual Hands-on Experiments	<a href="#">Dr. Anwar Alroomi</a>	Click <a href="#">here</a> for information.
Improving the durability of packaging materials using vapor phase corrosion inhibitors	<a href="#">Dr. Behzad Bavarian</a>	Click <a href="#">here</a> for information.
Sustainable materials for steam generating system and power plants	<a href="#">Dr. Behzad Bavarian</a>	Click <a href="#">here</a> for information.
Corrosion protection of steel pipes/reinforced concrete structures using corrosion inhibitors	<a href="#">Dr. Behzad Bavarian</a>	Click <a href="#">here</a> for information.
Application of high strength aluminum alloys for aircraft applications	<a href="#">Dr. Behzad Bavarian</a>	Click <a href="#">here</a> for information.

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**CSUN.**

COLLEGE OF  
ENGINEERING AND  
COMPUTER SCIENCE



**aims<sup>2</sup>**

attract, inspire, mentor, support students

student  
research  
symposium

Sept. 11, 2019  
3 p.m.  
USU Grand Salon



HSI STEM Grant Program



**CSUN**  
COLLEGE OF  
ENGINEERING AND  
COMPUTER SCIENCE

**AIMS<sup>2</sup> 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



Peer Tutors

Not secure | ecs.csun.edu/aims2/student-resources/peer-tutors/

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Student Resources

## Peer Tutors

Please contact tutors directly to inquire about assistance for any of your other courses. They are not limited to the courses listed below!

### Spring 2019

First Name	Last Name	Email	Dept.	Courses
Alexis	Aleman	alexis.aleman.341@my.csun.edu	BIOL	CHEM100, BIOL 106, 107
Joel	Damain (Barajas)	joel.barajas.841@my.csun.edu	EE	CE240. MATH150A, 150B, 250, 280. ECE240, 309, 350, 351, 440, 442, 455, 460, 480. PHYS220B. GEOL101.
Andrew	Espindola	andrew.espindola.4@my.csun.edu	CE	MATH150A, 150B, 250, 331. COMP110, 182, 282. ECE240, 309, 320, 340, 350. PHYS220A, 220B. BIOL106.
Xiaoao	Feng	xiaoao.feng.642@my.csun.edu	EE	COMP110. ECE206, 240, 309, 320, 340, 350, 351, 370, 420, 422, 442, 455, 480, 492. PHYS220A, 220B. MSE304. ME370.
Ivan	Garcia	ivan.garcia.45@my.csun.edu	CE	MSE304. ECE309, 320, 340, 420, 450.

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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.,

## 2019-20 Peer Mentors

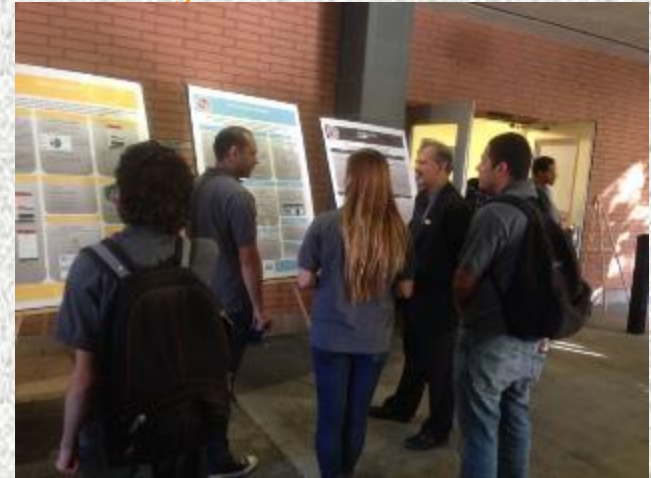
Marian Giron	Electrical Engineering
Elvis Chino-Islas	Computer Engineering
Marcel-Carlos	Mechanical Engineering
Christian Mariscal	Mechanical Engineering
Fernando Landeros	Electrical Engineering
Froilan Campos	Computer Science
Garabed Simitian	Mechanical Engineering
Josue Vega	Computer Science
Eileen Quiroz	Computer Science
Alexis Siguenza	Computer Science
Fernando Vargas	Computer Science
Diego Barreto	Mechanical Engineering
Tiffany-Haghighi	Mechanical Engineering
Jake Lyon	Computer Science
Meyer Millman	Computer Engineering
Aaron Palacios-Rom	Mechanical Engineering
Jessica Opinion	Civil Engineering
Luis Landeros	Electrical Engineering

Returning Peer Mentors	
Alan Cruz	Mechanical Engineering
Alexis Sierra	Civil Engineering
Christian Mendoza	Electrical Engineering
Cristobal Barajas	Mechanical Engineering

Returning Alumni Mentors
Alejandro Campos
Anthony Ortiz
Delbert Stewart
Edith Elyasi
Felix Villa
Melissa Flores
Noe Gonzalez
Pablo Casas
Scott Judge



## *Student-Faculty Interaction*



- Resume Workshops
- Tech Fest preparation
- Research Presentations
- Attending conferences
- Annual AIMS<sup>2</sup> Research Symposium

- Student mentors
- Student tutors
- Weekly/biweekly meetings
- Meetings via appointments
- Advising
- Maintain minimum requirements for scholarship



## *Fall 2019 Study Skills Workshops*

- Mandatory for Cohort 4 students (new cohort)
- Duration of workshop is 8 hours spread over two days
  - (i.e, Friday 3 PM - 7 PM/Saturday 9 AM – 2 PM)
- Dates : October 18/19
- Format – Common session on Friday for all Cohort 4 students
- Saturday – Breakouts for Transfer and Freshmen Students



## *Summer 2018 Workshop Images*





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- Examples of Excelencia is the only national initiative to recognize evidence-based programs advancing Latino students in higher education.
- This year, Excelencia in Education received over 166 nominations from 32 states, DC and Puerto Rico for the 2019 Examples of Excelencia. From these nominations, 16 were selected as finalists for their efforts in serving Latino students



***In October, four finalists will be selected as the 2019 Examples of Excelencia - one in each of the following categories: associate, baccalaureate, graduate and community-based organization.***



## ***2019 Finalists in the Baccalaureate Category***

### **Attract, Inspire, Mentor, and Support Students - The AIMS<sup>2</sup> Program**

**California State University, Northridge (CA)**

***Career/Workforce; Undergraduate Research***

### **College Assistance Migrant Program (CAMP)**

**Washington State University (WA)**

***First Year Support; Learning Community***

### **Pathways to Academic Success & Opportunities (PASO)**

**California State University, San Marcos (CA)**

***First Year Support; Institutional Change***

### **Project MALES (Mentoring to Achieve Latino Educational Success)**

**University of Texas at Austin (TX)**

***Mentoring***

### **Promesa Scholars**

**Ferris State University (MI)**

***First Year Support; Learning Community***



# *2019 Finalist for Examples of Excelencia*

<https://www.youtube.com/watch?v=WrhC1p-RCEc&feature=youtu.be>



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# *CSUN*

## *Engineering Majors Survey*

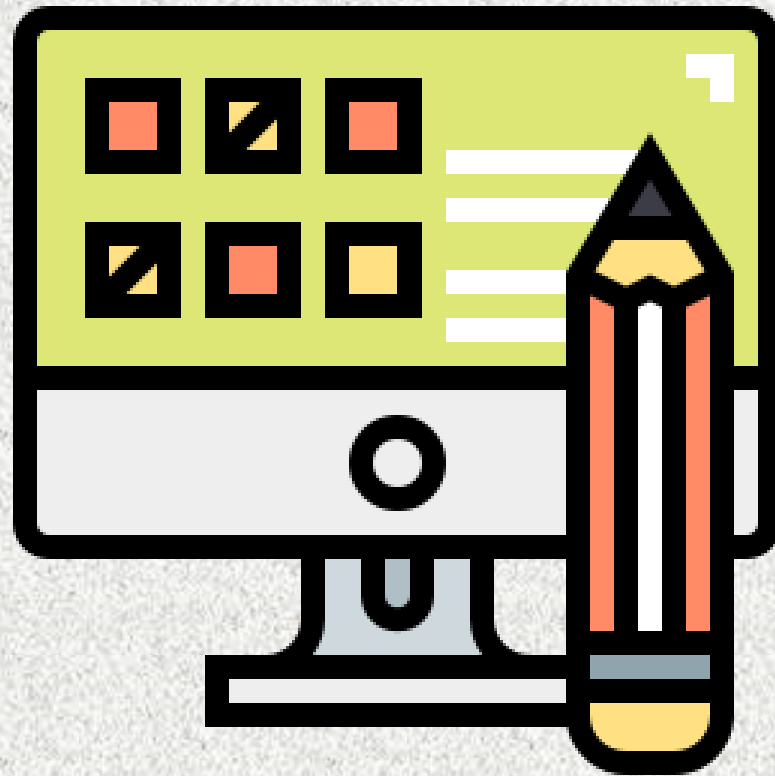
AIMS<sup>2</sup> New Cohort Orientation  
College of Engineering and Computer Science  
California State University, Northridge



## *YOUR Feedback Matters!*

CSUN's Engineering Majors Survey (EMS) helps us to understand the **impact of the AIMS<sup>2</sup> program** by exploring students entrepreneurial and innovative interests.

The **15-minute survey** asks for you to share your interests and experience—and is NOT about what you know or do now know technically as an engineering or computer science student!



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*EMS Survey Completed  
Twice as an AIMS<sup>2</sup>  
Student*

Complete at **program entry** (new cohort, first semester in program)

Administered **every other spring term** (next and final administration: Spring 2021)



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# *Steps to Complete the EMS Survey*

1. Review email pre-invitation (to be sent early fall term)
2. Review email invitation (to be sent early fall term) with survey link
3. Access survey via link on desktop, laptop, or mobile device
4. Complete items and submit the 15-minute survey
5. Claim your \$5 Matamoney gift card (details at the end of the presentation and the end of the EMS survey)



# Pre-Invitation Email Message

From: [Nathan Durdella or designee]

Subject: CSUN's College of Engineering and Computer Science Needs YOUR Input

**You have an opportunity to participate in the *Engineering Majors Survey*. And your input is of critical importance!**

CSUN's College of Engineering and Computer Science is pleased to announce the adoption of the ***Engineering Majors Survey***, a short online survey developed by Stanford University's Epicenter. The ***Engineering Majors Survey*** contains questions about your student experiences and your interests in the future. This survey has received high acclaim from engineering students around the country, who say:

*"It made me think about what I may be doing five to ten years after I graduate rather than just thinking about immediately after graduation."*

*"It made me think about what I actually want to do with my education."*

*"This survey opened my eyes to how many different opportunities [are out there] that I might not have pursued yet."*

The ***Engineering Majors Survey*** takes only 10 minutes to complete. Your participation in this survey is voluntary and confidential. Each and every response is valued—and response will help us better serve you as students in the College of Engineering and Computer Science and in the AIMS<sup>2</sup> program at CSUN (<http://www.ecs.csun.edu/aims2/>).

***To thank you for your participation, all respondents who provide their contact information will receive a \$5.00 Motamoney card distributed in-person on campus—details to follow survey.***

You will receive an email invitation with the survey link soon—so please look for a message from me in about a week.

We look forward to your input in the ***Engineering Majors Survey***!

Kind regards,

Nathan

Nathan Durdella, Ph.D.

Associate Professor

Department of Educational Leadership and Policy Studies

Michael D. Eisner College of Education

California State University, Northridge



# Invitation Email Message

From: [Nathan Durdella or designee]  
Subject: CSUN's College of Engineering and Computer Science Needs YOUR Input

Dear CSUN Student,

**The Engineering Majors Survey is now open! And your input is of critical importance.**

Last week we emailed you to inform you about the **Engineering Majors Survey**, a short online survey developed by Stanford University's Epicenter. You are receiving this email because you are completing your first year or first transfer year at CSUN. Members of a research team are collecting information about first-year and transfer CSUN students as a part of the AIMS<sup>2</sup> program at CSUN (<http://www.ecs.csun.edu/aims2/>). We would like to invite you to complete a short online survey about your experiences as an engineering and computer science at CSUN.

**To thank you for your participation in completing the survey, you will receive a \$5.00 Matamoney card—details at the end of the survey.**

Please note that the completion of this questionnaire is voluntary and confidential, and will not affect your standing at CSUN or participation in CSUN's AIMS<sup>2</sup> program. Your individual survey responses will be kept confidential, and your individual responses will not be shared with in any published report.

If you would like to participate in this survey, please click on the link below:

<link>

We would greatly appreciate your completion of the survey by [date]. Thank you for your help on this important project for CSUN's College of Engineering and Computer Science.

If you have any questions about your participation in this survey, please contact me at:  
[nathan.durdella@csun.edu](mailto:nathan.durdella@csun.edu).

Kind regards,

Nathan

Nathan Durdella, Ph.D.  
Associate Professor  
Department of Educational Leadership and Policy Studies  
Michael D. Eisner College of Education  
California State University, Northridge



# *EMS Survey: Welcome Page*

Optimized for  
mobile!

## Desktop web browser view

**Welcome!**

Thank you for participating in the **Engineering Majors Survey Fall 2017!**

The survey is designed to be completed in about 10-15 minutes. For the open-ended questions, feel free to elaborate as much as you would like, we welcome all responses.

Remember, after you reach the end of the survey, you find information on how to claim your free \$5 Matamoney card!

Thank you very much for your time in helping us to understand engineering majors today,

Your friends on the **Engineering Majors Survey team!**

>>

Survey Powered By Qualtrics

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# EMS Survey: Participant Information Form

**Your rights as a research participant!**

**Click-through IF YOU ARE 18 YEARS OR OLDER (not eligible if under 18 years)**

**PARTICIPANT INFORMATION FORM**  
Engineering Majors Survey (EMS) - CSUN  
Student Participants

**Purpose of the Study:**

The purpose of this study is to understand how you can best serve you as an AIMS2 program participant. The study explores how AIMS2 can design project activities and experiences to meet your unique needs as a student in engineering or computer science at CSUN.

**AIMS2 Project Evaluation**

We are seeking student participants to assist in a research study conducted by Nicholas D'Amico, PhD, Associate Professor, Department of Educational Leadership and Policy Studies, Edsall Family University, Worthington, CSUN.

If you choose to participate in this study, you will complete a confidential survey about your AIMS2 program experience and give permission to researchers to review CSUN information about you. This survey will help us learn more about the effectiveness of the AIMS2 program. This survey will not affect your grades or standing.

You will be compensated with a \$50 Amazon gift card for your participation in this study.

You are eligible to participate in this study if you are at least 18 years old and eligible to participate in the AIMS2 program.

You are also guaranteed that you do not have to answer every question on the survey at any time. This study data will be de-identified with the assignment of a random six-digit number. This de-identified data will remain in this study and will be used for research purposes and will be retained indefinitely.

This project may include data or information that is provided or described in this study and may include confidential information. This project is part of this study and is not to be used for any other purpose. This project is not to be used for any other purpose.

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If you have any questions, concerns, or questions regarding this study, please contact Nicholas D'Amico at 818-877-2400 or email at ndamico@csun.edu.

If you have any questions, concerns, or questions regarding this study, please contact Nicholas D'Amico at 818-877-2400 or email at ndamico@csun.edu.

This is a declaration. If you do not wish to participate, please close this browser window to end this survey.

If you wish to participate in this study, click "I agree" to begin the survey.

☒ I am 18 years of age or older and I agree.  
☐ I do not agree.



# *EMS Survey Items*

## Section 2: School Experiences

In this section, we would like to know more about your learning experiences and activities during high school and as an undergraduate student, especially as these relate to "innovation" and "entrepreneurship".

We also understand that some of you may have just started school and you have not had an opportunity yet to do some of the activities/programs listed below.

During high school, did you:

Please choose the appropriate response for each item:

	No	Yes	I prefer not to answer
Take an art, dance, music, theater, or creative writing class	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Learn computer programming	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Take a shop class (e.g., a woodworking, automotive, or maker class) or engineering class	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Participate in a robotics competition, such as a FIRST Robotics Competition	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Attend a science, math, technology, or engineering related summer camp	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Have a research position or internship at a science, math, technology, or engineering related company or organization	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Learn about entrepreneurship	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Attend a science, math, technology, or engineering related conference	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



## *Research Compensation: \$5 Matamoney Card*

- *As a thank you for your participation in the EMS survey, we would like to offer you a \$5.00 Matamoney gift card.*
- *After completing the survey, you may pick up your Matamoney gift card from Josefina Gudino ([josefina.gudino@csun.edu](mailto:josefina.gudino@csun.edu)) in Jacaranda Hall (JD) 4448 in the College of Engineering and Computer Science.*



# Questions about the EMS?

- If you have any *comments, concerns, or questions regarding the conduct of this research*
  - Please contact Nathan Durdella (project evaluator) at 818-677-3316 or [nathan.durdella@csun.edu](mailto:nathan.durdella@csun.edu).
- If you have *concerns or complaints about the research study, research team, or questions about your rights as a research participant*
  - Please contact Research and Sponsored Projects: phone 818-677-2901 or email [irb@csun.edu](mailto:irb@csun.edu).



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*Questions?*