



## ASUCD SENATE BILL #96

Authored by: GUPTA  
Co-authored by: FUJIMOTO  
Introduced by: GUPTA

An ASUCD Senate Bill to establish a new unit called the ASUCD "Innovation & Research Lab."

---

### ACTIONS

Date	Action
4/17/2023	Submitted.
4/20/2023	Introduced on the Senate Floor by Senator Shrey Gupta.
4/20/2023	Referred to the following commissions: Internal Affairs Commission, Academic Affairs Commission, Research and Data Committee.
4/24/2023	Considered by the Research & Data Committee with a recommendation of Do Pass. 9-0-3, YES: Jahanvi Narwal, Jeremy Elvander, Amanda Li, Cindy Nguyen, Hannah Wen, Jay Cavallaro, Trenton Artica, Suranjana Sooraj, Frederick Kiessling, NOT PRESENT: Nikita Dutt, Maya Wiegand, Nitin Kanchi.
4/24/2023	Considered by the Academic Affairs Commission with a recommendation of Do Pass, as amended. 9-0-0, YES: Szabadi, Cao, Villanueva, Chung, Chen, Smith, Teclé, Thata, Blair. <b>Filled out by the Commission Chair Chung.</b>
4/26/2023	Considered by Internal Affairs Commission with a recommendation of "Do Pass, as amended," 7-0-2. YES: Truong, Tran, Deshmukh, Boggeln, Do, Kobayashi, Terrones, NOT PRESENT: Kumpfert, Rizk, Do.
4/27/2023	Considered by the Senate. [Action by Senate (tabled until, passed, failed, or recommitted)]. [yes votes, no votes, abstain votes]. <b>Filled out by SGAO.</b>
XX/XX/XXXX	[Action by President (signed, vetoed, passed without signature)]. <b>Filled out by SGAO.</b>

---

BACKGROUND: The ASUCD Innovation and Research Lab will operationally serve the association in two major ways:

- (1) Build robust applications that apply software development to meet the evolving needs of ASUCD bodies.
- (2) Generate and analyze data from different sources (surveys, sales data, etc.) to elevate student voices and provide recommendations on topics of interest for ASUCD bodies.

ASUCD was created to represent and serve the needs of all its students, including those of every academic discipline. The Innovation aspect of this unit will hire student software engineers, replacing the programmers in the Information Technology unit. The Research aspect will hire student researchers, replacing the volunteers currently part of the Research & Data Committee. The unit's values are as follows:

- (1) To use STEM to impact students.
- (2) To seek out, listen, and understand student needs and concerns to inform decision making.
- (3) To encourage contributions of STEM students within ASUCD.
- (4) To explore new ideas, encourage experimentation, and foster creativity.
- (5) To use data and technology to improve ASUCD operations and student life.

Section 1. The ASUCD Senate hereby amends Section 2201 of the ASUCD Bylaws as follows:

2201. **DEFINITIONS**

- A. An **ASUCD Unit** shall be defined as a semi-autonomous subdivision of ASUCD with clear structure, purpose, hierarchy of personnel, an itemized budget on the ASUCD Budget Website, reporting requirements, and any additional requirements set by the ASUCD Personnel Committee, Office of the Controller, ASUCD Business Manager, or through the enactment of legislation by the ASUCD Senate.

(1) The following shall be considered ASUCD Units, entitled to all rights and privileges granted to ASUCD Units as described in the ASUCD Constitution and Bylaws:

- i. Aggie Reuse
- ii. Bike Barn
- iii. The California Aggie
- iv. Campus Center for the Environment (CCE)
- v. Coffee House
- vi. Creative Media
- vii. Entertainment Council (EC)
- viii. Housing Advising for Undergraduate Students (HAUS)
- ix. Information Technology (IT)

- x. Innovation & Research Lab (IRL)
- xi. KDVS
- xii. Mental Health Initiative (MHI)
- xiii. The Pantry
- xiv. Picnic Day
- xiv. Unitrans
- xv. Whole Earth Festival (WEF)

Section 2. The ASUCD Senate hereby amends Section 2202(A) of the ASUCD Bylaws as follows:

A. Advocacy

- (1) The following ASUCD Units and any respective Subunits shall be defined as Advocacy Units:
- i. Campus Center for the Environment ( CCE)
  - ii. Innovation & Research Lab (IRL)

Section 3. The ASUCD Senate hereby amends Section 801(E) of the ASUCD Bylaws as follows:

E. **Member Selection:**

- (1) The membership of the Board of Unit Directing Students consists of representatives of the following ASUCD Units:
- i. Aggie Reuse Store
  - ii. Bike Barn
  - iii. Campus Center for the Environment (CCE)
  - iv. California Aggie
  - v. Coffee House
  - vi. Creative Media
  - vii. Entertainment Council
  - viii. HAUS
  - ix. Information Technology (IT)
  - x. Innovation & Research Lab (IRL)
  - xi. KDVS
  - xii. Mental Health Initiative (MHI)
  - xiii. Office of the External Affairs Vice President

- xiv. Pantry
- xv. Picnic Day
- xv. ~~Refrigerator Services~~
- xvi. Unitrans
- xvii. Whole Earth Festival

Section 4. The ASUCD Senate hereby amends Section 401(I)(6) of the ASUCD Bylaws as follows:

**(6) STEM Committee**

- i. The STEM Committee shall incorporate STEM expertise into the operations of the Association, promote access and equity within STEM, and provide the specific benefits. Responsibilities of the committee shall include, but are not limited to:
  - a. Assisting ASUCD and externalities through collaboration and advising in events, projects, and services that incorporate STEM, such as conducting data research with the Executive Office and/or Creative Media; and,
  - b. Providing outreach to students through hosting events, workshops, and more, to encourage student participation and networking within STEM; and,
  - c. Connecting with UC Davis administration and ASUCD representatives to advocate for gender, racial, and income equity in STEM; and,
  - d. Providing resources that promote equitable access to STEM-related materials on campus, including but not limited to: connecting students with appropriate departments or links, lab material, software access, internship opportunities, etc; and,
  - e. Other activities that exist to incorporate STEM expertise into the operations of the Association and/or promote access and equity within STEM.
- ii. The voting members of the STEM shall include a minimum of five (5) members, including the chair and vice chair, who are all current UC Davis undergraduate students.
- iii. The following shall serve as non-voting ex-officios of the committee:
  - a. Two (2) adopted ASUCD Senators;
  - b. One (1) representative from the ASUCD Innovation & Research Lab.
- iv. The committee shall be responsible for proposing and hosting an annual event or other public function approved by the Senate, to showcase all STEM-related projects led by the Association to the undergraduate student.
- v. The STEM Committee Chairperson shall facilitate regularly scheduled meetings, while providing public meeting minutes. Within the committee, the chairperson is responsible for overseeing all projects by the committee, and ensuring projects uphold the Bylaws/mission statements for ASUCD and the UC Davis community. The chairperson should be able to effectively communicate with other organizations on campus, such as those with a focus in STEM-related activities, and the UC Davis Administration.

Finance: No

Appropriation: None

Vote:  $\frac{2}{3}$

## **LONG-RANGE PLAN**

### **EXECUTIVE SUMMARY**

The ASUCD Innovation & Research Lab aims to serve the association by developing robust software applications to meet the evolving needs of ASUCD bodies and conducting well-written surveys that provide qualitative and quantitative data on topics of interest. The unit will engage STEM students within ASUCD, promoting their involvement in decision-making and operational aspects of the organization. It will consist of one unit director, two associate directors (one for software engineering and one for research), 10 developers, and 10 researchers.

### **VISION**

The ASUCD Innovation & Research Lab envisions becoming a pivotal contributor to the improvement of ASUCD operations and student life at UC Davis through utilizing technology, research, and data-driven approaches. By engaging STEM students within the association, the unit aims to foster innovation, creativity, and collaboration among diverse academic disciplines. We want to build stronger communities of undergraduate students that are interested in STEM. By bringing people together in a sustainable organization and well-funded group allows them to both benefit the association from their skills, while also supporting their development academically and professionally. Our Research & Data branch will unite data science and statistics majors, while our Software Development branch will bring together computer science and design majors. Our long-term goal is to ensure that all STEM groups and majors are represented, providing students with opportunities to collaborate, innovate and learn. Our vision is to see the third-floor of the MU buzzing with activity from STEM students, engaging with ASUCD activities, and taking full advantage of its services.

Values:

- To use STEM to impact students.
- To seek out, listen, and understand student needs and concerns to inform decision making.
- To encourage contributions of STEM students within ASUCD.
- To explore new ideas, encourage experimentation, and foster creativity.
- To use data and technology to improve ASUCD operations and student life.

### **BACKGROUND**

The establishment of this new unit is driven by a need to address current gaps in representation within ASUCD while leveraging technology and research to better serve students' needs. The Innovation & Research Lab will replace the existing Research & Data Committee and Information Technology programmers by expanding its scope to include both software development and research projects.

### **GOALS**

1. Develop high-quality software applications beneficial for various ASUCD units.
2. Conduct comprehensive research projects by creating well-designed surveys that provide valuable insights into student experiences.
3. Engage STEM students within ASUCD through outreach efforts.
4. Foster a culture of innovation and creativity within the Association.
5. Continuously evaluate success through key performance indicators (KPIs) or metrics.

### **PEOPLE**

The primary focus of the ASUCD Innovation & Research Lab is to impact UC Davis students by addressing their needs through innovative software solutions and data-driven decision-making processes within ASUCD units. The unit also aims to create a supportive environment for its employees where they can develop professionally while contributing positively to student life at UC Davis through meaningful projects. By engaging STEM students within ASUCD, it fosters a sense of belonging among them while providing opportunities for personal growth and skill development.

The structure of the team is as follows:

- Unit Director
  - Associate Director of Research & Data
    - 10 Researchers, working in teams
  - Associate Director of Software Development
    - 10 Developers, working in teams

## **PRODUCTS**

The main outputs of the ASUCD Innovation & Research Lab will come from its two initial branches:

- The software development branch will create software and applications for the Association based on input from units and students
- The research and data branch will distribute and create reports from surveys for ASUCD units and legislative bodies to make driven by statistics and analysis
- Initially, output of this unit will utilize existing infrastructure to enhance daily life of students and employees. The following are projects this unit could take on:
  - Mobile order for the Coffee House
  - Crossword & reading app for the California Aggie
  - Community bike share app for the Bike Barn
  - Detailed ridership feedback for Unitrans
  - Perception of ASUCD elections for Elections committee

## **COMPETITION**

There are many Registered Student Organizations (RSOs) that work on software development projects and continually partake in on-campus research/feedback. The difference between this unit and those RSOs are that we are designed to serve ASUCD:

- Our projects directly serve ASUCD units and beneficiaries (students, employees)
- Unlike RSOs, our unit will work exclusively on projects that specifically benefit the Association.
- Our goal is to maintain a good relationship with on-campus organizations, including clubs.

This unit will replace the Research & Data committee and take the place of student projects within the Information Technology unit.

## **MARKETING**

1. Utilize social media platforms such as Instagram, Facebook, and Twitter to promote the unit's projects and events, showcasing the benefits offered to potential participants and customers.
2. Design print materials like posters, flyers, and brochures to distribute across campus and create awareness about the unit's services.
3. Collaborate with other ASUCD units and campus organizations for cross-promotion of events and services.
4. Engage in grassroots marketing efforts by attending relevant events, workshops, or conferences to network with potential collaborators or participants.

## **MEASUREMENT**

1. Establish key performance indicators (KPIs) for both software development and research projects that measure progress towards achieving objectives.
2. Assign project managers within the team who will be responsible for overseeing progress on individual projects, ensuring that they stay on course.
3. Conduct regular performance reviews at both individual and team levels to assess alignment with unit goals.
4. Develop a contingency plan that outlines procedures for handling future unforeseen events or circumstances that may impact the unit's operations.

## **WHEN TO GET OUT/MOVE ON**

1. Regularly reassess the unit's mission, goals, and objectives based on changes in the needs and interests of STEM students or shifts in available resources.
2. Monitor engagement levels from STEM community members through event attendance, feedback surveys, or requests for services; reevaluate strategies if there is a persistent lack of interest or engagement.
3. Adapt the unit's business plan/model if significant changes occur in the campus or community environment affecting STEM students or resources available to them.

### **FINANCIAL MODEL**

In its first year, the unit aims to be 100% subsidized by the ASUCD base fee through a budget proposed by the ASUCD President and passed by the Senate. In the future, the unit will determine if it can monetize its products or receive external funding through grants.

### **ENVIRONMENTAL SUSTAINABILITY**

Since our unit primarily deals with technology and digital output like reports, surveys, designs, and software, we will serve as stewards to the environment in the following ways:

1. Utilizing cloud platforms that are carbon neutral: We will prioritize using cloud services providers that are committed to reducing their carbon footprint and investing in renewable energy sources, ensuring that our digital infrastructure is environmentally friendly.
2. Encouraging researchers to collect data without creating significant carbon emissions: We will promote the use of online surveys, carbon-free travel for interviews, and digital research methods
3. Investing in environmentally-friendly hardware and servers: When purchasing new equipment or updating existing hardware, the unit will prioritize energy-efficient options that meet industry standards for sustainability.
4. Implementing energy-saving practices within the unit's workspace: By encouraging team members to power down computers, monitors, and other electronic devices when not in use, we can help reduce unnecessary energy consumption within our office environment.

### **INTERNAL AND EXTERNAL RELATIONS**

- Internal relations
  - Support legislative bodies with insight and resources about the STEM community
  - Work closely with units on data to be acquired or software to be built
  - This will be facilitated by the Associate Director of each branch respectively
  - The unit director, or their designee, will serve as an ex-officio on the ASUCD STEM committee (proposed bylaw change)
- External relations
  - Maintain relationships with Campus Counsel on legality and feasibility of research and software products
  - Work closely with respective campus departments on information that is being researched (i.e. Transportation Services, Equitable Access, etc) or software being built around (i.e. IET, Student Housing & Dining, etc)

### **EMERGENCY PROCEDURES**

To ensure continuity in the event of unexpected resignations or absences, a clear line of succession will be established within the unit. If the Unit Director is unable to continue their role, the Associate Directors will step in to oversee their respective areas (Research & Data and Software Development) and jointly manage the unit until a new Unit Director is appointed. The Unit Director and available Associate Directors will fill unfilled positions as needed.

For each project undertaken by the ASUCD Innovation & Research Lab, a contingency plan will be developed to address potential issues that may arise during project execution. These plans will outline alternative strategies, backup resources, or revised timelines to ensure that business operations continue as smoothly as possible despite unforeseen challenges.



## **SHORT-RANGE PLAN**

### **Purpose**

The purpose of the ASUCD Innovation & Research Lab is to support the Association in its STEM-related needs, including survey research, data analysis and development of software application.

### **Objectives**

The overall objective of the ASUCD Innovation & Research Lab is to increase the representation of students interested in STEM and incorporate them in the operations of ASUCD.

The unit will be established with two branches with the following objectives:

- Research & Data: provide qualitative and quantitative data on topics of interest to support the rest of the Association in its decision making and operations.
- Software Development: create software that supports the Association in its operations, whether internal or external

### **Operations**

#### Overall Unit Operations

The overall operations of the ASUCD Innovation & Research Lab will be overseen by the unit director with the assistance of the associate directors of each branch. This group will be responsible for reviewing requests for surveys and software and determining which are suitable for the unit's goals and capabilities. The associate directors of each branch will then assign approved projects to project teams and the external directors will communicate with the body who requested the project. Before approval of the request and during the development, the directors will be responsible for communicating with ASUCD HQ and campus entities to actively identify potential compliance issues.

#### Research & Data

This branch will be responsible for designing, administering, and analyzing surveys on topics of interest to the student body. The branch will have multiple teams, each responsible for a survey project and draft questions, administering the survey, analyzing the data, and creating reports and presentations to the body who made the request.

#### Software Development

This branch will establish software development teams that will do the following:

- Take recommendations from ASUCD bodies on potential applications to build
- Design, develop, and launch applications that benefit the association

The branch will also establish a regular application maintenance pipeline where software is properly documented, regularly reviewed for maintenance purposes, and takes user input on recommendations for improvements. This branch will also have members who will serve as consultants for contracts and projects that implement or replace software within the Association.

### **Future Plans**

To ensure a smooth transition from year to year, the unit overall will develop a comprehensive onboarding process for new members and provide regular training sessions for existing members.

Future expansion the unit will explore will be outreach efforts such as organizing events to engage or introduce students to STEM fields and support for the STEM student community at UC Davis. Advocacy for policies and initiatives that support students in STEM

The unit could also explore expanding the variety of operating bodies within the unit to more than just software and data analysis. This can include groups that support aerospace engineering, biotechnology, and more.

**NON-BINDING ITEMIZED BUDGET**

<b>Position</b>	<b>Cost per</b>	<b>Total cost</b>	<b>Notes</b>
Unit Director	1 x 8,550	8,550	\$19*15hr*30w
Research and Data Associate Director	1 x 8,550	8,550	\$19*15hr*30w
Software Development Associate Director	1 x 7,200	8,550	\$19*15hr*30w
Research and Data Researchers	10 x 5,400	54,000	\$18*10hr*30w*10p
Software Developers	10 x 5,400	54,000	\$18*10hr*30w*10p
Research & Data marketing	3,000 x 3	9,000	Incentives for surveys, app flyers/banners, digital ads, sponsorships, etc
Software Development marketing	3,000 x 3	9,000	
Research & Data community outreach	3,000 x 3	9,000	Events to cultivate STEM communities (hackathons, speaker series, etc)
Software Development community outreach	3,000 x 3	9,000	
Research & Data staff development	3,000 x 3	9,000	Training, lessons, courses to teach survey and app development & admin.
Software Development staff development	3,000 x 3	9,000	
Research & Data team building	3,000 x 3	9,000	Initial investment in strong founding teams to create an exciting working culture
Software Development team building	3,000 x 3	9,000	
		205,650	

- Notes
  - The Innovation & Research Lab can tap into Information Technology’s software services and technology equipment budget to sustain its operations.
  - Information Technology will not be requesting student developers in their budget, further balancing the cost of this unit.

## **DRAFT VACANCY LISTINGS**

### **Unit Director**

Purpose: The Unit Director is the head of the ASUCD Innovation & Research Lab, responsible for overseeing the overall operations, staff management, and strategic direction of the unit.

#### Duties

- 1) Manage all staff including recruiting, training, evaluating, motivating, delegating and monitoring their activities. Schedule ongoing staff meetings.
- 2) Attend unit director training as required by ASUCD leadership.
- 3) Collaborate with ASUCD Business Manager and ASUCD Controller to ensure that operational practices comply with ASUCD/UC Davis policies and procedures.
- 4) Maintain Unit policies and procedures.
- 5) Uphold, safeguard, and promote ASUCD's values and philosophy relating to ethics, integrity, and social responsibility.
- 6) Draft and present a written report once a quarter to the ASUCD Senate.
- 7) Oversee unit's annual budget
- 8) Act as liaison to student government and meet with the adopted senator(s) for the unit quarterly.

#### Skills

- 1) Strong leadership and management skills in overseeing multiple projects and staff.
- 2) Familiarity with application development and/or data analysis processes.
- 3) Excellent decision-making skills on how to manage unit resources effectively.
- 4) Ability to develop and maintain positive relationships with ASUCD bodies and campus partners.
- 5) Strong communication and interpersonal skills.
- 6) Knowledge of UC Davis policies and procedures related to student affairs and research.
- 7) Experience in strategic planning and budget management.

### **Research and Data Associate Director**

Purpose: The Research and Data Associate Director is the head of the Research and Data branch of the ASUCD Innovation & Research Lab. They will oversee all staff and projects within the Research and Data branch and directly report to the unit director.

#### Duties

- 1) Oversee all surveys and research projects of the Research and Data branch
- 2) Assist in recruitment of the branch's researchers
- 3) Meet weekly with the Unit Director to provide updates on the branch's projects and operations

#### Skills

- 1) Perform administrative duties and work independently
- 2) Manage multiple projects at the same time
- 3) Lead and motivate multiple employees respectfully and effectively
- 4) Communicate clearly and concisely
- 5) Proficient in Google Suite and Microsoft Office applications
- 6) Understanding of operational management and finance
- 7) Familiar and/or have experience with survey writing, distribution, and analysis

### **Research and Data Researchers**

Purpose: Collaborate with other members of the Research and Data branch to conduct surveys, collect data, and analyze results.

#### Duties

As a part of ASUCD, you agree to subscribe to the ASUCD Newsletter.

- 1) Write appropriate and clear survey questions
- 2) Attend unit meetings to discuss current and upcoming projects
- 3) Assist in compiling and summarizing results into reports and presentations for unit's clients

#### Skills

- 1) Interest in survey creation and analysis
- 2) Ability to learn and research new topics quickly and accurately
- 3) Dependable and hardworking
- 4) Proficient in Google Suite and Microsoft Office applications
- 5) Familiar and/or have experience with survey writing, distribution, and analysis

### **Software Development Associate Director**

Purpose: The Software Development Associate Director is the head of the Software Development branch of the ASUCD Innovation & Research Lab. They will oversee all staff and projects within the Software Development branch and directly report to the unit director.

#### Duties

- 1) Oversee all software development projects of the Software Development branch, ensuring the projects align with ASUCD's objectives and requirements.
- 2) Assist in the recruitment, training, and mentorship of the branch's developers.
- 3) Meet weekly with the Unit Director to provide updates on the branch's projects and operations.
- 4) Collaborate with other ASUCD units to determine software needs and priorities.
- 5) Ensure that software development best practices are followed and that the branch stays up-to-date with industry trends.

#### Skills

- 1) Experience in software development, project management, and team leadership.
- 2) Strong communication and organizational skills.
- 3) Familiarity with various programming languages, frameworks, and development methodologies.
- 4) Ability to manage multiple projects simultaneously and meet deadlines.

### **Software Developers**

Purpose: Collaborate with other members of the Software Development branch to design, develop, and implement software applications that support ASUCD's operations and initiatives.

#### Duties

- 1) Participate in the design, development, testing, and maintenance of software applications in accordance with ASUCD requirements and industry best practices.
- 2) Attend unit meetings to discuss current and upcoming projects.
- 3) Work closely with other developers and the Associate Director to ensure timely and quality project completion.
- 4) Provide technical support and troubleshooting for developed applications.
- 5) Continuously improve technical skills and stay updated on industry trends.

#### Skills

- 1) Experience in software development using various programming languages and frameworks.
- 2) Strong problem-solving and critical thinking abilities.
- 3) Ability to work effectively in a team environment and collaborate with others.
- 4) Dependable and hardworking. Proficient in Google Suite and Microsoft Office applications.
- 5) Familiarity with version control systems and agile development methodologies.

DO PASS AS AMENDED, 12-0-0 BY A ROLL CALL VOTE OF THE ASUCD SENATE ON APRIL 27, 2023.  
YES: ILUPEJU, ALAMILLA, OJEDA, SHURMAN, TALREJA, RAGHUNATHAN, FUJIMOTO, KLEIN, LESCHYN,  
XU, GUPTA, SCHNELBACH.

**PASSED IN ACCORDANCE WITH SECTION 503(C)(6) OF THE ASUCD BYLAWS ON  
May 4th, 2022.**

---

Radhika Gawde