

# Fostering Instructional Innovation with New Spaces & Services

Anali Makoui, Merced; Kem Saichaie, Davis  
Judi Franz, Irvine; Noah Wittman, Berkeley  
UCCSC @ UCSC July 12, 2016

# Agenda

1. SE 101, Active Learning Classroom; Judi Franz, Irvine (8 min)
2. Active Learning Classrooms at UC Davis; Kem Saichaie, Davis (8 min)
3. Academic Innovation Studio; Noah Wittman, Berkeley (8 min)
4. TEAL Classroom; Anali Makoui, Merced (8 min)
5. Q&A (13 min)

# Irvine: Active Learning Classroom SE101



## Smart Classrooms:

- Initial project 2007-2011
- “Refresh” 2012-2016
- What’s next?

## Looking for a space to try out new ideas

- Social Ecology gave us an old computer lab
- How to make the best use of an octagon

## “Friends of 101”

- Faculty, TAs from across campus
- Vendors, IT and AV staff, Facilities
- Registrar, Schedule of Classes Coordinators

~ 9 months to discuss, design, order, install



# What Faculty Want:

- With regards to seating, tables that seat 2-4 and separate chairs would be far preferable to the standard tablet arm chairs. This not only provides more table space to students for both laptop and notebooks for example, but is also much more easily re-configurable for different size group interaction.
- Rotating chairs to facilitate interactions between groups of students. More aisles to allow instructors to more easily get close to students.
- small group interaction poor in our lab room, ICS 180, the desks did not allow the small groups of our class to meet.
- Old-fashioned movable cluster-friendly seating would be great! So many more teaching options if the furniture could be moved to allow student-student interaction--face to face (gasp!)--not just electronic. Even for classes as large as 100.
- Classrooms are very ineffective for any kind of group work.
- Rooms are small with appropriate number of desks but it is difficult for students to work in small groups because of the tight space.
- Interactive space for small group discussion.
- Every classroom should be "adaptable" to updated technology.
- Wireless communication with tablet computers or laptops would be incredible.
- Seating so that students can interact in group settings of 4 to 6 students. Better access to the students in the middle of the rows.





<http://sites.uci.edu/learningspaces/>

<http://www.classrooms.uci.edu/gac/SE101.html>



### Pre-launch:

- Of the faculty who were interested in the space and requested it for their course (FIVE), how many were scheduled for Winter Quarter?
  - (ZERO)
- Of the faculty who were actually scheduled in the room, how many knew what kind of space it was?
  - (ONE)
- Of the faculty who were scheduled in the room, and were given an orientation to the space, how many requested a different room?
  - (TWO)

### Instructor Engagement:

- Requires outreach
- Requires time to talk and to think about how they teach
- Requires open communication about what is working and what isn't (tech & teaching)
- Requires trust
- Critical to STUDENT engagement

# Assessment

New classroom building coming online Fall 2018

Data from SE101 will inform decisions about the new building

- We already know we will have a mix of Active Learning and standard classrooms
- Lecture halls will be double-tier, with wider/more aisles

Data we're collecting:

- What technologies are students actually using?
  - Laptop vs Tablet vs Phone
- What technologies are faculty using to teach?
- How often is the wireless projection being used, and how?
- How people move in the room
  - How much difference does the space itself make, versus the technology?

Observation and feedback from faculty AND students via [Google form](#)



# Sample Feedback

## From instructors:

"I love the open space to walk around and interact with the students, and I especially like the chairs! While the space is wonderfully designed for group work, I have found students prefer a short review of material, lecture-style, before they begin working. If I am trying to teach graphing or equation solving, it would be better to have a large, tall, central white board that can be seen from everywhere in the room, or a better system for displaying handwriting on the digital system."

"As a TA, I found that I had more issues with keeping the section's attention. I think there were more issues with students talking and being on their phone than usual. I'm not sure if this is because of the room or because of the specific group of students... It's a little more difficult to gather the attention of the entire class because there is not a single focal point for them to focus on."

## From students:

"I like this type of classroom more for discussions. It gets students more engaged and it is easier to see the notes."

"I like that each pod has its own monitor. This makes it very easy for the instructor to show the class relevant materials (presentation slides, homework assignments, code, etc.). I also like that the classroom is already segmented into different groups. This makes group work much faster and easier than in a traditional lecture room."

"It was confusing in the beginning but we got use to it after a while."

"Although I like the interactive abilities, I would include more boards/board space because not everything can be clearly conveyed electronically (such as graphs). Overall it's a cool space."

"The screen is pretty clear, the classroom is also wide and clean. But since the screen is fixed so that sometimes we can only watch from the side which is not clear."

## Why we do what we do:

“This classroom has been amazing. I never thought I would be able to learn Organic Chemistry, but have been super successful in the course so far. I strongly believe that the classroom facilitated a group learning experience that was an essential part of my ability to understand the material and learn by doing. Sitting in a huge lecture hall would have NEVER been as effective. This set up allows us all to work through problems and share helpful technological resources. Seriously, every class that requires quantitative analysis should be taught this way. Truly revolutionary and I hope to see more classrooms like this in the future.”

# Lessons Learned

- We need lead time with the instructors. Meeting with them weeks before the start of the quarter was critical - it gave them time to re-think their course, ask questions, get familiar with the technology
- Students like that their feedback matters
- Importance of outreach with faculty and staff to get the right instructors in the right rooms
- It's not just the technology: the layout and flexibility of the room and furnishings are equally important
- Instructor attitudes and preparation affected student attitudes and experience



Kem Saichaie, Associate Director of Learning and Teaching Support  
Center for Educational Effectiveness - Office of Undergraduate Education - UC Davis

# Active Learning Spaces at UC Davis

Two Primary Projects

General Campus: Walker Hall Project

College of Engineering: Dorf Classroom

# Walker Hall Renovation

Home to Graduate & Professional Studies

Renovation Completion: 2018

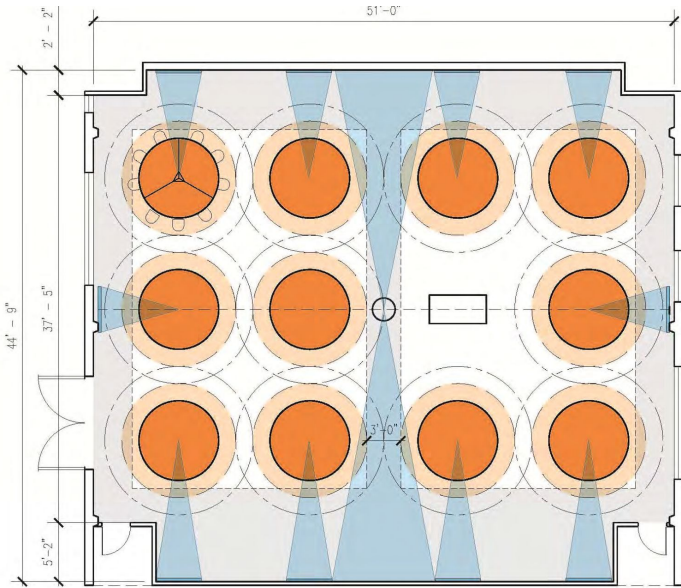
Learning Spaces:

- 1 Active Lecture with ~ 180 seats
- 1 Active Learning with 99 seats
- 1 Active Learning with 64-72 seats





# Walker Hall Active Learning Classrooms



FLEX / ACTIVE LEARNING CLASSROOM

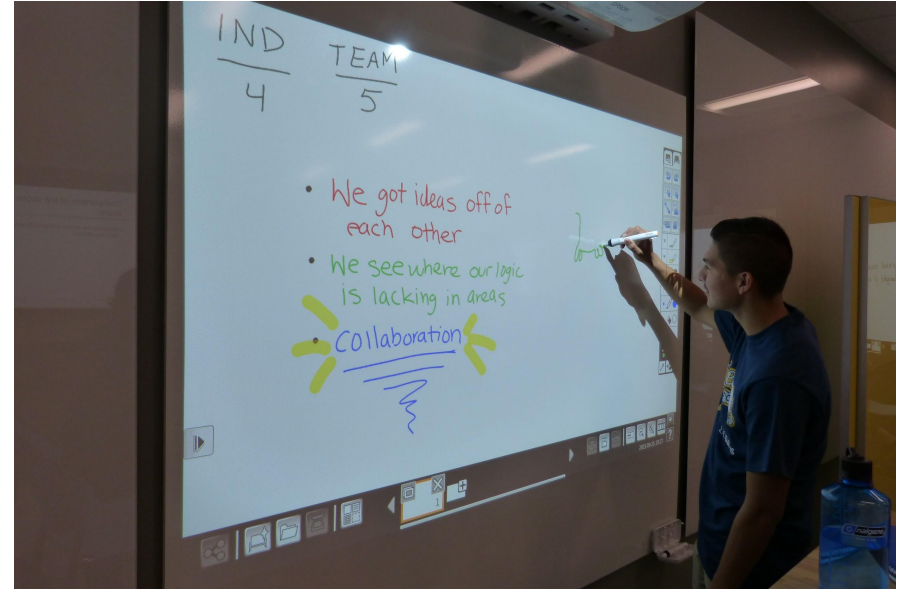
99 seats

2,200 sf





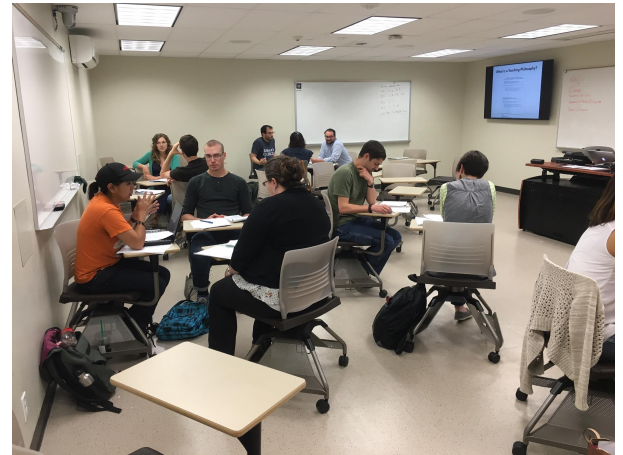
# Dorf Classroom in College of Engineering



# Instructor Engagement

Center for Educational Effectiveness (CEE) is planning Faculty Learning Communities focused on Learning Spaces (Pilot group will start Winter 2017).

CEE is actively working with instructors who are teaching in the pilot learning space (Grove 1283, pictured below)

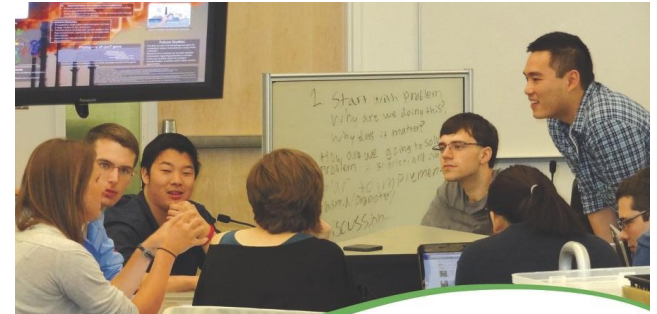


# A Guide to Teaching in Active Learning Classrooms: History, Research, and Practice

[tinyurl.com/ALCbook](https://tinyurl.com/ALCbook)

This book provides an introduction to ALCs, briefly covering their history and then synthesizing the research on these spaces to provide faculty with empirically based, practical guidance on how to use these unfamiliar spaces effectively.

Promotion: Use code **ALC16** to receive **20% off**



## A GUIDE TO Teaching IN Active Learning Classrooms

HISTORY, RESEARCH, AND PRACTICE

Paul Baepler, J.D. Walker,  
D. Christopher Brooks,  
Kem Saichaie, and  
Christina I. Petersen

Foreword by Bradley Cohen

# Academic Innovation Studio, UC Berkeley

The Academic Innovation Studio catalyzes innovation by bringing together faculty, researchers, graduate students, and service providers to **inspire and support experimentation, connect people, and share ideas.**



# Partners

bConnected (Google Apps for Education + Collaboration Tools)

Berkeley Resource Center for Online Education

Center for Teaching & Learning

Digital Humanities @ Berkeley

Educational Technology Services

Berkeley Library

Research IT

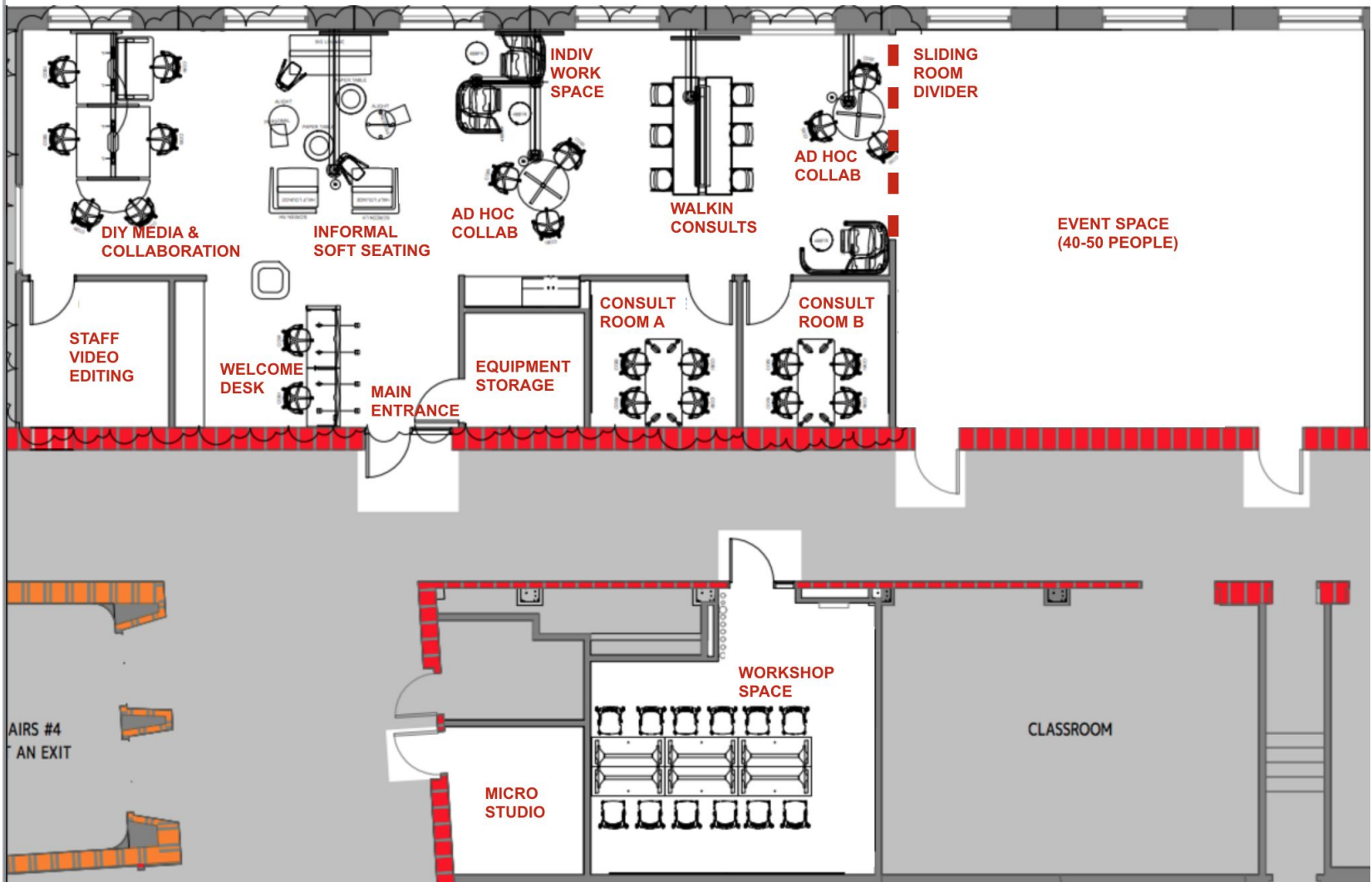












DIY MEDIA & COLLABORATION

INFORMAL SOFT SEATING

INDIV WORK SPACE

AD HOC COLLAB

SLIDING ROOM DIVIDER

WALKIN CONSULTS

AD HOC COLLAB

EVENT SPACE (40-50 PEOPLE)

STAFF VIDEO EDITING

WELCOME DESK

MAIN ENTRANCE

EQUIPMENT STORAGE

CONSULT ROOM A

CONSULT ROOM B

AIRS #4  
AN EXIT

MICRO STUDIO

WORKSHOP SPACE

CLASSROOM

# Vision

Come to the Academic Innovation Studio to:

- **Inspire and get inspired** by sharing stories with peers across departmental boundaries
- **Experiment in a safe space** before taking innovations out into the world
- **Connect with peers** on campus who are working on similar innovative ideas in order to learn from and with each other
- **Find integrated support** from service providers from across campus

# Instructor Needs

- Help adapting to changes in technology, teaching and student expectations and knowledge
- Simple, convenient, clear and coordinated services available where and when they need them, including ongoing transactional support
- Resources that save them time, and help them accomplish what they couldn't do themselves
- Connections to learn and get recognition from peers and to develop personal relationships with staff
- Safe places to explore and experiment, with support

# Opportunities

- Clarify and better integrate instructional support service offerings
- Increase awareness of and engagement with services
- Empathize with instructors and offer services that address their greatest needs
- Provide point-of-need as well as proactive support, that uncovers needs before they arise
- Encourage collaboration, knowledge and referrals between support groups
- Foster communities of practice and showcase and celebrate work
- Capture metrics to understand impacts and advocate for unmet needs

# Learn More

**Academic Innovation Website:** <http://ais.berkeley.edu>

**AIS Planning Project** (Space & Service Strategy Report):

<https://www.ets.berkeley.edu/projects/academic-innovation-studio-implementation-project>

**Active Learning Classroom Project:**

<https://www.ets.berkeley.edu/projects/active-learning-classrooms>

## Technology Enhanced Active Learning

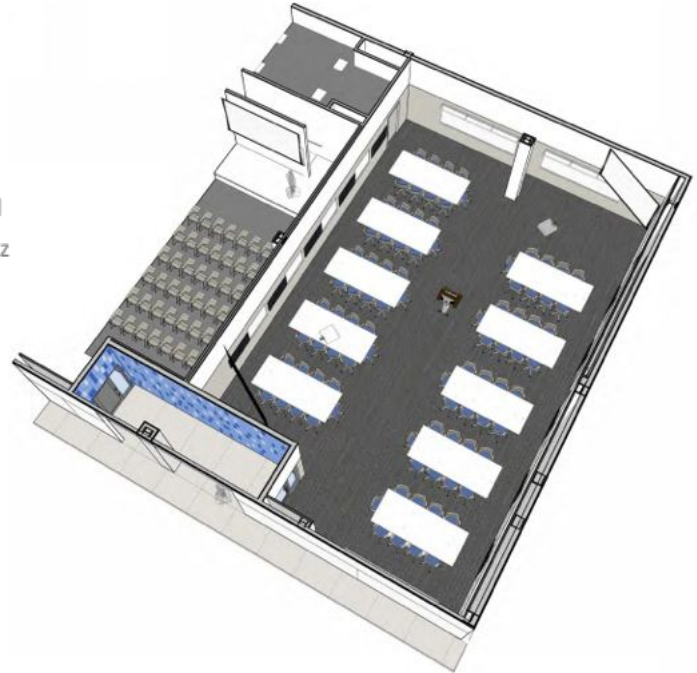
- Implemented by MIT physics department in 2008. Attendance increased and failure rate dropped by more than 50%, from 10-12% to 4%
- Similar to Active Learning Classroom (ALC) at University of Minnesota and Student Centered Active Learning Environment with Upside-down Pedagogies (SCALE-UP) at North Carolina State
- Other adopters:
  - Rensselaer Polytechnic Institute
  - North Carolina State University
  - University of Maryland
  - University of Colorado Boulder
  - Harvard



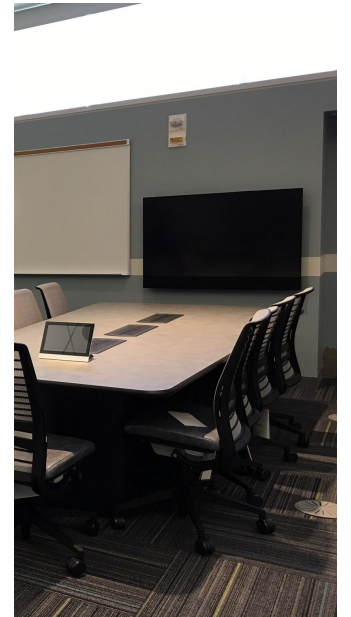
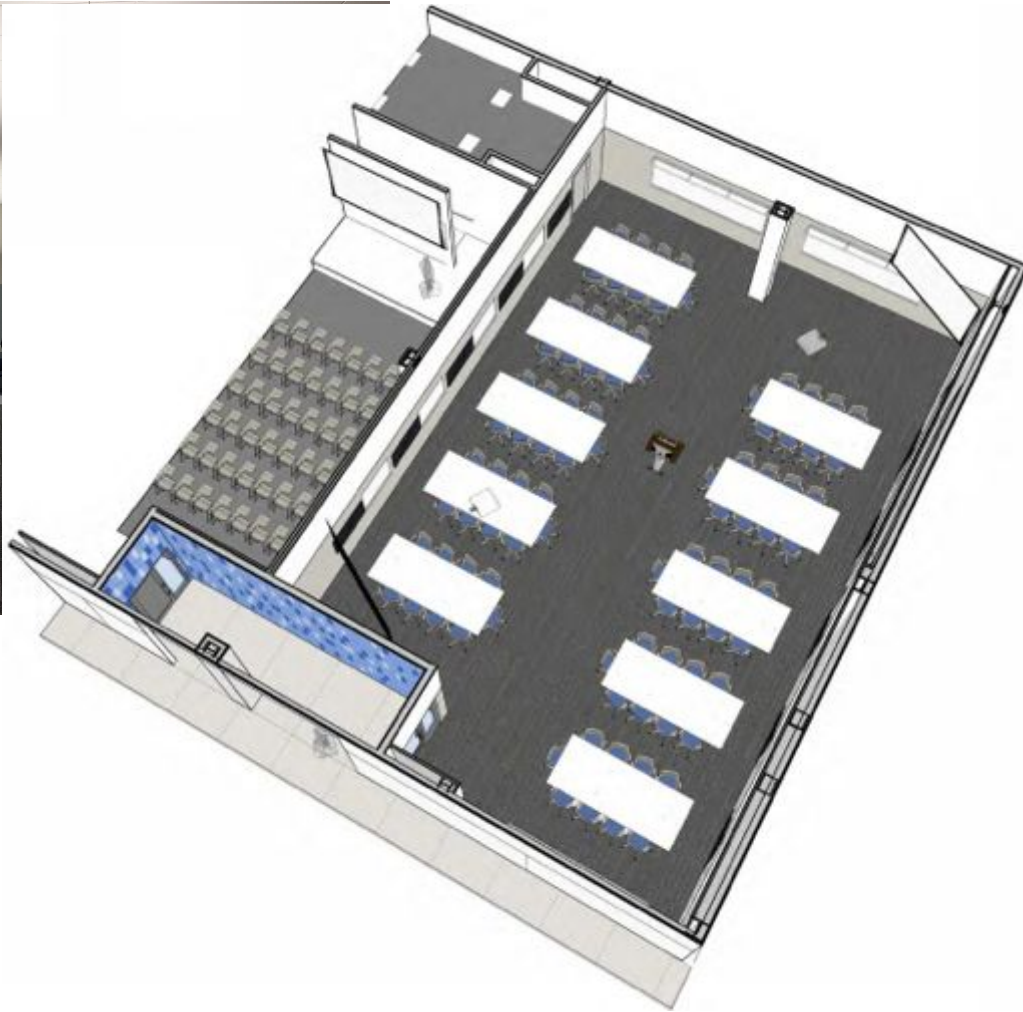
UCMERCED

University of California Merced

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**Policies and Procedures Committee Members:**

- Vice Provost and Dean of Undergraduate Education
- Office of the Registrar
  - University Registrar
  - Associate Registrar
- Center for Engaged Teaching and Learning:
  - Associate Vice Provost of Teaching and Learning
- Information Technology:
  - Director of Academic and Emerging Technology
  - Director of CyberInfrastructure & Research Computing
- Faculty:
  - Professor (History - Senate Chair Elect)

**Current Estimated Timelines:**

Training: F16  
Classes: S17

**Training Committee Members:**

- Center for Engaged Teaching and Learning:
  - Associate Vice Provost of Teaching and Learning
- Information Technology:
  - Director of Academic and Emerging Technology
  - Director of CyberInfrastructure & Research Computing
  - Technology Enhanced Space Lead Analyst
  - LMS Administrator

Q&A

