



**MAY 3, 2024**

**CAL STATE LA**  
COLLEGE OF ENGINEERING,  
COMPUTER SCIENCE,  
AND TECHNOLOGY

## CAPSTONE SENIOR DESIGN PROGRAM

PROJECT PRESENTATIONS TAKE PLACE @ USU AND GE

**[ CE ]**

**CIVIL ENGINEERING**  
Program Presentations  
1st Floor

**USU:** Theater

**[ CS ]**

**COMPUTER SCIENCE**  
Program Presentations  
3rd Floor

**USU:** LA ABC, Alhambra Rm.  
**GE:** Ballroom 1

**[ ITEC + GRM ]**

**INDUSTRIAL TECHNOLOGY**  
**GRAPHIC COMMUNICATIONS**  
Program Presentations  
3rd Floor

**USU:** San Gabriel Rm.

**[ EE + ME + ETEC ]**

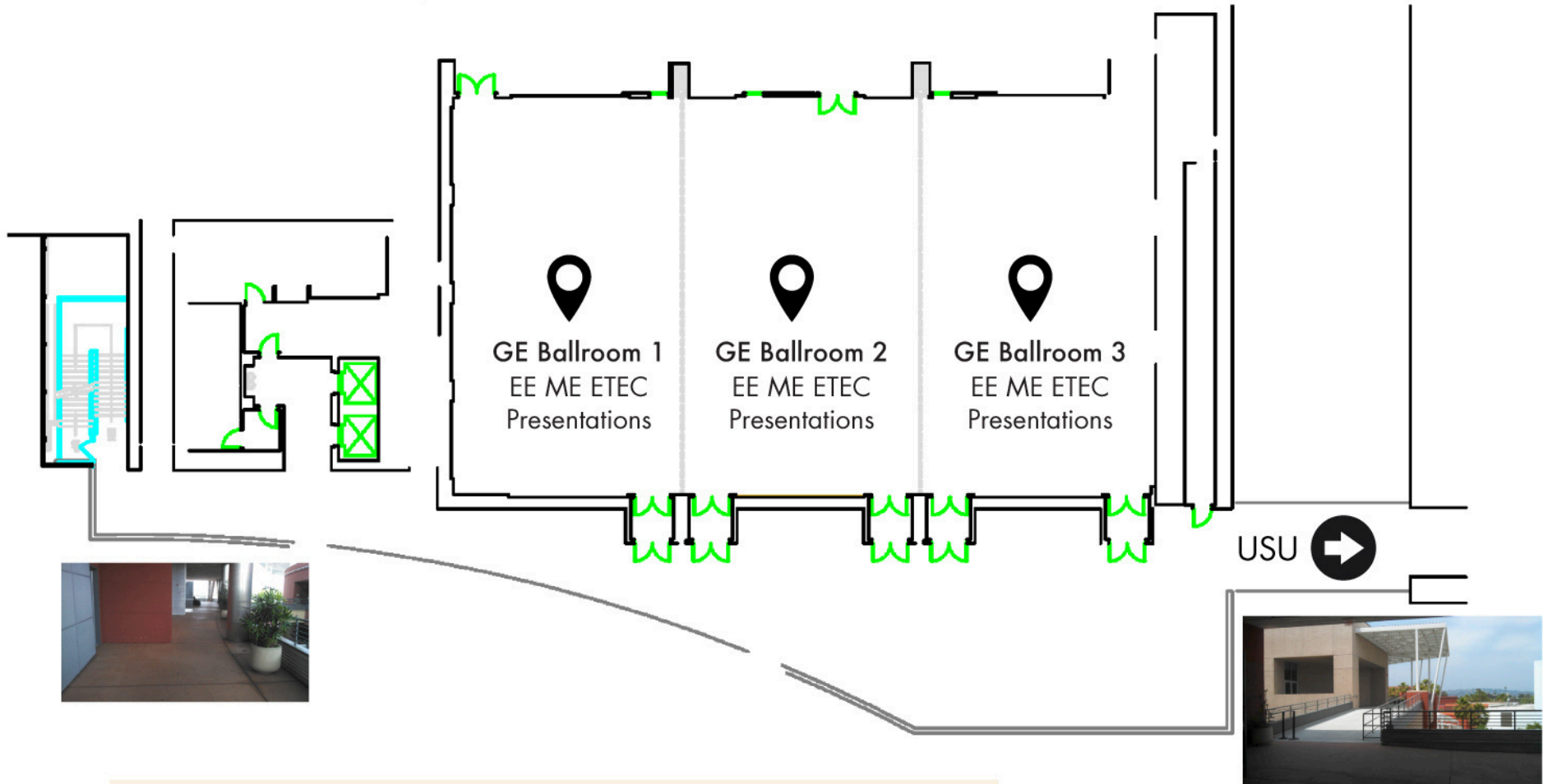
**ELECTRICAL ENGINEERING**  
**MECHANICAL ENGINEERING**  
**ENGINEERING TECHNOLOGY**  
Program Presentations 3rd Floor

**GE:** Ballrooms 1,2,3  
**USU:** Los Angeles Room B,  
Pasadena Rm., Montebello Rm.



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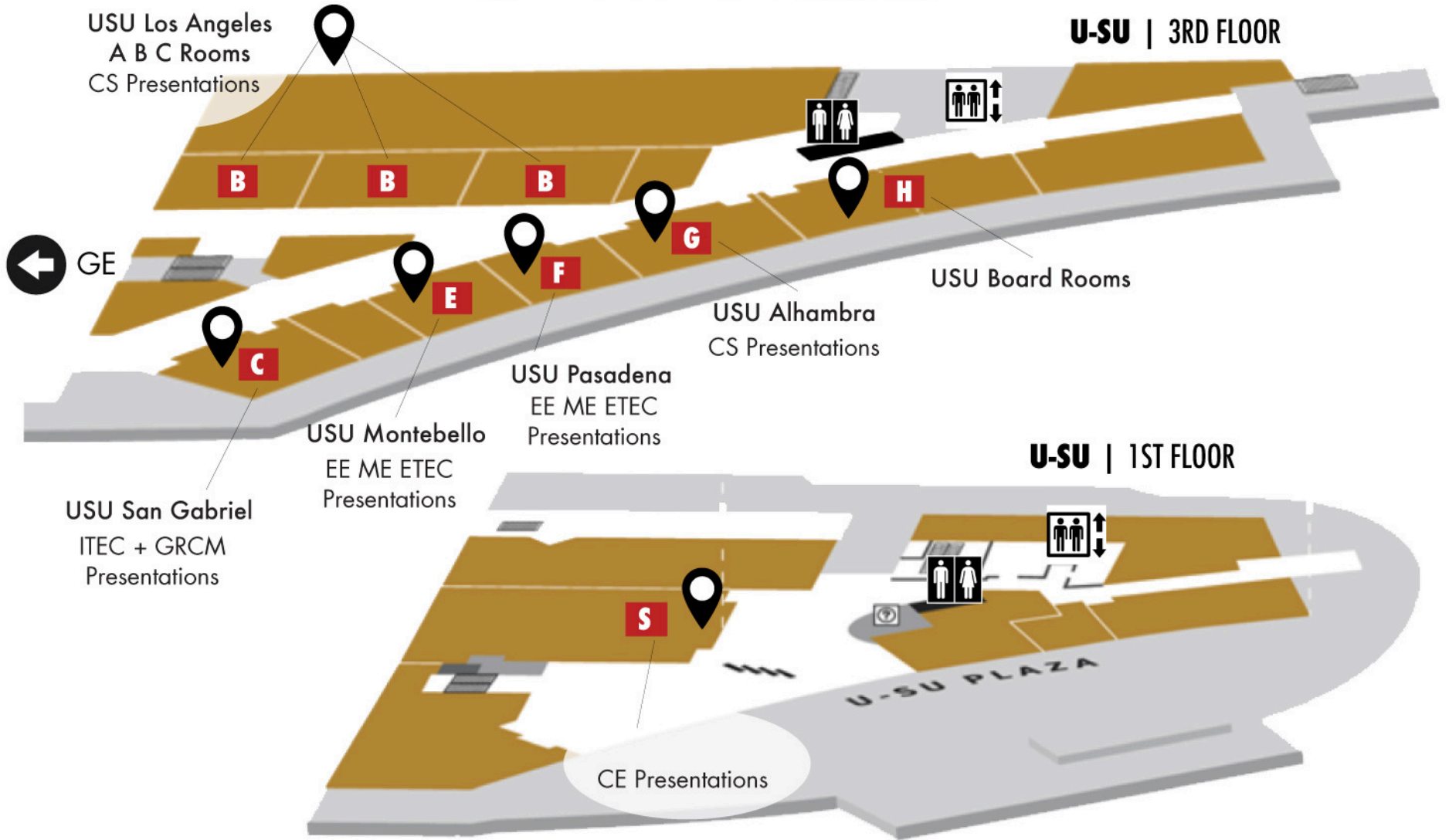
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<p><b>[ CE ]</b></p> <p>CIVIL ENGINEERING Program Presentations 1st Floor</p> <p><b>USU:</b> Theater</p>	<p><b>[ CS ]</b></p> <p>COMPUTER SCIENCE Program Presentations 3rd Floor</p> <p><b>USU:</b> LA ABC, Alhambra Rm. <b>GE:</b> Ballroom 1</p>	<p><b>[ ITEC + GRM ]</b></p> <p>INDUSTRIAL TECHNOLOGY GRAPHIC COMMUNICATIONS Program Presentations 3rd Floor</p> <p><b>USU:</b> San Gabriel Rm.</p>	<p><b>[ EE + ME + ETEC ]</b></p> <p>ELECTRICAL ENGINEERING MECHANICAL ENGINEERING ENGINEERING TECHNOLOGY Program Presentations 3rd Floor</p> <p><b>GE:</b> Ballrooms 1,2,3 <b>USU:</b> Los Angeles Room B, Pasadena Rm., Montebello Rm.</p>
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**USU 1ST FLOOR**

S Theater (Room 106)

**USU 3RD FLOOR**

B Los Angeles Room (Room 308A-C)

E Montebello Room (Room 309)

G Alhambra Room (Room 305)

C San Gabriel Room (Room 313)

F Pasadena Room (Room 307)

H U-SU Boardroom (North & South) (Room 303)



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Capstone Expo presentations take place at GE and USU  
Each presentation room has customized presentation times.

● CE ● CS ● EE ME ETEC ● ITEC + GRM



SCAN ME

GE BALLROOM 1

9:00 am	<b>Welcome</b>	
	<b>Session 1 - Aerospace</b> Moderator: Patrick Hartunian	
9:30 am	●	110A - Boeing Spot-Tag Generator
10:00 am	●	110B - Boeing Spot-Tag Generator
10:30 am	●	111A - Aerospace On-Orbit Manufacturing
11:00 am	●	111B - Aerospace On-Orbit Manufacturing
11:30 am	●	112 - Aerospace DiskSat Dispenser
12:00 pm	●	112 - Aerospace DiskSat Dispenser
12:30 pm	<b>BREAK</b>	
12:45 pm	<b>CS Closed Session</b>	
2:00 pm		

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GE BALLROOM 2

9:00 am	<b>Welcome</b>	
	<b>Session 2a - Robosub Competition</b> Moderator: Salvador Rojas	
9:30 am	●	Robosub - CS Team
10:00 am	●	102 - Robosub - ENGR Team
10:30 am	<b>BREAK</b>	
10:45 am	<b>Session 2b - Stickman Acrobot</b> Moderator: Kurt Sawitskas <i>Stickman Acrobot Intro</i>	
11:00 am	●	106A - Stickman Acrobot
11:30 am	●	106B - Stickman Acrobot
12:00 pm	●	106C - Stickman Acrobot
12:30 pm	●	106D - Stickman Acrobot
1:00 pm	●	106E - Stickman Acrobot
1:30 pm	<b>BREAK</b>	
1:45 pm	<b>EE Closed Session</b>	
2:45 pm		
3:45 pm		

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GE BALLROOM 3

9:00 am	<b>Welcome</b>	
	<b>Session 3 - UAV Competitions</b> Moderator: Mike Thorburn	
9:30 am	●	114 - Aggressive Manuevers
10:00 am	<b>CSU UAV Competitions Intro</b>	
10:15 am	●	104A - C-UASC
10:45 am	●	104B - C-UASC
11:15 am	<b>BREAK</b>	
11:45 am	●	105A - C-3DPAC
12:10 pm	●	105B - C-3DPAC
12:35 pm	●	105C - C-3DPAC
1:00 pm	●	105D - C-3DPAC
1:25 pm	●	105E - C-3DPAC
1:50 pm	<b>BREAK</b>	

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SCAN ME

USU LOS ANGELES-A

USU LOS ANGELES-B

USU LOS ANGELES-C

USU ALHAMBRA

9:00 am	<b>Welcome</b>
	<b>Moderator: Yuqing Zhu</b>
9:30 am ●	AI Research and Development
10:00 am ●	GPS Performance Analysis and Visualization
10:30 am ●	Autonomous Path Planning for Unmanned Aerial Vehicles
11:00 am ●	SAYA.life A Machine Learning Platform for Intelligent Water Systems Management
11:30 am	<b>BREAK</b>
12:00 pm	CS Closed Session
12:30 pm	
1:00 pm	
1:30 pm	

9:00 am	<b>Welcome</b>
	<b>Moderator: Jungsoo Lim</b>
9:30 am ●	115 - LA City BoE Sidewalk Assessment Project ENGR Team
10:00 am ●	LA City BoE Sidewalk Assessment Project CS Team
10:30 am ●	Machine Learning for Network-Denied Environments
11:00 am ●	Box.com/eDefender Integration
11:30 am ●	PDGo
12:00 pm	<b>BREAK</b>
12:30 pm	CS Closed Session
1:00 pm	
1:30 pm	

9:00 am	<b>Welcome</b>
	<b>Moderator: David Krum</b>
9:30 am ●	MoonTrek Augmented Reality
10:00 am ●	VIPER Rocks!
10:30 am	SUAS Flight Path Visualization
11:00 am ●	Leveraging Digital Phenotyping to Support Patients with Visual Field Loss
11:30 am	<b>BREAK</b>
12:00 pm	CS Closed Session
12:30 pm	
1:00 pm	
1:30 pm	

9:00 am	<b>Welcome</b>
	<b>Moderator: Huiping Guo</b>
9:30 am ●	Behavioral Cognition Project
10:00 am ●	Secure Module/Key Management Application
10:30 am ●	The arQive
11:00 am ●	Want2Remember
11:30 am	<b>BREAK</b>
12:00 pm	CS Closed Session
12:30 pm	
1:00 pm	
1:30 pm	

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SCAN ME

USU MONTEBELLO

9:00 am	<b>Welcome</b>
	<b>Session 4 - Energy/Infrastructure</b> Moderator: Curtis Wang
9:30 am	● 103 - ASHRAE
10:00 am	● 107 - Project Channel Islands
10:30 am	● 107 - Project Channel Islands
11:00 am	● 113 A - iMasons
11:30 am	● 113 B - iMasons
12:00 pm	<b>BREAK</b>
12:15 pm	CS Closed Session
1:00 pm	
1:30 pm	

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USU PASADENA

9:00 am	<b>Welcome</b>
	<b>Session 5 - Automotive / Specialized Devices</b> Moderator: John C. Bachman
9:30 am	● 101-SAE Baja
10:00 am	● 101-SAE Baja
10:30 am	● 108-Electric Car Battery Development
11:00 am	● 109-Battery Development Thermal Management
11:30 am	● 116 - 3D Printing Project
12:00 pm	● 117 - Einstein Telescope Cryogenic Suspension
12:30 pm	<b>BREAK</b>
12:45 pm	CS Closed Session
1:30 pm	

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USU SAN GABRIEL

9:00 am	<b>Welcome</b>
	Moderator: Juan Pena, Jr.
9:30 am	● EDS System "Emergency Drone Service" (ITEC)
10:00 am	
10:30 am	● Astrophobia (GRMC) TechTopia (GRMC)
11:00 am	
11:30 am	
12:00 pm	<b>BREAK</b>
12:15 pm	CS Closed Session
1:00 pm	
1:30 pm	

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USU THEATER

9:00 am	<b>Welcome</b>
	Moderator: Howard Lum
9:30 am	● Group 1: Costa Mesa Park-and-Ride: A Sustainable Solution to Promoting Urban Commuting
10:15 am	● Group 2: Park-and-Ride for a Sustainable Tomorrow
11:00 am	● Group 3: Costa Mesa Park-and-Ride Facility
11:45 am	● Group 4: Development of a Sustainable Park-and-Ride Facility in Costa Mesa
12:30 pm	<b>BREAK</b>