

# 2023 AICHE SOUTHERN REGIONAL CONFERENCE PROGRAM

Hosted By :

—  
The University of  
Florida

# MARCH 3RD-4TH



# Posting about the 2023 AIChE Southern Regional Conference?

Tag AIChE and UF AIChE on Instagram!

AIChE: @chenected

UF AIChE: @ufaiche

Search "AIChE" to add some fun stickers to your stories/reels!



# Table of Contents

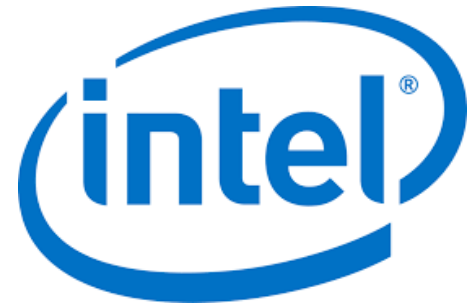
Welcome	2
Sponsors	3
Keynote Speaker	4
Meeting Policies and Notices	5
Schedule	6
Recruitment Fair	7
Student Technical Presentations	8
Poster Competition	9
Jeopardy Preliminary	10
ChemE Car Teams	11
Maps and Floor Plans	12-17

# WELCOME

The University of Florida's  
AIChE Chapter would like  
to welcome you to the  
2023 AIChE Southern  
Regional Conference! We  
hope that you enjoy all the  
events that we have  
organized for this  
weekend.

THANK YOU TO THE ASRC  
**SPONSORS**

**UF** Herbert Wertheim  
College of Engineering  
*Department of Chemical Engineering*  
UNIVERSITY of FLORIDA



AUBURN  
PULP AND PAPER



**ALBERT AND JENNIFER DACOSTA**

**MIKEY AND TRACEY DICKINSON**

**SHEILA AND DANE BOYINGTON**

**ALEX MORENO**

# A MESSAGE FROM OUR KEYNOTE SPEAKER

Chemical engineers and the skills we possess are core to addressing society's greatest challenges, supporting the future of human endeavors. Technologies are evolving at an increasing pace, disrupting the ways we live, work, communicate, and learn. Chemical engineering has continuously expanded its domain, encompassing materials, biological systems, management expertise, digital capabilities, and many other areas, building on the foundation of what makes a chemical engineer: our unit operations approach to problems, our ability to apply fundamentals to a wide variety of subject areas, and the unique understanding of how to integrate highly complex systems to meet a desired objective. Chemical engineers today have an opportunity to leave a legacy of impacts that will have broad ramifications on future generations, and this is an exciting time to be a chemical engineer.

Billy B. Bardin is a Global Technology Director at Dow Inc. He leads efforts to explore, evaluate, and implement emerging and next generation technologies that are required to maintain and improve Dow's competitive position. Bardin began his career in 2000 with Union Carbide/Dow in South Charleston, W. Va. He has held numerous global leadership roles in research, development, and manufacturing in which he has developed and commercialized technologies including new heterogeneous catalysis research capabilities, novel catalytic processes for feedstocks and derivative products, process technologies for improved olefins production, and advanced digital manufacturing capabilities, among others. Bardin holds a Bachelor of Science in Chemical Engineering from North Carolina State University, and a Master of Science and a Doctor of Philosophy in Chemical Engineering from the University of Virginia. He is a Registered, Professional Engineer (PE) with the W. V. State Board of Registration for Professional Engineers. Bardin is an executive member and past Chair of the Industrial Advisory Board for the School of Chemical Engineering at Purdue University and a member of the advisory boards for the Departments of Chemical Engineering at the University of Virginia and North Carolina State University. He is the 2023 President of the American Institute of Chemical Engineers (AIChE) and previously served on the Board of Directors 2017-19. He is a Fellow of the AIChE. Bardin is vice-chair of the Board of Directors for MxD, the national digital advanced manufacturing institute. He was recently named as one of Smart Industry Magazine's Top 50 Industrial Digital Transformation Leaders and as a Visionary Manufacturing Leader by the National Association of Manufacturers' Manufacturing Leadership Council.



**BILLY B. BARDIN**

# MEETING POLICIES & NOTICES

## **Recording and General Photography Policy**

AIChE meetings are one of the primary ways the Institute fulfills its mission to advance the development and exchange of relevant knowledge. The content presented at this event is the property of the presenters. Recording sessions or taking photos of slides is strictly prohibited.

## **General Photography Notice**

Sessions and events at the meeting are being photographed and these will be used in the UF AIChE Spring 2023 Newsletter, the UF Department of Chemical Engineering Newsletter, the UF AIChE website, and other promotional avenues. By registering for this conference, you consent to your likeness being used for such purposes without compensation and release AIChE, UF AIChE, and the University of Florida's Department of Chemical Engineering from any liability on account of such usage.

## **Code of Conduct**

All meeting attendees, volunteers, and staff are expected to abide by the AIChE Code of Conduct. Read the full Code of Conduct at [aiche.org/resources/conferences/code-conduct](https://www.aiche.org/resources/conferences/code-conduct)

## **Code of Ethics**

All meeting attendees, volunteers, and staff are expected to abide by the AIChE Code of Ethics. Read the full Code of Ethics at [aiche.org/about/governance/policies/code-ethics](https://www.aiche.org/about/governance/policies/code-ethics)

## **AIChE Equity, Diversity, and Inclusion Statement**

AIChE is committed to promoting a fair, just, and equitable profession and society. Read the full statement at <https://www.aiche.org/equity-diversity-inclusion/statement>

# Schedule

Friday			
Start Time	End Time	Event	Location
2:00PM	9:00PM	Registration	Wertheim Laboratory Lobby
3:00PM	7:00PM	Milliken Plant Tour	Meeting at Wertheim Patio
5:30PM	8:00PM	ChemE Jeopardy Preliminary Rounds	Florida Gym Rooms 210, 230, 260, & 280
7:00PM	9:00PM	Welcome Event	Florida Gym Floor 1 Gymnasium
Saturday			
Start Time	End Time	Event	Location
9:00AM	12:30PM	Registration	Reitz Union Floor 2 Gallery
9:00AM	10:00AM	Breakfast with UF AICHe President Address	Reitz Union Floor 2 Grand Ballroom
10:00AM	12:30PM	Student Technical Presentation Competition	Reitz Union Rooms 2320 & 2325
10:00AM	1:00PM	Poster Competition	Reitz Union Rooms 2355 & 2365
10:00AM	2:00PM	Recruitment Fair	Reitz Union Rooms 2335 & 2340
10:00AM	11:00AM	Diversity and Inclusion Seminar with Dr. Sindia Rivera-Jimenez	Reitz Union Floor 2 Auditorium
10:00AM	12:00PM	ChemE Car Safety Inspection and Poster Competition	Florida Gym Floor 1 Gymnasium
12:30PM	2:30PM	Lunch	Reitz Union Floor 2 Grand Ballroom
1:00PM	3:00PM	ChemE Car Competition Prep	Florida Gym Floor 1 Gymnasium
2:30PM	4:00PM	ChemE Jeopardy Finals	Reitz Union Room 3315
3:00PM	6:00PM	ChemE Car Competition	Florida Gym Floor 1 Gymnasium
4:00PM	5:00PM	Resume and Interview Workshop with Erin Lin	Reitz Union Room 3320
4:00PM	6:00PM	Escape Room	Reitz Union Room 2330
4:00PM	6:00PM	President's Meeting and Conference Seminar/Bids	Reitz Union Floor 2 Auditorium
6:00PM	8:00PM	Awards Banquet and Keynote Address	Reitz Union Grand Ballroom



# **Recruitment Fair**

**10:00 AM - 2:00 PM**

**Reitz Union Rooms 2335 & 2340**

## **Companies**

Ascend Performance Materials

Intel

Kraton

Mosaic

## **Universities**

FAMU-FSU College of Engineering

University of Alabama

University of Florida

University of Kentucky

University of South Florida

University of Tennessee

University of Virginia

# Student Technical Presentations

**10:00 AM - 12:30 PM**  
**Reitz Union**

## **Room 2320**

- 10:00 - 10:30 Daniel Duke - University of Alabama, Huntsville  
*Structural & Band Level Alignment of CsPbBr<sub>3</sub>/Graphene & CsPbI<sub>3</sub>/Graphene Heterostructures from First Principles*
- 10:30 - 11:00 Lucas Bertucci - University of Kentucky  
*Solar Panel Recycling: Environmental Sustainability*
- 11:00 - 11:30 Lydia Thies - University of Florida  
*Identifying the Effects of Alkane Size and Branching on the Mechanism of C–C Bond Hydrogenolysis on Iridium Surfaces*
- 11:30 - 12:00 Nathan Thornburg - University of South Carolina  
*Controlling Metal Nanoparticle Size on Carbon Supports with Surface Tension*

## **Room 2325**

- 10:00 - 10:30 Ethan Slaton - University of Florida  
*High-Throughput Protease Reprogramming Powered by a Suite of Integrative Vectors*
- 10:30 - 11:00 Katie Traynelis - North Carolina State University  
*Investigating the Residue Specificity of p300 in Human Histone Peptides*
- 11:00 - 11:30 Nicholas Kelhofer - Georgia Institute of Technology  
*Gamma Sterilization of Contraceptive Drug-Loaded Microneedle Patches*
- 11:30 - 12:00 Elise Collins - Auburn University  
*Using Cellulose Nanocrystals as a Carrier for Targeted Herbicide Delivery*

Presentation slots will run for 30 minutes where presenters will present for 15 minutes, answer questions for 5 minutes, and the judges deliberate for 5 minutes. There will be 5-minute breaks between each set of presentations.

# Poster Competition

**10:00 AM - 1:00 PM**

**Reitz Union Rooms 2355 & 2365**

## **Session 1**

**10:00 - 11:15**

Fuels, Petrochemicals, and Energy  
Materials Engineering and Sciences  
Separations

## **Session 2**

**11:45 - 1:00**

Catalysis and Reaction Engineering  
Computing, Simulation, and Process Control  
Environmental Science and Engineering  
Food, Pharmaceuticals, and Biotechnology

# Jeopardy Preliminary

5:30 PM - 8:00 PM  
Florida Gym Second Floor

## Bracket 1: Room 210

Tennessee Tech University

University of South Florida

University of Alabama Huntsville

## Bracket 2: Room 230

University of South Alabama 1

North Carolina State University

Mississippi State University

## Bracket 3: Room 260

North Carolina A&T

Louisiana State University

Auburn University

## Bracket 4: Room 280

University of Florida

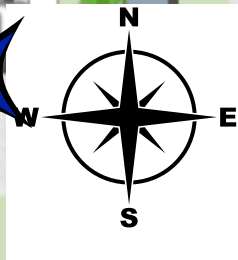
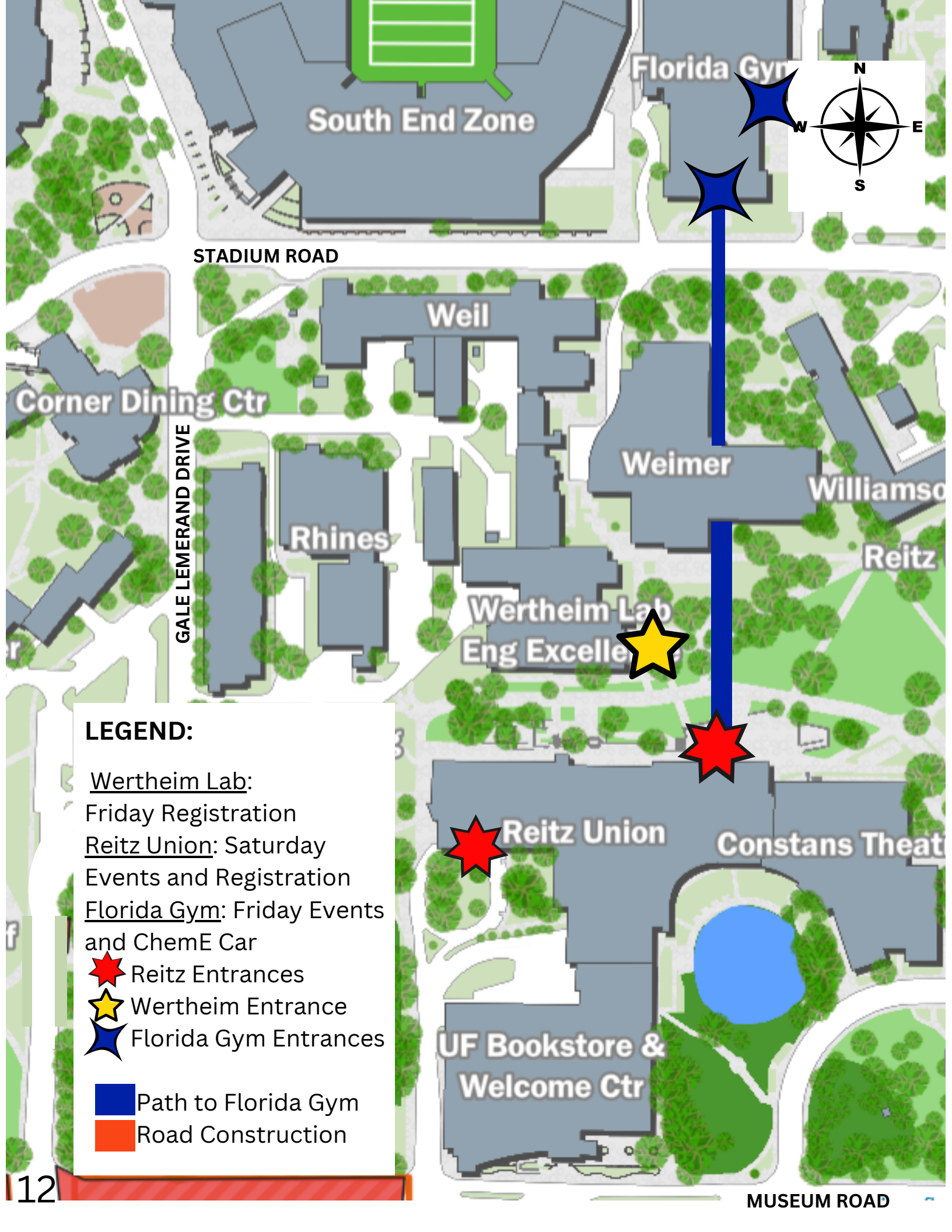
University of South Alabama 2

Clemson

Teams will compete in the preliminary rounds with first and second place proceeding to the semi-finals after the preliminary rounds. Georgia Tech won 1st place at the last regional conference and will directly proceed to the semi-final round.

# ChemE Car Teams



Brenner's Pick-Up Truck FIT  
Chargertron UAH  
Chattanooga Choo Choo UTC  
Coki Racing Team UPRM  
Davy C-Rocket UTK  
Goose Wagon FAMU-FSU  
Kentucky Fried Chemicals UK  
Quarantina TTU  
Ramlin Wreck v2 GT  
The Capa-Bull Car USF  
The Lead Gator UF  
The Stop-Cock and Roll AU  
VoltPack NCSU  
Ye Olde Rolling Stones UNA



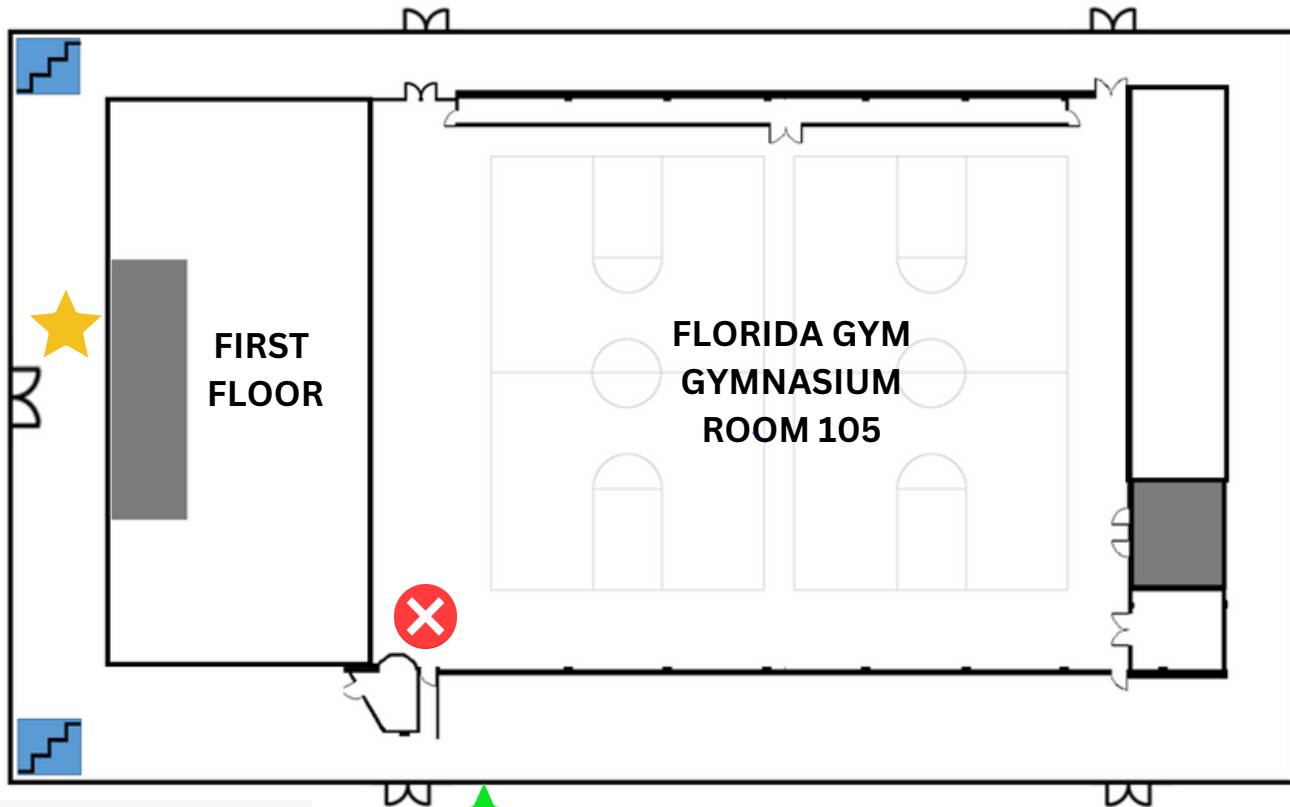
STADIUM ROAD

GALE LEMERAND DRIVE

**LEGEND:**

- Wertheim Lab:  
Friday Registration
- Reitz Union: Saturday  
Events and Registration
- Florida Gym: Friday Events  
and ChemE Car
-  Reitz Entrances
-  Wertheim Entrance
-  Florida Gym Entrances
-  Path to Florida Gym
-  Road Construction

TO REITZ UNION  
←

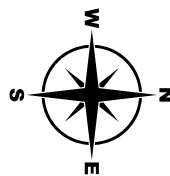


**Florida Gymnasium**







Welcome Event  
ChemE Car Safety Inspection  
& Poster Competition  
ChemE Car Performance  
Competition

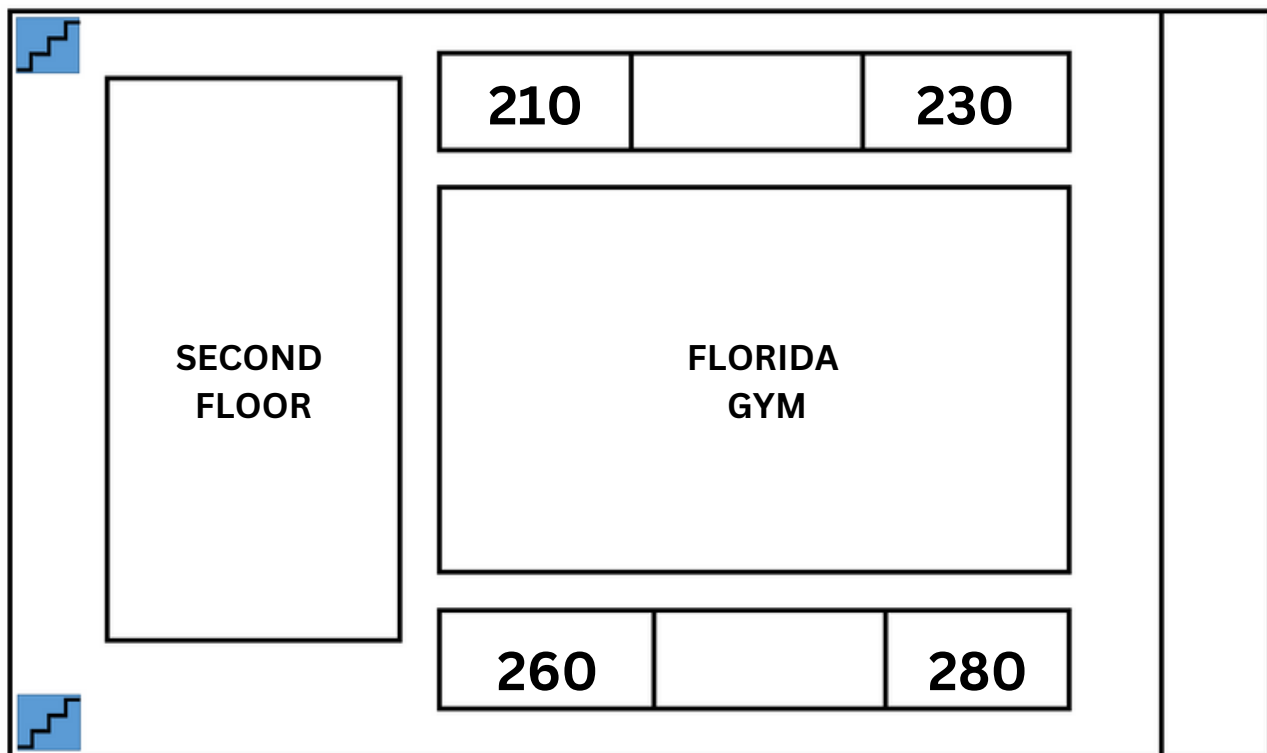
**Floor 2 Classrooms**

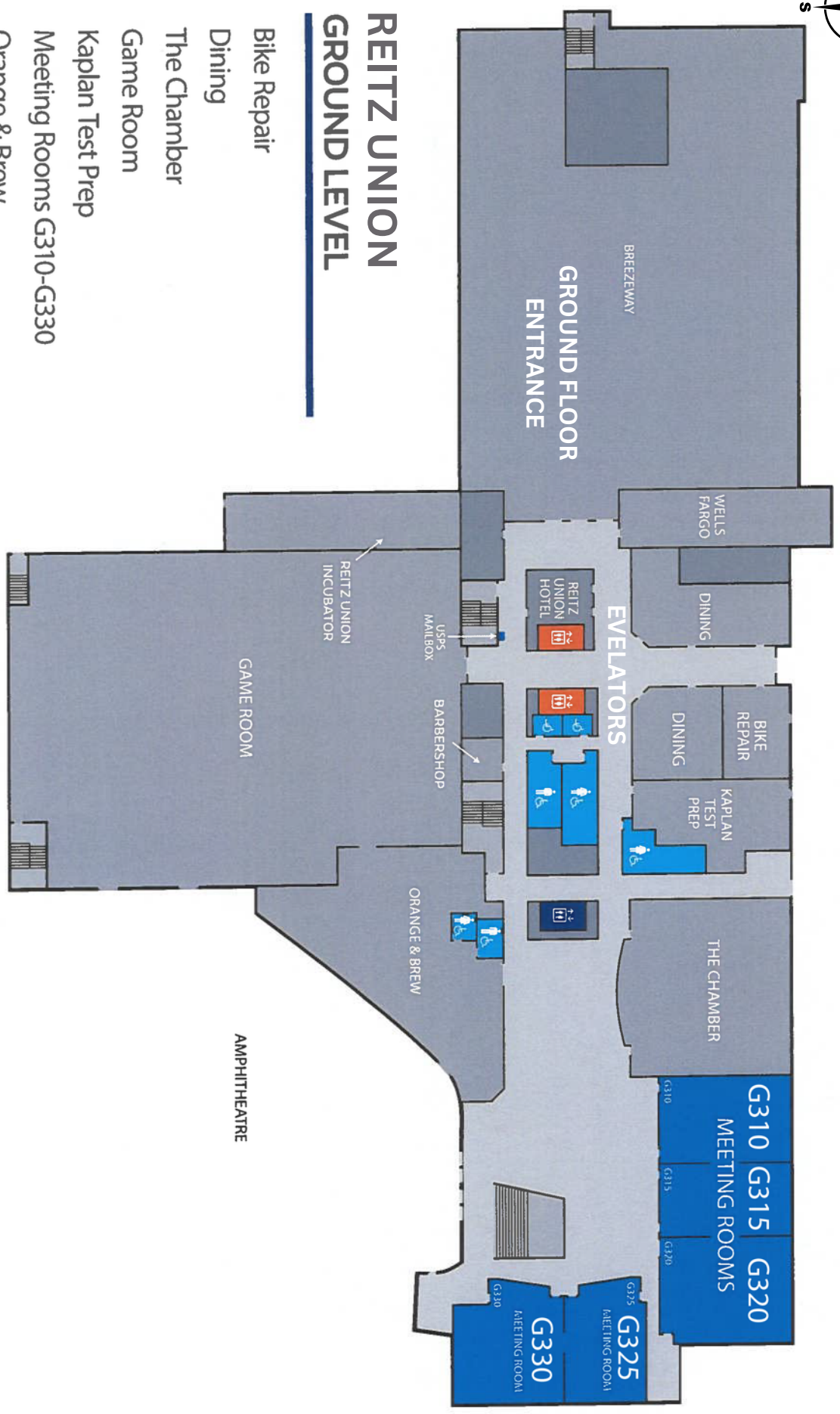
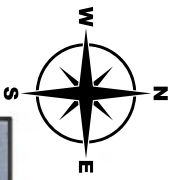
ChemE Jeopardy Preliminary  
and Semi-Finals



**LEGEND**

-  Exits
-  Stairs
-  Restrooms
-  Friday Entrance
-  Saturday Entrance
-  Main Gym Entrance



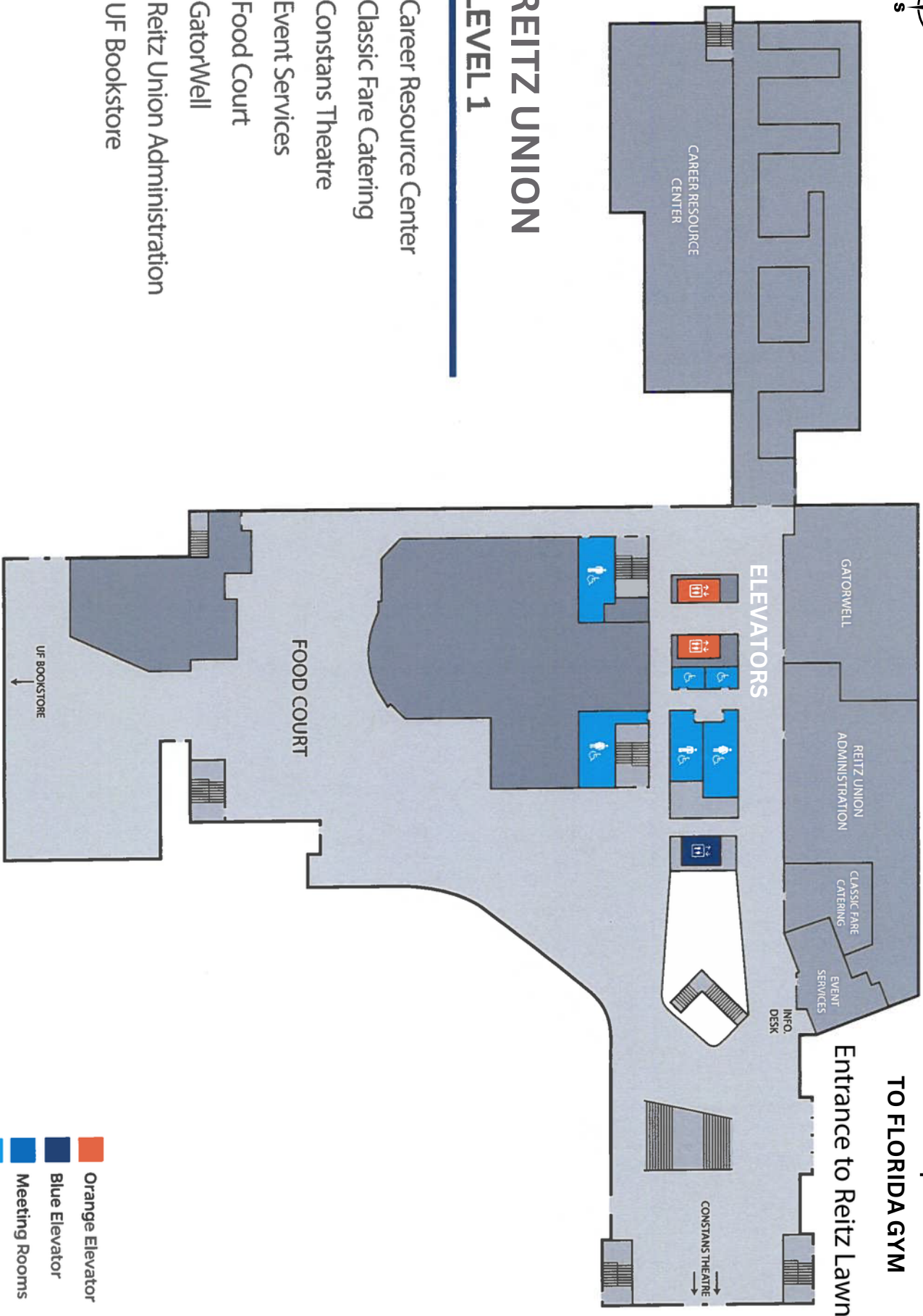
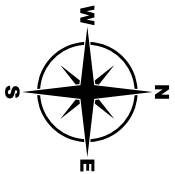


# REITZ UNION GROUND LEVEL

- Bike Repair
- Dining
- The Chamber
- Game Room
- Kaplan Test Prep
- Meeting Rooms G310-G330
- Orange & Brew
- Reitz Union Barbershop
- Reitz Union Hotel
- Reitz Union Incubator
- USPS Mailbox
- Wells Fargo

<span style="display: inline-block; width: 15px; height: 15px; background-color: orange; border: 1px solid black; margin-right: 5px;"></span> Orange Elevator
<span style="display: inline-block; width: 15px; height: 15px; background-color: blue; border: 1px solid black; margin-right: 5px;"></span> Blue Elevator
<span style="display: inline-block; width: 15px; height: 15px; background-color: lightblue; border: 1px solid black; margin-right: 5px;"></span> Meeting Rooms
<span style="display: inline-block; width: 15px; height: 15px; background-color: lightblue; border: 1px solid black; margin-right: 5px;"></span> Restrooms



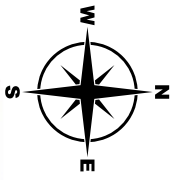


# REITZ UNION

## LEVEL 1

- Career Resource Center
- Classic Fare Catering
- Constans Theatre
- Event Services
- Food Court
- GatorWell
- Reitz Union Administration
- UF Bookstore

- Orange Elevator
- Blue Elevator
- Meeting Rooms
- Restrooms



**SATURDAY  
REGISTRATION**

**REITZ UNION  
LEVEL 2**

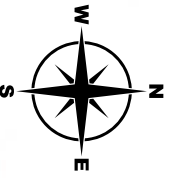
**Reitz Ballroom**  
Breakfast with UF President Address  
Lunch  
Awards Banquet with Billy B. Bardin

**Meeting Rooms**  
Technical Presentation Competition  
Poster Competition  
Recruitment Fair  
Escape Room

**Auditorium**  
Diversity and Inclusion Seminar  
President's Meeting & Hosting  
Conference Seminar/Bid

**Gallery**  
Registration

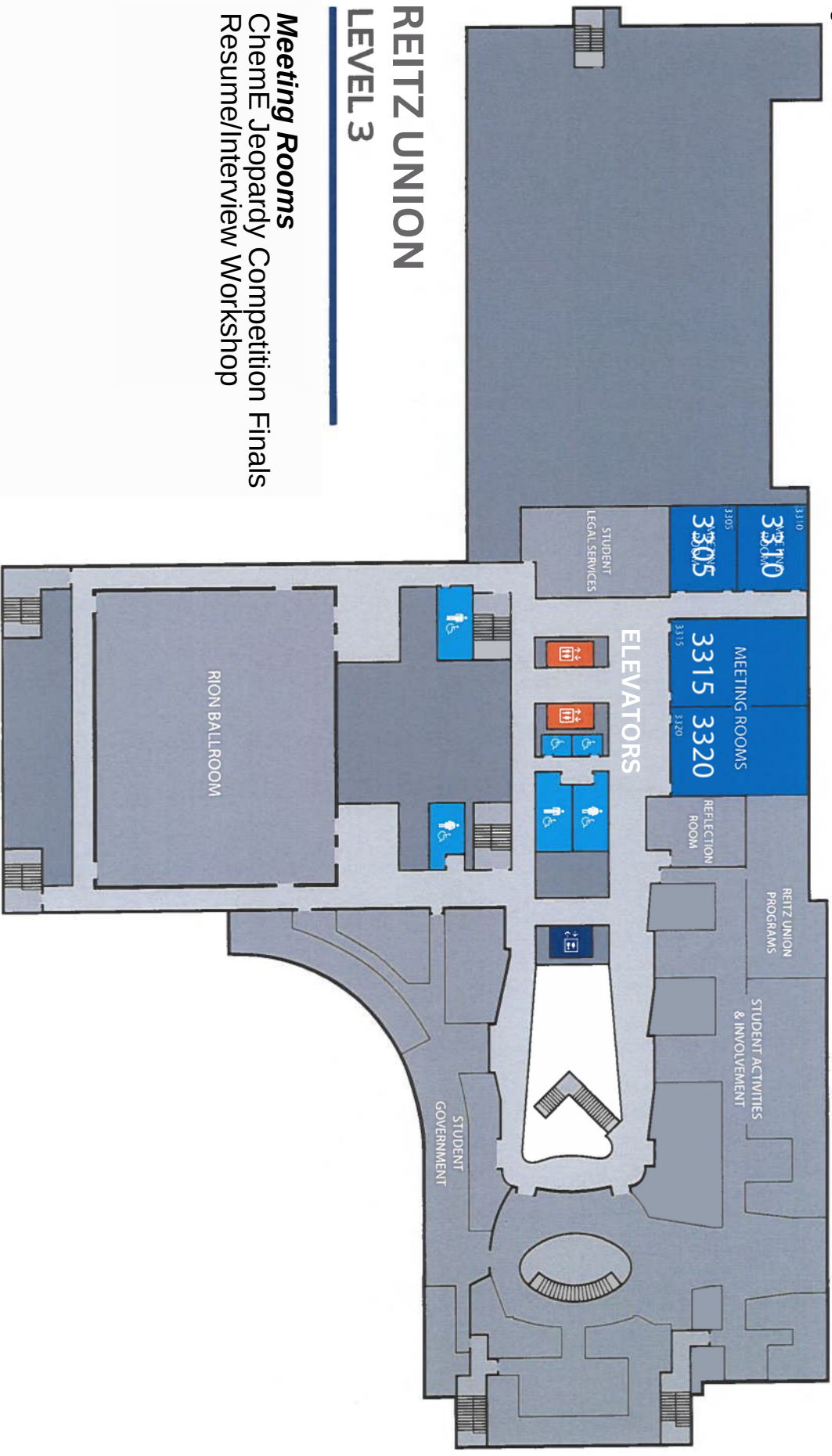
- Orange Elevator
- Blue Elevator
- Meeting Rooms
- Restrooms



# REITZ UNION

## LEVEL 3

**Meeting Rooms**  
ChemE Jeopardy Competition Finals  
Resume/Interview Workshop



- Orange Elevator
- Blue Elevator
- Meeting Rooms
- Restrooms

