

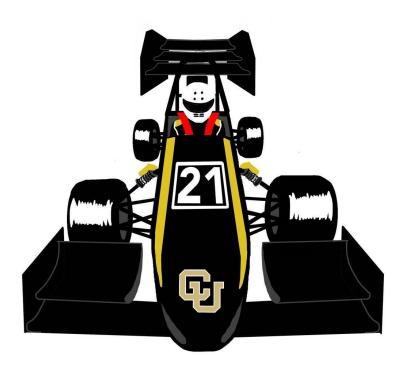
# Spring Introductory Meeting

January 25th, ECCR 200 @ 7:00pm Edwin, Hunter, and Josh



### Agenda

- About Our Team
- Endurance Racing Division
- Formula SAE Division
- Application
- Contact Information
- Questions



#### Video







#### Our Team

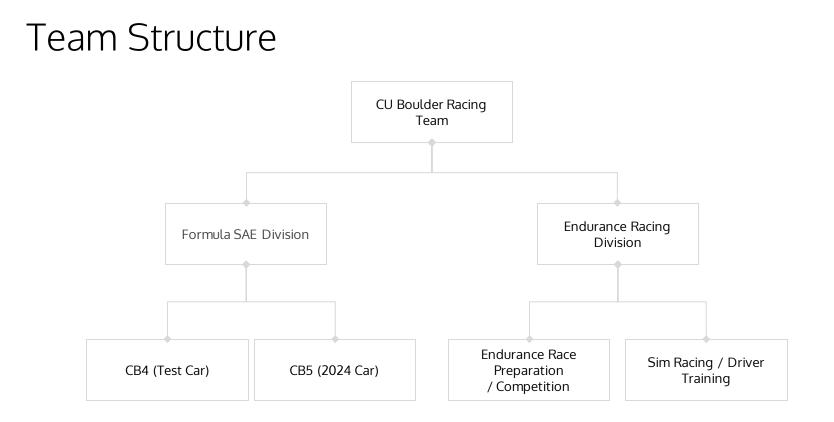
#### **Mission Statement**

Founded in 2016, the CU Boulder Racing Team is an organization focused on various automotive road racing competitions. We have two divisions. The Formula SAE division cites goals of building a race car to compete in an intercollegiate competition known as Formula SAE. The Endurance Championship division's goals revolve around building endurance race cars to compete in the ChampCar Endurance Series. As well as being one of the largest STEM organizations on campus, our club welcomes everyone, with or without prior racing experience. All we ask from our members is the willingness to learn and an enthusiasm for racing.



Virginia International Raceway, December 2023







### Our Team

- 250 members last year
- Freshman-PhD
- All colleges
- All skill levels



2023 Formula SAE Competition at Michigan International Speedway



# RACING TERMU

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# **Endurance Racing**

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#### About

- Endurance road racing
  - 8-24 hour long races
  - Travel Opportunities
- Race preparation
  - Building
  - Maintenance
  - Testing
- Compete in different series
  - ChampCar Endurance Series
  - Lucky Dog Racing League





#### Goals

- Compete in 3-5 races every year
- Provide hands-on mechanical and problem solving experience
- Provide opportunities to drive during testing and races
- Facilitate projects to improve the cars' performance
- Hold a high regard for safety on and off the track
- Have fun

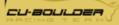




# Qualifying

- Done before every race to choose 4-6 drivers per car
- Scored mainly on driving rather than lap time
  - Shifting, Stability, Racing line, Ability to stay calm, Racing technique
- Held at IMI Motorsports Complex
  - Track map and tips sent out beforehand
- Sign-up sheet sent out in advance. Everyone gets a chance to drive
- Coaching, 5 practice laps, feedback, 5 fast laps





### Involvement Opportunities

#### Drivers

- o Open qualification process
- o 4-6 drivers per car at each race
- Mechanics
  - o All members, including drivers
  - Race preparation work meetings
- Leadership Positions
  - o Project managers
  - Race crew (logistics, strategy, etc)
- Engineering
  - Programming (telemetry, streaming, etc)





# Our Cars

- 2001 NB Mazda MX-5 Miata #719
  - 2.4L GM Ecotec Swap
  - Fancy buttons
  - Data logging
  - Aero
- 1999 NB Mazda MX-5 Miata #718
  - 1.8L Inline-4
  - Built to accommodate tall drivers
  - 6 speed transmission
  - Colorful trunk
  - Spec Miata without a hardtop



#### Daytona International Speedway, April 2022

#### High Plains Raceway, August 2023





#### Meetings & Time Commitment

- Workshop days on Sundays in Longmont
- Required to attend at least three work meetings to be eligible to attend and drive in team races
- Occasional general meetings (pre / post race, team updates, etc)





### Team Bonding Events

- F1, Indy, IMSA watch parties
- Track days
  - IMI, HPR, etc.
- Go Karting Events
  - Podium Karting
- Shop days
  - Work on your car with others
- Weekly Sim Challenges







### Spring Race Schedule

- March 16-17
  - NCM Motorsports Park (Kentucky)
  - ChampCar Endurance Series
- April 20-21
  - High Plains Raceway (Colorado)
  - ChampCar Endurance Series
- May 25-26
  - Watkins Glen International (New York)
  - ChampCar Endurance Series



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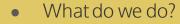


#### Formula SAE



#### Agenda





- How are we organized?
- What's it like to be involved?
- Why you should Join?
- What do we look for in our members?
- What should you expect?



#### CB4 at 2023 Formula SAE Competition

#### What is Formula SAE

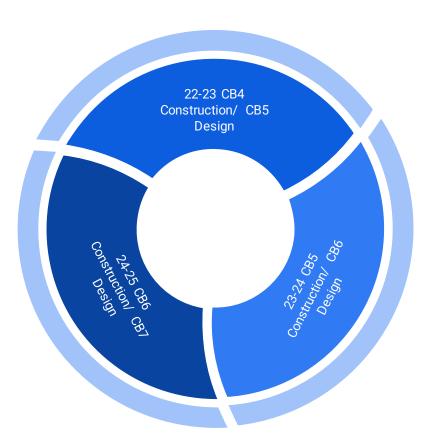
- Formula SAE is an intercollegiate engineering competition hosted by the Society of Automotive Engineers. Founded in 1981, it has become the most prestigious collegiate engineering design event in the country.
- Design and build a race car from the ground up
- Present design to a board of judges as a business venture
- FSAE involvement is highly sought after by employers in the aerospace and automotive industries





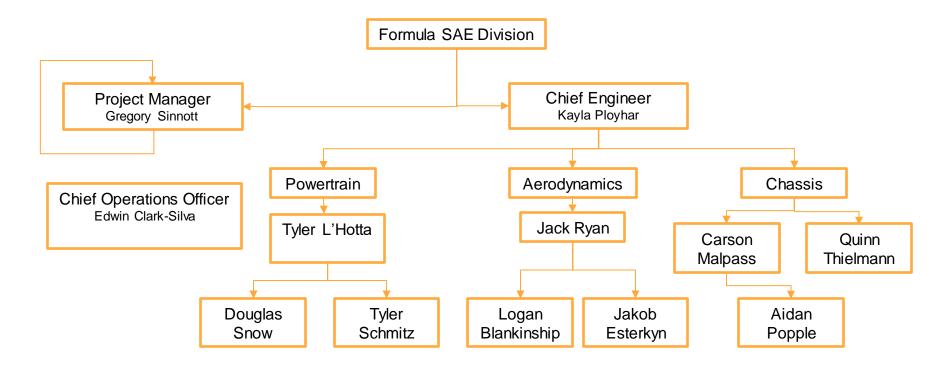
### CU Formula SAE Chapter

- Started in Fall of 2019
- The team operates on a 2 year cycle
- CB3 Completed in Spring 2022
- CB4 Completed in Spring 2023
- CB5 design began Summer 2023
- We offer training on essential skills necessary to be a valuable member of our team, machining, CAD etc.





#### How is FSAE Organized?



#### Involvement

- Car design
- Manufacturing
  - Machining
  - Welding
  - Fabrication
  - and more...
- Leadership opportunities
  - Systems engineers
  - Business team
  - Project Management





#### Member Benefits

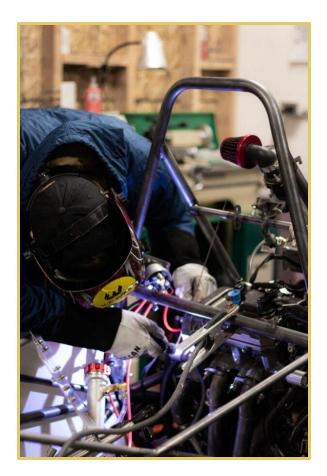
- Education
- Practical engineering/ business experience
- Recruitment opportunities
- Well-recognized by employers
- Build/Drive a freaking race car!





#### Member Benefits – Workshops

- Racecars 101
- Introduction to Vehicle Dynamics
- Component Design
- Engines 101
- Computational Fluid Dynamics (CFD)
- Finite Element Analysis (FEA)
- CAD 101 & 201
- Shop Training
- Design for Manufacturing (DFM)





#### Member Benefits – Industry Recruitment



Jet Propulsion Laboratory California Institute of Technology



TESLA









... and more!



#### What We Look For

- Multidisciplinary
  - All majors welcome
- Enthusiasm for racing
- Willingness to learn
- Consistent Involvement
- Previous experience is a plus
  - Not a must
- Freshman- PhD





#### Time Commitment & Meetings

- Weekly general meetings
- Weekly subsystem meetings (Aero, Chassis, Powertrain, Business)
- Weekly shop meetings
- 5+ hrs/ week







# **Application Process**

#### **Endurance Process**

- Visit buffsracing.com
- Click "Join Now"
- Apply by Jan. 28<sup>th</sup> @ 11:59PM
- Decisions are made on first-comefirst-serve basis and application information
  - Limited spots available





#### **FSAE** Process

- Visit buffsracing.com
- Click "Join Now"
- Applications close Jan.
  28<sup>th</sup> @ 11:59PM
- Interviews will be held from Jan. 29th-Feb 2nd ECNW 150N (In The Hub)
- Decisions will be made by Feb 4<sup>th</sup>
- Decisions are made based on current team needs



- Sign up for an interview slot next week from Jan. 29th-Feb 2nd
- You must apply before your interview (application available on our website)
- Interviews are only required if you want to join Formula SAE





#### Team Dues

- Team dues cover membership for the FSAE and Endurance divisions.
- Team dues are \$150 for the spring semester
  - Financial assistance is available upon request
- Included with your membership is a CUBRT Sticker







#### **Contact Information**

Email: <a href="mailto:buffsracing@colorado.edu">buffsracing@colorado.edu</a>

buffsracing.com

colorado.edu/studentgroups/racing-team









#### Membership payments

Scan in your banking app to pay HUNTER at xxx-xxx-7978.



(Please put 2024 CUBRT Membership Dues in the description of the payment)



# Questions?

