



ECE DESIGN SHOWCASE

Including our Intro to ECE Design, Senior Design 1 and Senior Design 2 Teams

LIVE STREAM

Awards
Announcements
4:30 pm CT

Join us on
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@ecemsstate



APRIL 28
2:30-4:00PM
SIMRALL HALL



To our Senior Design 2 students, we wish you much success in your future endeavors.

Chris Anderson, Caleb Bates, Matthew Beach, Josh Berry, Nathan Bond, Carter Boyd, Joshua Brandon, John Burns, Lindsey Byron, Robert Cain, Brandon Carlson, Jeff Carmical, Cooper Carter, Robert Clark, Meka Clark, Nicholas Collins, Dylan Couch, Chance Curry, Joseph Delgadillo, Shania Drummond, Jerrick Dubose, Mackenzie Ellenberger, Colton Faulkner, Carter Ferrell, Thomas Frye, Tyler Fulmer, Nathan Gardner, Christopher Gill, Dylan Gutierrez, Josh Hall, Collin Hand, Hunter Harris, Caleb Hendricks, Nicholas Hogue, Dillon Holley, Jared Honeycutt, Cody Hudson, Aryonna Johnson, Sam Johnston, Chris Jones, Kierra Magee, Cameron Massengill, Ryan Meadows, Carver Middleton, Noah Morrison, Liam Nelson, Grant O'Neal, Andrew Price, Hunter Redmond, Thomas Riley, Audrey Robertson, Tre Robinson, Alex Rogers, Collin Salley, Ashwin Senthil, Hannah Spyker, Christopher Trieu, April Turner, Haley Vannucci, Harris Washington, Clay Whitt, Dillon Woods, Jaqwan Works, Jonathan Wright

Special thanks to the project advisors for their insight and assistance.

Dr. Chanyeop Park

Dr. Jean Mohammadi-Aragh

Dr. Vuk Marojevic

Dr. Ryan Green

Dr. Mehmet Kurum

Dr. Ali Gurbuz

Dr. Chaomin Luo

Dr. Yaroslav Koshka

Mrs. Jane Moorhead

Meka Clark

JaQwan Works

Dr. John Ball

Dr. Bryan Jones

Dr. Seungdeog Choi

Dr. Umar Iqbal

Dr. David Wallace

Dr. James Fowler

Dr. Keith Hodge

Eric Touns

Hunter Harris

Jonathan Cheeks

and to course instructors

Dr. Jean Mohammadi-Aragh

Dr. Lalitha Dabburu

Ms. Alexis Nordin

Mr. Timothy Sellers

Dr. Samee Khan

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Project Listing:

AREA71

Lobby

Intro to ECE Design 2

Project Description: The Mage provides a pathway for weather forecasters to interrupt unmanned cable TV stations when severe weather threatens.

Team Members: Lea Mohammadi, Roland Robinson, Tyler Mahler, Zac Causey , Davenport Hill III

Project Mentor: Robert Clark

Guardian

Lobby

Senior Design II

Project Description: Guardian is an RFID tag reading safety system that cuts power to dangerous machinery when workers get too close.

Team Members: Jeff Carmical, Nicholas Collins, Nathan Gardner, Sam Johnston, Carter Boyd

Project Advisor: Dr. Ryan Green

CareVision

Lobby

Senior Design II

Project Description: CareVision is a remote-monitoring system that makes the process of preventing bedsores streamlined and effective.

Team Members: Alex Rogers, Christopher Trieu, Nathan Bond

Project Advisor: Dr. James Fowler

Spice Boys

1st floor Hallway

Senior Design I

Project Description: Automatic Spice Dispenser that dispenses spice recipes onto food.

Team Members: Noah Wright, Ethan Marsh, Ben Murphy, Chris Clements, Kolton Blann

Project Advisor: Dr. Umar Iqbal

Keg Kleaner (Automated Keg Washer)

1st floor Hallway

Senior Design II

Project Description: Compact fully automated keg washer.

Team Members: Aryonna Johnson, Joseph Delgadillo, Matt Beach, Harris Washington, Colton Faulkner

Project Advisor: Dr. Jean Mohammadi-Aragh

Ram N'GO

1st floor Hallway

Senior Design I

Project Description: Ramen vending machine with build in hot water dispenser to allow for cooking on location

Team Members: Dylan Myers, Charles Payne, Mohamed Obeid, Michael Smith and Alex Phillips

Project Advisor: Dr. David Wallace

PDOS

1st floor Hallway

Senior Design II

Project Description: A system that automatically switches between power sources in a home depending on the circumstances surrounding it

Team Members: Alex Cain, Liam Nelson, Noah Morrison, Thomas Frye, Chris Jones

Project Advisor: Dr. Yong Fu

Four by One

1st floor Hallway

Senior Design II

Project Description: We are an innovation to the game of four in a row. We strive to make the game more fun and interactive for old and new players by adding in new features that keep the game exciting and interesting.

Team Members: Joshua Brandon, Josh Berry, Collin Hand, Tyler Fulmer, Dylan Gutierrez

Project Advisor: Dr. Chaomin Luo

Sir Mix A Lot

1st floor Hallway

Intro to ECE Design 2

Project Description: Our project is a portable container that can pour drinks to certain specifications, which can be used in both social/recreational capacities as well as in a scientific and lab setting.

Team Members: Ryan Harper, Hayes Temple, Koby Lee, Lewis Czamanske

Project Mentor: Eric Toups

TBD Systems

1st floor Hallway

Intro to ECE Design 2

Project Description: We created a renter-friendly security system that utilizes vibration sensors and a door camera- while causing no structural changes to your home.

Team Members: Ty Usey, Bob Loflin, Eli Frazure, Chris Shelley

Project Mentor: Hunter Harris

Brew Alert

1st floor Hallway

Senior Design II

Project Description: A smart thermostat system designed for breweries

Team Members: Collin Salley, Hannah Spyker, Kenzie Ellenberger, Hunter Harris, Ashwin Senthil

Project Advisor: Dr. Jean Mohammadi-Aragh

KLTCB

1st floor Hallway

Intro to ECE Design 2

Project Description: A device that measures the content of water to determine if it is drinkable or not.

Team Members: Jonathan Evans, Connor Bailey, Travis Sanders, Keegan Lawrence, Logan Spears

Project Mentor: Robert Clark

Safety Bear

Room 104

Senior Design II

Project Description: Safety Bear is a safety alert device used to alert drivers to check their backseat for children, pets and their valuables.

Team Members: Meka Clark, Jared Honeycutt, Kierra Magee, Cameron Massengill, Haley Vannucci

Project Advisors: Dr. Yaroslav Koshka and Dr. Ali Gurbuz

ACE

Room 104

Intro to ECE Design 2

Project Description: Table tennis is a game designed to require at least two people to play. The problem is that one person cannot enjoy table tennis alone. We designed the Table Tennis Buddy to solve that problem. Using our product, the balls are automatically fed (shot) from one end of the table to the other. Thus, this product creates the possibility of one person (customer) playing and enjoying the game of table tennis.

Team Members: Chiedo Atuegwu, Grant Williams, Michael Tabb, Dalton Williams, Logan Riddle

Project Mentor: Eric Toups

Hydro Pump

Room 104

Senior Design II

Project Description: HVAC condensate pump with failsafe alarm and secondary pump.

Team Members: Brandon Carlson, Dylan Couch, Chris Gill, Hunter Redmond

Project Advisor: Dr. David Wallace

The Automatic Plant Hydration System

Room 129

Intro to ECE Design 2

Project Description: This product automatically waters your houseplants for you.

Team Members: Trace Sweeney, Lance Fielder, Austin Busby, Brady Bennett

Project Mentor: Hunter Harris

ToxiClear

Room 129

Intro to ECE Design 2

Project Description: Drinking Water Quality Tester - Insert probe into water and it will give feedback on whether that water is safe to drink or not.

Team Members: Avery Adams Frank Cardona Kaden Holloway Cody McDoniel Marlon Sims

Project Mentor: Robert Clark

Breaker Boys

Room 129

Intro to ECE Design 2

Project Description: A remote control circuit breaker

Team Members: Andrew Thompson, Hayes Haff, Cooper Medved, Evan Heller, Grayson Godbold

Project Mentor: Jonathan Cheeks

Wayfinder

Room 129

Intro to ECE Design 2

Project Description: The Wayfinder can give people a new sense, one that extends beyond the reaches of the traditional white cane. We plan to make the world accessible to those that are blind and near blind, allowing them to find their way through an unfamiliar world.

Team Members: Laine Pittman, Yinshan Hung, Jamal Kelly, Ian Avant, Ethan Carey

Project Mentor: Robert Clark

Simple Sanitation

Room 129

Intro to ECE Design 2

Project Description: The Waste Warrior is a trashcan with features designed to decrease the hassle of taking out the trash. It can open and close the trashcan's lid with a touch of a button. Also, it can alert the owner when it has reached max capacity with an LED light. The owner can push a button for the Waste Warrior to extract the trash bag making it easier to remove the bag.

Team Members: Tyler Baber, Isaac Olivares, KJ Butler, and Rayven McMillian

Project Mentor: JaQwan Works

Team TBD

Room 130

Intro to ECE Design 2

Project Description: Our product is a non-damaging way to mount a intrusion detection system to a door that is remotely activated by external forces acting on the door, such as kicking it.

Team Members: Ty Usey, Bob Loflin, Eli Frazure, Chris Shelly

Project Mentor: Hunter Harris

Thermo-Cats

Room 130

Intro to ECE Design 2

Project Description: A thermostat that has a hardware controller for cooling and ventilation.

Team Members: Tristan Welch, Gideon Andrews, Abigail Mitchell, Victor Gonzalez

Project Mentor: Meka Clark

VELO

Room 130

Senior Design II

Project Description: VELO has developed a wireless device that tracks barbell kinematic data in a weight room application. Our technology also incorporates with the Tsunami Bar, a flexible barbell, to capture the flexion, or bend, when conducting an exercise. All metrics are reported to a mobile application for graphical representation.

Team Members: Carver Middleton, Carter Ferrell, Chris Anderson, TJ Riley

Project Advisor: Dr. John Ball

Easy Dealer

Room 130

Senior Design I

Project Description: The Easy Dealer is a card-dealing device that shuffles the cards and plays three card games with the users.

Team Members: Richard Scott, Justin Xie, Jonathan Cheeks, JP Gathings, Hayden Groover

Project Advisor: Mrs. Jane Moorhead

Battery Checkers

Room 130

Intro to ECE Design 2

Project Description: Device that measures voltage of battery and outputs percentage remaining

Team Members: Jackson Lewis, Brad Vo, Joe Whitenton, Alex Box

Project Mentor: Meka Clark

Noah-lot

Room 131

Intro to ECE Design 2

Project Description: A credit card cleaning machine that uses UV light to disinfect the card

Team Members: Noah Gregory, Kyle Russell, Dalton Crawley, Noah Christensen, Noah Dimitriades

Project Mentor: Meka Clark

Water Me

Room 131

Intro to ECE Design 2

Project Description: Automatic Pet Water Bowl Filler

Team Members: Andrew Bonner, Brooke Molen, Avri O'Daniel, Toney Williams

Project Mentor: Meka Clark

Free Labor

Room 131

Intro to ECE Design 2

Project Description: Water Dispenser that tracks dispensed water against a daily goal

Team Members: Blaine Carroll, Jacob Clanton, Joseph Taylor, Kyler Smith

Project Mentor: JaQwan Works

Enginuity Bros

Room 131

Intro to ECE Design 2

Project Description: A device that will allow users to not lose focus when working at the computer

Team Members: Austin Polk, Maxwell Hayhurst, Jaxon Everett, Korey Green, Vaishnavi Muralidharan (Vi)

Project Mentor: JaQwan Works

Morning Math

Room 131

Intro to ECE Design 2

Project Description: An alarm clock that ensures you wake up by having you complete a short math quiz to turn off the alarm.

Team Members: Conner Davis, Bryce Harrison, Presley Witt, Austin O'Briant

Project Mentor: JaQwan Works

The Electric 5

Room 135

Intro to ECE Design 2

Project Description: Automatic Candle Extinguisher - counts down to a lid closing on a candle to put out the flame

Team Members: Taylor Maples, Gavin Shows, Britney Miranda, Aurora Triplett, James Rigney

Project Mentor: Jonathan Cheeks

Team #53

Room 135

Intro to ECE Design 2

Project Description: Structural failure detection device

Team Members: Lane Chatterton, Ryan Smith, Anai Fuentes, Tyce Neu, Tyler Cresap

Project Mentor: Meka Clark

Fan Supreme

Room 135

Senior Design II

Project Description: Fan Supreme is a mechanism built to attach to a fan that clean fan blades. It uses a retractable arm with a vacuum accompanied by a wiper that provides an accurate and efficient cleaning. It is controlled by a wireless remote that can reach up to ten meters, and it uses a filter that needs to be changed quarterly, reducing the cleaning burden on the user.

Team Members: Dillon Holley, Clay Whitt, JaQwan Works, Jonathan Wright

Project Advisor: Dr. Umar Iqbal

Keg Stand

Room 135

Senior Design II

Project Description: Our product is a scale that monitors the volume of liquid inside a keg and determines how much is poured at any given time

Team Members: Nick Hogue, Chance Curry, Rob Clark, Andrew Price

Project Advisor: Dr. Chanyeop Park

Robo Retriever

Room 135

Senior Design II

Project Description: A remote controlled vessel that navigates deep bodies of water and retrieves harvested ducks.

Team Members: Lindsey Byron, Grant O'Neal, Caleb Bates, Caleb Hendricks, April Turner

Project Advisor: Dr. Mehmet Kurum

FPS

Simrall Exterior

Senior Design I

Project Description: A bank pole fishing device that alerts the fisherman when a fish is actively hooked on the line.

Team Members: Daniel Spears , Madison Dyer, Tucker Bourland, Nathanael Addison, Joanna Leake

Project Advisor: Dr. Ryan Green

Auto Flagger

Simrall Exterior

Senior Design II

Project Description: An automated stop sign that directs traffic through a road construction zone

Team Members: Josh Hall, Audrey Robertson, John Burns, Cooper Carter, Treshon Robinson

Project Advisor: Dr. Vuk Marojevic

Joy Ride

Simrall Exterior

Senior Design II

Project Description: A rideable toy vehicle that allows all children, even those with disabilities, to cruise in comfort through the use of intuitive controls and various safety features

Team Members: Jerrick Dubose, Ryan Meadows, Shania Drummond, Cody Hudson, Dillon Woods

Project Advisor: Dr. Seungdeog Choi

I.C.U. Truckers

Simrall Exterior

Senior Design I

Project Description: Semitruck Blind Spot Monitoring System

Team Members: Klayton Greer, Lane Belk, Duncan Ziller, Logan Tharp, Braden Patridge

Project Advisor: Dr. Mehmet Kurum

Solar Paw-er

Simrall Exterior

Senior Design I

Project Description: Solar powered heated and cooled doghouse.

Team Members: Sarah Johnson; Gabby Trigg; Katie Nordeman; John David East; Will Watkins

Project Advisors: Dr. Bryan Jones and Dr. Keith Hodge

Collide-O-Scope

Simrall Exterior

Senior Design I

Project Description: Roadside collision sensor to alert DOTs when safety assets are hit.

Team Members: Ajaya Dahal, William Clark, Zachary Sahnger, Walker Thames, Joseph Westerfield

Project Advisor: Dr. Ryan Green

Team 26

2nd floor hallway

Intro to ECE Design 2

Project Description: Our project is making an automatic medicine dispenser that is activated during a certain time. After a certain time is reached the dispenser will activate a buzzer that acts as an alarm. The alarm is then turned off with a push of a button and the medicine will dispense.

Team Members: T.J. Barnes, Adesola Raji, Kaishu Thomas, Jon Michael Barnett, Nathan Phan

Project Mentor: Eric Toups

Rise N' Shine

2nd floor hallway

Intro to ECE Design 2

Project Description: The Rise N' Shine is an automated curtains and blinds opening system. After a certain amount of time, the curtains on the system will open up and the blinds will follow shortly after. The project is meant to function as a wake-up device that is an alternative to alarms.

Team Members: Cameron Haley, Brain Mclaurin, Isaac Alanis, Spencer Krebs, Joshua Duncan

Project Mentor: Hunter Harris

SmartCane

2nd floor hallway

Intro to ECE Design 2

Project Description: A white cane that can detect obstacles from chest to eye level.

Team Members: Garrett Bradshaw, Slade Hicks, Garrett Mclaurin, Brandon Waldrup

Project Mentor: Jonathan Cheeks

Sixth Sense

2nd floor hallway

Intro to ECE Design 2

Project Description: Our project is a motion sensor doorbell called Saved by the Bell: Lockdown. This doorbell detects when someone approaches the sensor and sounds off an alarm in the house to alert the residence.

Team Members: Dylan Johnson; Andric Knott; Hunter Reinkie; Jennefer Jones; Dane Smith

Project Mentor: Jonathan Cheeks

Smart Bottle

2nd floor hallway

Intro to ECE Design 2

Project Description: An appliance that will track how much water you have drank.

Team Members: Brendan Harrison, Slay Lucius, Micah George, Matthew Storey, Ronald Chamberlain

Project Mentor: Hunter Harris

Plant RESCuers

Room 208

Intro to ECE Design 2

Project Description: Autonomous Plant Watering System

Team Members: Rei Johnson, Erin Howell, Shayne Ford, Colby Stevens

Project Mentor: Eric Toups

Plugged In

Room 208

Intro to ECE Design 2

Project Description: A temperature sensor that reads temp and displays to an lcd. Can be used for a lot of different things but we used it as a device that can read temperature in the shower (because the sensor is water proof)

Team Members: Cooper Robinson, Tanner Lunn, Jigar Bhatt, Tyler Strobel, Jaden Hall

Project Mentor: Hunter Harris

Feed Me Flowerpot

Room 208

Intro to ECE Design 2

Project Description: This project demonstrates the capabilities of a self watering flowerpot

Team Members: Zavian Thomas, Brennan Sheckart, William Sanders, Grant Harper, Caleb Germany

Project Mentor: Jonathan Cheeks

Prestige World Wide Design

Room 208

Intro to ECE Design 2

Project Description: Our product is called the Auto Fountain. It conserves water by stopping water from being pumped whenever extreme conditions are met.

Team Members: Taylor Holley Blayne Brister James Juve Coby Burroughs

Project Mentor: Eric Toups

Guard Dawgs

Room 208

Intro to ECE Design 2

Project Description: Our project is a portable security system that is perfect for hotels and small homes.

Team Members: Trace Bowen, Lindsay Moore, Thach Nguyen, Elijah Moore

Project Mentor: JaQwan Works