



THE  
UNIVERSITY  
OF RHODE ISLAND

COLLEGE OF  
ENGINEERING

*e-Week*

**CAPSTONE DESIGN  
SHOWCASE**

**APRIL 19, 2024**

**BIOMEDICAL ENGINEERING**

12:30-1:30 Project Pitch in FCAE 045 | 1:30-3:00 Project Demos in FCAE 110

**3D Liver Tissue Models for Microplastic Toxicity Analysis | Research-inspired**

Marin Oehler, Cleo Hazen, Katie Messenger, Daniel Groysman

**Know H2O | Research-inspired**

Ellie Lambrakis, Seth Ohlemacher, Jackson Garside, Kaitlyn Tunney

**Mixed Reality Stroke Rehabilitation | Research-inspired**

Nie Iv, Madison Lauer, David Eyo, Donovan Kelley

**Mobility Improvement and Rehabilitation Console (MIRC) Balance Board | Research-inspired**

Cassidy Considine, Raphael Dias, Matthew Galipeau, and Isaac Gonzalez

**KinetoSense | Research-inspired**

Anna Cetera, Emma Lehman, Taylor Oden, Elizabeth Sheehy

**Mind Game | Research-inspired**

Morgan Pitkin, Emma Harlow, Ethan Salley, Victoria Pacella

**Wearable Tech for Mothers | Research-inspired**

Erin Murphy, Emma Giusti, Hanna Hoogasian, James Dee

**MedMaS: Medication Management Solution | Research-inspired**

Brian Dunbar, Victoria Smith, Alex DerBoghosian, Max Marcin

## CHEMICAL ENGINEERING

1:00-3:00 Project Presentations in FCAE 120

Ryan Barnosky, Emily Molino, Carter Wunch

Nathan Lamoureux, Tom Abendroth, Jake Libutti, Dan D'Augelli, Maria Choflet

Stefanie Vining, AnnaLi, Ana Karabots, Riley Flanagan, Lauren Lamothe, Alexandra Vasta

Camila Cersosimo, Cam Nichols, Matt Mellor, Megan O'Kelly

Jackson Zmich, Molood Saeed, Melissa Schneider, Lauren Hubert, Dana Allababidi, Kylie Hartley

Ailill Smith, Jacob Cultrera, Matt O'Donnell

## CIVIL ENGINEERING

1:00-3:00 Project Presentations in FCAE 120

### TNEG

Tim Dominici, Sam Blume, Cole McAssey, Nick Suriale, Luke Lockhart, Pat Sheldon, Demitri Forand, Brandon Wall

### Pinnacle Engineering

Ian Schermerhorn, Jared Neault, Nicholas Marchetti, Jared Hill, Zachary Kelling, Evan Lyne, Nicholas Piampiano, Tyler Levitz, Shane Mello, Adrian Skala, Greg Monti, Darby Williamson

### Rhody Consultin Inc.

Curtis Briggs, Marie Phelps, Feng Yu, Jared Booth, Kevin Schweighardt, Andrew McGrath, Ethan Lehnertz, Nathan Flor, Tyler Sanborn, Issaac Tabares, Jake Smith

### Coastline Consultants

Christine Ducharme, Ethan Major, Tristan Halsey, Andrew Wingert, Meghan Reilly, Sam Mutch-Wilson, Nick D'Amato, James McHale, Brynne Wright, Lauren Jordan, Liz Niedermeyer, Amanda Lovett, and Alexandra Russo

### Ground Up

Laura Heffernan, Jess Kozma, Kate Lecuyer, Aidan Clarey, Osury Aponte, Michaela Rietzel, Will Curran, Kyle Padula, Katie Henry, Katie Hampston, Zach Tyler, Laure Colón

## ELECTRICAL AND COMPUTER (ELECOMP) ENGINEERING

1:00-3:00 Project Presentations and Demos in FCAE 150

### **Robotoy | Research-inspired**

Kyle DaSilva, Noah Doak, Chris Glebus, Luis Medrano

### **Aerocyonics: SAInt Dashboard | Industry-inspired**

Kyle Nadeau; Mario Corado

### **XMOS Vocal Motion | Industry-inspired**

Mason Jacob, Derek Raffetto, David Quevedo,

### **Standalone Cable Checker | Industry-inspired**

David Botelho, Anthony Cepeda, Nicholas Petrozzi

### **Voltserver: Automated Cable Transitioning System | Industry-inspired**

Daniel Bradley, Andrew Brown, Brian Piwonski, Wesley Hardskey

### **RDSI: Critical Data Relay | Industry-inspired**

Juan Cante and Erik Slader

### **On-Premises Large Language Models (LLMs) | Industry-inspired**

Demetrios Petrou and Sokpearoun Lorn

### **Low Frequency Radio Frequency (RF) Signals over Fiber Optics | Industry-inspired**

Amanda Iadevaia, Zackery Hansen

### **Project Echo Mike 1 - Post-Release Tracking Device for Small Mammalian Species | Industry-inspired**

Alexi Andresky, Grace Firth

### **Digital Companion for Obesity | Industry-inspired**

Afolabi Abayomi, Dayla Olivo, Yashaswini Mandalam, Connor Vincent, Justin Watkins

### **Joule Tome Battery Blaster | Industry-inspired**

Alex Amado, Ryan Fish, Matt St. Jean, Steve Kowalewski, Matt Tabatneck

### **Production Tracker | Industry-inspired**

Cristopher Quenes; Kaidan Campbell

### **Zebra Technologies - Blitz | Industry-inspired**

Casimir Ryan, Fatima Lynch-Smith, Alexis Estrada

### **VS-OMNI | Industry-inspired**

Beckett Maestas, Jayron Gonzalez

### **Project Emilia-Wireless Enablement of Green Power Technologies for Edge Devices | Industry-inspired**

Joseph Daiaa, Alan Piwonski, Nick Fedorenko, Lucas Frost, Eddie Perez, Allen Liu, and Andrew Ou

## INDUSTRIAL AND SYSTEMS ENGINEERING

1:00-3:00 Project Presentations and Demos in FCAE 169, 180, and 180A

### **Localization of RFID Tags Using Multiple Antennas | Research-inspired**

Malinda Fry, Dan Warner

### **LabFab Industry 4.0 | Research-inspired**

Caitlin Ludford & Ivy Ozuna

### **Designing a Managerial Dashboard for Assembly Line Scheduling and Monitoring | Industry-inspired**

Shane Hart, Drew Hofer, and Sara Nunes

### **Smart Workplace for Assembly and Disassembly | Research-inspired**

Joshua Bell, Gianna Wadowski, Jian Bin Wu

### **Circuit Manufacturing Process Improvement | Industry-inspired**

Tola Sam, MJ Aurora, and Tristan Owen

### **Automated CNC Milling Process | Industry-inspired**

Ben Poirier, James Zovich, Brendaly Leon Silverio

### **A Swarm Robotics System for Autonomous Multi-robot Region Mapping | Research-inspired**

Nick Perrotti and Hannah Heath

## MECHANICAL ENGINEERING

12:00-3:00 Project Presentations and Demos in FCAE 010C, 025C, 155

**Ram Stuffer Redesign | Industry-inspired (FCAE 010C/025C)**

**Universal Data Collection Equipment Mount for Underwater Testing (FCAE 010C/025C)**

**Universal Biaxial Tension Testing Apparatus | Industry-inspired (FCAE 010C/025C)**

**Stylus Cleaner Apparatus | Industry-inspired (FCAE 010C/025C)**

Emily Quitzau, Sean Burt, Hugh Elliott, Alexandra Falco, Jack Kuprevich

**Radiation Detection Drone | Industry-inspired (FCAE 010C/025C)**

**Vortex Excited Strumming Vibration of Hydrophone Arrays | Research-inspired (FCAE 010C/025C)**

Jackson Eisen, Seth Cordeiro, Eli Alves, Chris Guerriero

**Blind Mating of non-Blind-Mate Connectors | Industry-inspired (FCAE 010C/025C)**

**Height and Parallel Measurement Automation | Industry-inspired (FCAE 010C/025C)**

**Shipping Sleeves Thermoform Packaging Innovation | Industry-inspired (FCAE 010C/025C)**

**Lunar Nuclear Power Plant | Industry-inspired (FCAE 010C/025C)**

**Catenary effects on mechanical properties of thermoplastic composites | Industry-inspired (FCAE 010C/025C)**

Sean Primiano, Austin Pickup, Brinik Erickson, Miles Williams

**Nuclear fuel element characterization | Industry-inspired (FCAE 155)**

**Toray Cart and Winch System | Industry-inspired (FCAE 155)**

Sagar Saran, Jose Pagan, Bryan Varela, Abraham Andres

**Universal Payload Gripper | Industry-inspired (FCAE 155)**

**Methodology for the Development of Small Payloads from a Host Underwater Vehicle | Industry-inspired (FCAE 155)**

Nicholas Berthiaume, Matthew DiSpirito, Joao De Barros, Mitchell Farah

**Ambient Temperature Phase Change Launcher | Industry-inspired (FCAE 155)**

**Propane Fast Heating Test Design (continuation) | Industry-inspired (FCAE 155)**

**Slow Heating Test Oven Design | Industry-inspired (FCAE 155)**

**Soap Vending Machine - Redesign and Build - Reduce single-use plastic | Research-inspired (FCAE 155)**

**Electromechanical Automation for ATP Seal Test Device | Industry-inspired (FCAE 155)**

Connor Montague, Robert Hauser, Berenika Wos, Connor Barton, Bryan Decelles

**Acoustic Sensor Test Alignment | Industry-inspired (FCAE 155)**

Matt Carvalho, Jacob Milman, Vanessa Lemoine, Mike Wojnilo

**Gas turbine integration with fuel tube | Industry-inspired (FCAE 155)**

**Gas turbine tube driver and control system | Industry-inspired (FCAE 155)**





## OCEAN ENGINEERING

1:00-3:00 Project Presentations and Demos in Toray Commons

### **Underwater Robotic Docking Arm | Research-inspired**

Kaitlin Kalajian, Brian Leong, Sarah Mayer, Tyler Simonenko, Sam Stebbins, Davin Zehme, Oddy Krey

### **Application of STORMTOOLS Coastal Environmental Risk Index (CERI) to Infrastructure and Extension to Wind Damage | Research-inspired**

Chase Rynkowski, Connor Young, Jelani Pool, Frederik Hoffmann, Jack Templeton, Max Hirsh, Daisy Delgado, Emily Linardakis, Sam Pineda, Justin Panadero

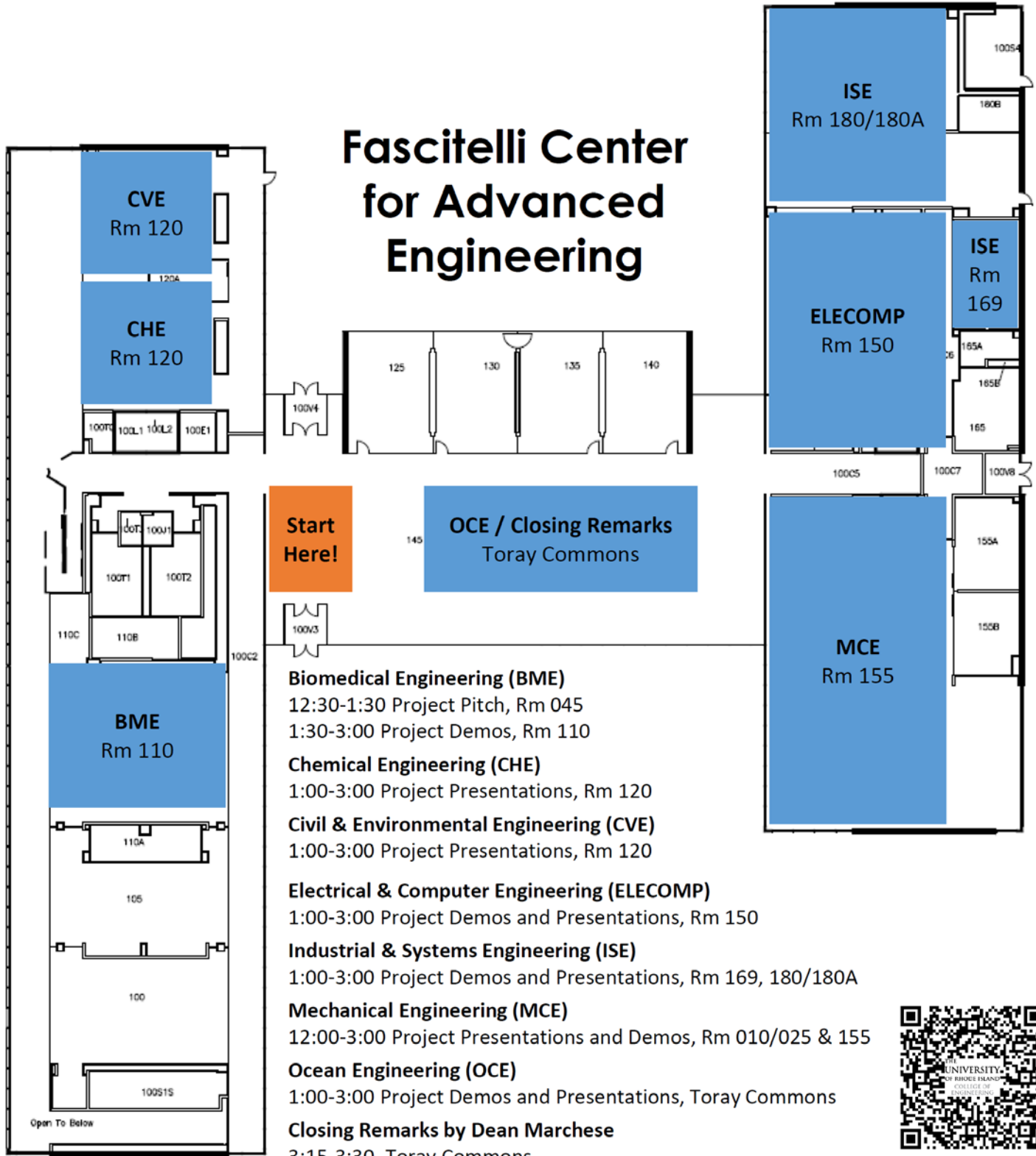
### **SONARMAATE | Industry-inspired**

Anthony Purcell, Alex Doyne-Ditmas, Lindsey Moss, Cam Mccarthy, Andrew Ferguson, Sydney Johnstone, Adriana Williams

### **Conceptualizing a Floating Offshore Wind Farm in the Gulf of Mexico; Challenges and Opportunities | Research-inspired**

Dante Caouette, Isaac Scarborough, Jack Morrissey, Jessie Arruda, Joseph DiSalvo, Kaitlyn Fucillo, Kali Vanderlaan, Lucy Damon, Matt Tetreault

# Fascitelli Center for Advanced Engineering



Access project descriptions here!

## INTERESTED IN SPONSORING A PROJECT?

Electrical and Computer Engineering  
Prof. Harish Sunak  
[harishsunak@uri.edu](mailto:harishsunak@uri.edu)

Mechanical Engineering  
Prof. Bahram Nassersharif  
[bn@uri.edu](mailto:bn@uri.edu)

all other engineering programs  
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