

WHAT IS THE CETA DESIGN EXPO?

The CETA Design Expo is a biannual event where student visionaries showcase their innovative projects. First-year students present after their first semester in the fall, sophomores present at the end of their second year in the spring, and seniors present their Capstone design projects in the spring or fall.

DESIGN EVALUATION CRITERIA

Performance - Successful task completion.

Creativity - How creative is the final product?

Level of Difficulty - How complex is the product?

Presentation

- **Poster** - Is the project goal clearly illustrated?
- **Oral** - Are students well-rehearsed/prepared?

Experimental Verification -

Was the product performance evaluated according to a set of criteria?

THANK YOU FOR ATTENDING!

UNIVERSITY OF HARTFORD

COLLEGE OF ENGINEERING,
TECHNOLOGY, AND ARCHITECTURE



CETA
DESIGN
EXPO

FRIDAY, APRIL 29, 2022

9 - 11 a.m.

**Sophomores: Final Projects
Project Showcase**

12:30 - 4 p.m.

**Seniors: Capstone Designs
Capstone Poster Session**

**CHASE ARENA,
REICH FAMILY PAVILION**

Thank you for joining us to see this year's most creative, hardworking, and accomplished students in the College of Engineering, Technology, and Architecture.

hartford.edu/cetadesignexpo



COURSE INSTRUCTORS

ES 143P

- Philip Faraci, MEng
- Enrico Obst, MEng

ES 242P

- Takafumi Asaki, PhD
- Ulrich Decher, PhD
- Philip Faraci, MEng
- Enrico Obst, MEng

BE 461P

- Mary Arico, PhD

CE 465

- Todd Brown, P.E.
- Clara Fang, PhD
- Ted Sussmann, PhD

ME 473

- Jeanne Goulart, MEng
- Allan Penda, MS
- Ron Prihar, MEng
- Paul Slaboch, PhD
- Akin Tatoglu, PhD
- Cy Yavuzturk, PhD

ECT 481P/AUD 481P / 483W

- Bruce Plumley, BS
- David Shuman, BM
- Ying Yu, PhD

ADT 489

- James Fuller, MEd

ES 143P PROJECTS

- **Water Overflow Prevention (E1)**
 - Mohammed Alabd Alsalam
 - Mohammed Alajmi
 - David Chea
 - Ali Hendar
 - Zachary Pozzi
- **Laser Shooting Game (E2)**
 - Nader Alazemi
 - Sulaiman Alhashan
 - Hamad Ali
- **The Voice Vision (E3)**
 - Abdulwahab Alazemi
 - Mohammad Alazemi
 - Omar Aldaas
 - Fayez Fahhad
- **Traffic Light (E4)**
 - Abdulmohsen Alali
 - Abdullah Alazemi
 - Fahad Alenezi
 - Salem Almaree
- **Object Avoidance (E5)**
 - Abdullah Alajmi
 - Ahmed Alamer
 - Khalid Alrukaibi
- **Electric Door Opener (E6)**
 - Rashed Alazemi
 - Saud Alazemi
 - Emmanuel Kurinaah
- **Robot Prime in Soccer (E7)**
 - Turki Alhajeri
 - Yousef Alhees
 - Yousef Qabazard
- **Soccer Goal (E8)**
 - Mohammed Almutairi
 - Abdullatif Alotaibi
 - Fawaz Alsuhail
 - Ahmad Aldweelah
- **Multi-Robot Obstacle Course (E9)**
 - Mohammad Alazemi
 - Omar Alenezi
 - Yousef Alhuraiti
 - Jenna Castro

ES 242P PROJECTS

- **Sensor Cane (SO1)**
 - Abigail Abram
 - Abdullah Alshatti
 - John Marrero Roman
 - Keenarah George
 - Fawaz Alkhalefa
- **Vision Cap (SO2)**
 - Henna Carr
 - Joseph Cristello
 - Demoi Wright
 - Brayden Smith
- **Daily Doses (SO3)**
 - Thomas Matta
 - Clarence Jubac
 - Olivia Rund
 - Lucas Slomski
- **Security Bar (SO4)**
 - Ali Alayer
 - Ed Delphonse
 - Christina Petrini
 - Brandon Cook
 - Merna Gouda
- **Compact Composter (SO5)**
 - Ali Boushehry
 - Kayla McDonald
 - Christos Stergiotis
- **Doggy Pass (SO6)**
 - Miles Calderone
 - William Denno
 - James Feltault
- **Catalytic Converter Anti-Theft Device (SO7)**
 - Todd Gaulin
 - Jonathan Hill
 - Luis Garcia
- **Oil Spill R.O.V. (SO8)**
 - Jolie Trinh
 - Brendan Lafleur
 - Adam Gionfriddo
 - Ashley White
- **Automatic Mask Dispenser (SO9)**
 - Peter-John Reid
 - Aaron Rizzo
 - Alvin Ye

ES 242P PROJECTS CONTINUED

- **Automatic Library Shelving Unit (SO10)**
 - Jefferson Cajuste
 - Dylan Reyes
 - David David
- **Thermal Jacket (SO11)**
 - Abdullah Boushehry
 - Ian Corn
 - Caroline Hollingsworth
- **Car Side Mirror with Sensors (SO12)**
 - Mariam Alotaibi
 - Carl-Michael Ellis
 - Christian Francois
- **Secure Package Box (SO13)**
 - Nezar Almunajem
 - Makenzi Parker
 - Jcob Raimondi
- **Infrared and GPS Sensor Setup for Earthquake Rescue Drones (SO14)**
 - Abdulrahman Alazmi
 - Fahad Aljufain
 - William Krzanowski
- **Smart Stick for Vision-Impaired (SO15)**
 - Ghezlan Alazemi
 - Dana Alhabib
 - Mejbel Almtoutah
 - Rouniel Perez-Salazar
- **See-4-Me (SO16)**
 - Dillon Camarillo
 - Likit Kannan
 - Monica Padykula
- **Water for All (SO17)**
 - Nathan Becher
 - Joe Castaldo
 - Paige DiCiccio
- **Recyclable Crusher (SO18)**
 - Anndrew Krebsbach
 - Peter Ogrinc
 - Justin Pezsolesi

ES 242P PROJECTS CONTINUED

- **Baby-Approved Concrete (SO19)**
 - Ryan Breighner
 - Nicholas Damon
 - Leif Farber-Krug
- **Self-Cleaning Cash Register (SO20)**
 - Jason Hicks
 - Joshua Menzies
 - Jay Scacca
- **My Owner Isn't Home (SO21)**
 - Nasser Alhajri
 - Bader Almutairi
 - Omar Alqahtani
- **PAT (SO22)**
 - Jacob Brecciaroli
 - Brett Kappel
 - Feiyan Orourke
 - Ahmed Alfeeli
- **Peter the Pet Feeder (SO23)**
 - Daniel Jimenez Gil
 - Evan Bouchard
 - Zahrah Alqallaf
- **Pumpkin Protector (SO24)**
 - Christian Chokshi
 - Zainab Al-Mahdi
 - Khaled Hussien
 - Hussain Alquallaf
- **SAFER SIGNS CO. (SO25)**
 - Alex Thornberg
 - Michael Doyle
 - Maggie Piotrowski
 - Thomas Lepage
- **UNI-TE (SO26)**
 - Thomas Conway
 - Michaela McNutt
 - Dylan Zapata
 - Noman Alshammari

BE 461P PROJECTS

- **Device for Testing Partial Trunk Control in Human Adults (S1)**
 - Rachel Necky
 - Dylan Mulligan
- **Breast Cancer Detection Device (S2)**
 - Izabella Lachcik
 - Chris Duarte
- **Medtronic (S3)**
 - Jason Addi
 - Spencer Notick
 - Lauren Winters
- **Team OPM (S4)**
 - Jordan Smith
 - Natalia Mularzuk
 - Calvin Anthony
- **Multiaxial Hand-Arm Force Measurement Handle (S5)**
 - Joseph Stevenson
 - Raylene Borges
- **Smart Hard Hat for Workers v2.2 (S6)**
 - Citlalli Rangel
 - Joshua Winkelbauer

ECT 481P PROJECTS

- **Retrieval Robot using Sound Navigation (S25)**
 - Casey Hill
 - Evan Gargiulo
 - Joseph Magnowski
- **Electric Boat, EB.KnotSoFast (S30)**
 - Brandon Glemboski
 - Alejandro Medina
 - Alex Velazquez
- **Automated Trash Collecting Robot (ATCR) (S37)**
 - Patrick Paduano
 - Damola Sonubi
 - Jason Mclean
 - Joseph Cacciare
- **Integrally Bladed Rotor Positioning System (S31)**
 - Michael Burke
 - Tyler Stuba

CE 465 PROJECTS

- **Architectural and Structural Design of Academic Building (S7)**
 - Jonah Berrien
 - Kayla Krijgsman
 - Hunter Rock
 - Shayni Shukla
- **Safety and Traffic Flow Improvements for RT 187 and Park Road Intersection (S8)**
 - Bushra Alotaibi
 - Serina Gelinis
 - Salem Almutairi
 - Mobarak Almutairi
- **Department of Public Works Site Evaluation and Design (S9)**
 - Mohammad Alsaleh
 - Anthony Guzman
 - Hussain Jamal
 - Jay Restrepo
- **Denitrification Upgrade of Water Treatment Plant in Spencer, MA (S10)**
 - Abdullah Alebraheem
 - Simon Brooks
 - Barrington Brown
 - Kashief Duhaney
 - Sydney Lewis
 - Alison Miner
- **South Street Roadway and Pedestrian Improvements (S11)**
 - Patrick Collins
 - Joseph Karn
 - Shana Robbins

ME 473 PROJECTS

- **Variable Vane Bushing Tester (S12)**
 - David Spencer
 - Edward Lund
 - Michael Wint
- **O-Ring Capability Deterioration at Elevated Temperatures (S13)**
 - Kyle Cunningham
 - Todd Gaulin
- **Material Strain Characterization During Fan Blade-out (S14)**
 - Jason A. Prakash
 - Vivekananthan Govindaraj

ME 473 PROJECTS CONTINUED

- **3D Point Clouds: Robust Control System for Cloud Generation (S15)**
 - Sky ChunYin Cheng
 - Brianna Cervello
 - Antonio Corrado
- **3D Point Clouds: Smart Surface and Object Segmentation (S16)**
 - Bernie Balko
 - James Bonner
- **Nanofluids (S17)**
 - Brazden Ellis
 - Nicholas Comeau
 - Pratek Krishna
- **Hartford Steam Boiler / Design for HVAC System Failure Detection (S18)**
 - Girivasan Neelakandon
 - Angie Perez
- **Generation of Valve Flow Curve on Water Test Stand (S19)**
 - Bhuvanesh Ravikaruna Moorthy
 - Kavinsandron Muthu
 - Indra Pramath Vaithesh Thangavel Sriram
- **Morphing Wind Turbine (S20)**
 - Kenneth Ong
 - Raul Illescas
 - Pierce Mulholland
 - Evan Appell
 - Sri Kirushna and Samsundar
- **Aircraft Wheel Build Unit Design Study (S21)**
 - Keanu Alcoces
 - Raffaele Di Vita
- **Automatic Diamond Powder Dispenser (S22)**
 - Joseph Accetura
 - John Bugay
 - Kyle Krohomer
- **Method for Automated Rivet Insertion (S23)**
 - Jason Marshall
 - Richard Miller
 - Grace Sierra

AUD 481P PROJECTS

- **Portable Assistant Microphone (PAM) (S26)**
 - Mara Winer
 - Francesco Lupoi
- **Audio Interface (S27)**
 - Max Van Allen
 - Silas Holmes
 - Brian Scheidel

ECE 483W PROJECTS

- **Smart Forklift (S28)**
 - Kaya Pina
 - David Cipriano
 - Juliana Fernandez
- **The Digiphone (Digital Saxophone) (S29)**
 - Simon O'Neil
 - Adam Wilson
 - Erica Petersen
 - Chris Devinney
- **Fall Detection Device (S32)**
 - Naser Alkandari
 - Mohammed Alkahldi
- **Smart Irrigation system using IOT (S33)**
 - Abdulaziz Altoom
 - Yousef Al-Boushehri
- **Wearable Echolocator (S34)**
 - Maisha Maliha
 - Vanessa Martin
 - Rene Liz
 - Aidan Cunnane
- **Solar Power Tracking System (S35)**
 - Michael Sciancalepore
 - Ted Carey
 - Esteban Bravo
 - Collin Mulcunry
- **Mini-HARQ (S36)**
 - Davi Wu
 - Danielle Ridley
 - Hego Marquez-Medonza
 - Ariel Brown

ADT 489 PROJECTS

- **Climate Change NET Zero Museum, Torrington, CT (S38)**
 - Edward Cappellina
- **Master Plan - Village Center, Washington, CT (S39)**
 - Nicholas Fleming
- **Civic Center, West Haven, CT (S40)**
 - Devine Karas-Gonzalez
- **Hotel and Resort, Block Island, RI (S41)**
 - Nicholas Lee
- **Theater/Concert Hall Renovations and Addition, Queens Village, NY (S42)**
 - Antonio Medel
- **"Make it Right" Home, New Orleans, LA (S43)**
 - Mariana Oliveira
- **Improving Mae La Refuge Camp, Mae La, Thailand (S44)**
 - Noble Oo
- **World War II Museum, Hartford, CT (S45)**
 - Treyquan Parks
- **LEED Home, Old Lyme, CT (S46)**
 - Alyssa Rankin
- **Renovations and Additions to Waterbury Train Station, Waterbury, CT (S47)**
 - Jacob Riddle
- **Mixed-Use (Residential and Retail) Facility, West Hartford, CT (S48)**
 - Noah Rios-Hoffman
- **Domestic Violence Housing and Support Facilities, Semora, NC (S49)**
 - Alexia Salafia
- **Expansion of JFK International Airport, Queens, NY (S50)**
 - Ernest Szlanta
- **Master Plan, Gary, IN (S51)**
 - David Tran
- **Brooklyn Police State and Parole Offices, Brooklyn, CT (S52)**
 - Griffin Ware
- **Passive Multi-Use Development, Montclair, NJ (S53)**
 - Mary White
- **Orphanage, Addis Ababa, Ethiopia (S54)**
 - Hana Yizengaw