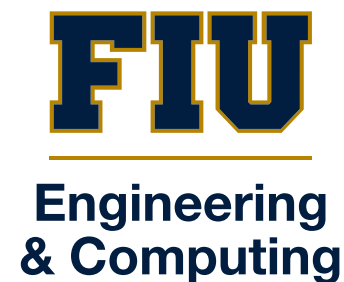


SENIOR DESIGN PROJECT SHOWCASE

THURSDAY, APRIL 18, 2019
1:30—4:30 p.m.

Ocean Bank Convocation Center
Modesto A. Maidique Campus
1180 SW 113th Avenue
Miami, FL 33199



Semi-Annual Senior Design Project Showcase College of Engineering & Computing at Florida International University

Congratulations to our graduating seniors for making it all the way to the Senior Design Showcase! This event symbolizes the culmination of a yearlong process in which students have cultivated original ideas, advanced designs and innovative concepts to create practical solutions to industry problems. The College of Engineering and Computing is proud of your accomplishments and the entrepreneurial creativity you have exhibited today. You are equipped with all the tools you need to tackle real-world, multi-disciplinary challenges. You embody the strength of FIU's engineering and computer science programs. Go Panthers!

An Investment in FIU is an Investment in the Future of the South Florida Community.

Help our students explore and discover a new world of opportunities by making a gift to the College of Engineering and Computing or being part of our Industry Affiliates Program. Your contribution will deliver immediate impact for learning and discovery, provide access to world class education for many deserving students from all backgrounds, and help us attract and retain the best and brightest students and faculty.

- Make your one time or recurring gift at <https://give.fiu.edu/give-now/college-of-engineering-and-computing>
- Partner with FIU's College of Engineering and Computing via our Industry Affiliates Program.

For more information, contact: **Karla Hernandez**
Office: (305) 348-4163
Email: karherna@fiu.edu

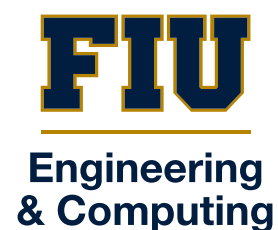
Jamie Diptee-Bay
Executive Director of Development
College of Engineering & Computing

Engineering Campus
Office: (305) 348-0230
Email: jdiptee@fiu.edu

For more information contact: jvallej@fiu.edu
capstone.cec.fiu.edu



#FIUCECCapstone
#FIUCECSeniorDesign



SENIOR DESIGN PROJECT SHOWCASE



THURSDAY, APRIL 18, 2019
1:30—4:30 p.m.

SENIOR DESIGN PROJECT SHOWCASE

Senior Design Project Locations and Titles

Electrical and Computer Engineering

- EC1.** Fire Fuel Detection System for Wildfire Prevention
- EC2.** Wireless Kitchen Appliances
- EC3.** Efficient Electric Motor Control System for Eco Race Car
- EC4.** Perimeter Defense System
- EC5.** Power Line Tethered Drone System
- EC6.** Autocart
- EC7.** IoT Based Smart Agriculture
- EC8.** My Travel Companion
- EC9.** Smart Rod
- EC10.** Southeast Conference 2019 Robot Competition
- EC11.** Automated Roll-on Bottle Capper (AROBC)
- EC12.** Edge IoT Drone
- EC13.** Water Purification Dam
- EC14.** Smart HVAC System
- EC15.** The Health Bike Generator
- EC16.** Chalk Plotter
- EC17.** Sun Chaser Solar Panel
- EC18.** Forensics Acquisition Analysis Communications Toll
- EC19.** Heavy Vehicle Blind Spot Assistance (HVBA)
- EC20.** Machine Learning Applications

Mechanical & Materials Engineering

- ME1.** Design of FSAE racecar suspension & vehicle dynamics
- ME2.** Alternate testing methods for metallic bone implants and rods
- ME3.** 3D Printed four cylinder Cummins diesel engine
- ME4.** Shell Eco marathon Americas Competition - Electric Vehicle

- ME5.** Structural Health Monitoring System of Jet Engine Outer Shells
- ME6.** Energy- Efficient Regenerative brakes for Electronic skateboard
- ME7.** Soft Robotics with 3D printing'
- ME8.** Lab on a Chip - 3D printed thrombosis on a Chip
- ME9.** Low cost modular Finger Prosthetics (Hi5)
- ME10.** Venturi vacuum device: the new way to collect forensic evidence
- ME11.** Portable Outdoor Air Conditioning Unit
- ME12.** Micro Satellite Development- CUBESAT
- ME13.** Heart Cooling System
- ME14.** Lunar-CisLunar Object characterization
- ME15.** Solar heat collection
- ME16.** Knee Telehealth Equipment
- ME17.** Hydrofoil Desing and Optimization
- ME18.** Emergency windshield wiper system
- ME19.** Shell Eco marathon competition - Energy Efficient Ineranl Combustion Engine
- ME20.** Blueprint Rover: An Accurate Floor Mapping Automated Guided Vehicle
- ME21.** VTOL Aircraft: for Littoral Combat Ships
- ME22.** Clima Drone: Low wind speed rapid adaptative drone
- ME23.** Liquid cooled top mount intercooler system
- ME24.** Air-Cooled Three-Valve SOHC Cylinder. Head for Porsche 911 Engines
- ME25.** Flash Temperature measuring device for tribological applications
- ME26.** Cellular usage monotoring device
- ME27.** Development of a boinspired multi-link inspection tool for enviroments with small size constraints
- ME28.** Solar powered AC absorption system
- ME29.** Automated Solar Powered Lawnmower
- ME30.** FSAE Engine Intake and Exhaust System

Biomedical Engineering

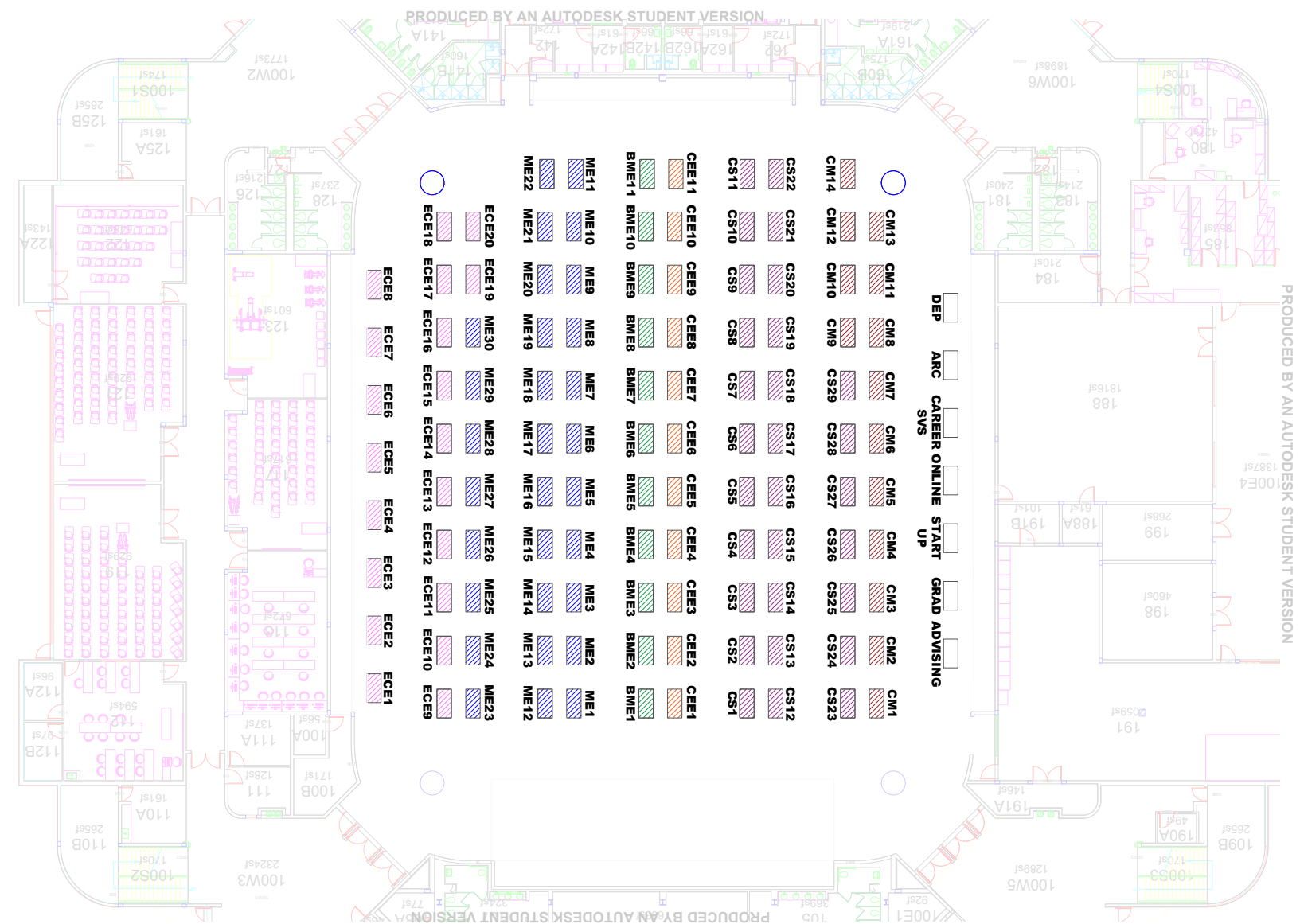
- BME1.** Port IO Acute Conduit Intraosseous Device
- BME2.** Field Therapy Accelerator
- BME3.** ProDent: a Dental Isolation Device
- BME4.** Septum for Drug Delivery Device
- BME5.** Doctor's Cyclo Massage
- BME6.** Prosthetic Pressure Detecting Sock
- BME7.** Dynamic Prosthetic Knee
- BME8.** Biologic Delivery from Cartridge to Cannula
- BME9.** Electromyogram Signal Simulator
- BME10.** System for Registering and Tracking Bone Movement
- BME11.** Quantifying Socket Adapter Device

Civil & Environmental Engineering

- CEE1.** Miami Dade South Dade Wastewater Treatment Plant Biosolids Drying
- CEE2.** Water and energy savings for HVAC systems
- CEE3-CEE11.** Resurface, restore, and rehabilitate State Road 7/NW 7 Avenue from north of Little River Drive to NW 119 Street in Miami-Dade County

Computer Science & Information Technology

- CS1.** Addigy: Financial Modeling Engine Ver 1.0
- CS2.** AmLight: Learning OpenFlow/SDN network Research and Experimentation Ver 2.0
- CS3.** ASL: American Sign Language Training System with Gesture Recognition Ver 1.0
- CS4.** Assessment of Student Online Engagement Ver 1.0
- CS5.** Developing a User Interface for a BIM Virtual Assistant Ver 1.0
- CS6.** Be On the Look Out Ver 12.0
- CS7.** Key Biscayne Citizen Scientist Project App Ver 3.0
- CS8.** Digital Graduations and Reunions Ver 1.0



- CS9.** E-Commerce for Environmental Technologies Company Ver 1.0
- CS10.** Food Frequency Questionnaire Ver 1.0
- CS11.** Interactive Smart Table Ver 2.0
- CS12.** Learning Management System App in Facebook Ver 2.0
- CS13.** Miami-Dade County Animal Cruelty Registry Ver 1.0
- CS14.** Minorities Inspiring Minorities in Computing Ver 2.0
- CS15.** Mobile Judge Ver 12.0
- CS16.** Miami-Dade County Vacancy Compliance Ver 2.0
- CS17.** Next Generation Airline Data Exchange Simulator (NGADS) Ver 1.0
- CS18.** The Environment Scholar (EnvoScholar) Ver 2.0

- CS19.** Heavy Hanging Punching Bag Ver 1.0
- CS20.** A User Interface for PluMA Ver 1.0
- CS21.** Restaurant Simulation Ver 1.0
- CS22.** Patrol Shift Bid Scheduler Ver 1.0
- CS23.** Learning with Virtual/ Augmented Reality (SKOPE) Ver 7.0
- CS24.** Snackability Smartphone App Ver 3.0
- CS25.** ML-based Smart Outlet Ver 1.0
- CS26.** A Simulation Platform for Autonomous Research and System Evaluation (SPARSE) Ver 2.0
- CS27.** VIP: Vertically Integrated Projects Ver 10.0
- CS28.** VRC: Virtual Roll Call Ver 6.0

- CS29.** Data Science Workflow Manager Ver 1.0

Moss School of Construction, Infrastructure and Sustainability

- CM1.** Champions Construction
- CM2.** S&A Construction Co.
- CM3.** PCF Construction Group, LLC
- CM4.** F&P Construction
- CM5.** BRO Construction LLC
- CM6.** Quality Control Constructions
- CM7.** VB Construction LLC
- CM8.** Wecon General Contractors
- CM9.** Gabriel Construction
- CM10.** Prodigious Construction
- CM11.** CG Hill Construction
- CM12.** B.G.R. Construction LLC
- CM13.** QT Construction
- CM14.** ABC Team