



Mechanical Engineering Program

E. Cole, T. Oppenheim, W. Tsai
R. Blomberg, G. Hooper, J. Van Dixhorn

21 April 2021



CAL MARITIME

Introduction

Dr. William Tsai, Associate Professor

wtsai@csu.edu

Overview

- Introduction
- Senior Capstone Projects
- Summer Experiences
- Makerspace
- Machine Shop
- Student Perspectives

Why Choose the Cal Maritime ME Program?

- Small size & personal connections
- Undergraduate teaching focused
- Hands on practical and system level experiences
- Preparation for the engineering workplace
- Ranked #3 in 2020 Best Colleges for Mechanical Engineering by gradreports.com



Engineering
Accreditation
Commission

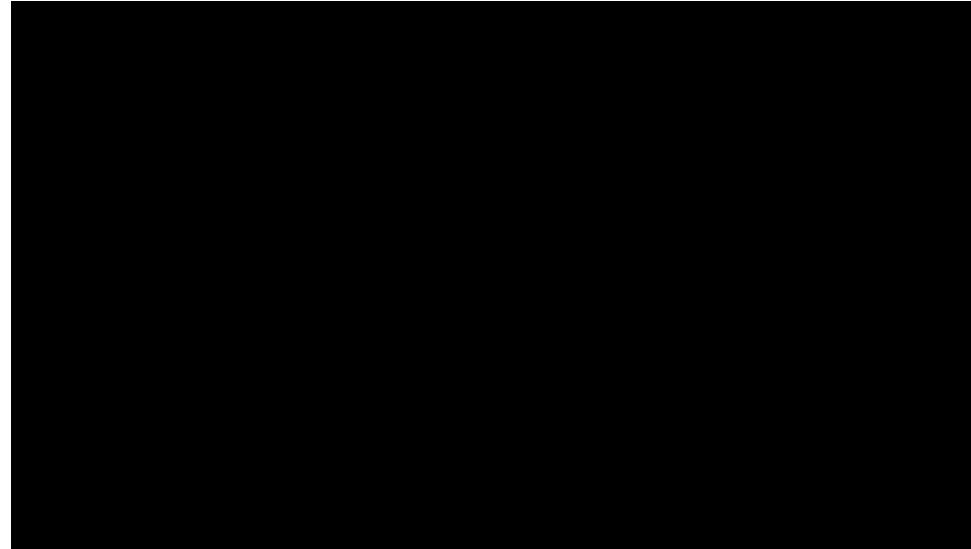


Senior Capstone Projects

Dr. Tomas Oppenheim, Assistant Professor

toppenheim@csum.edu

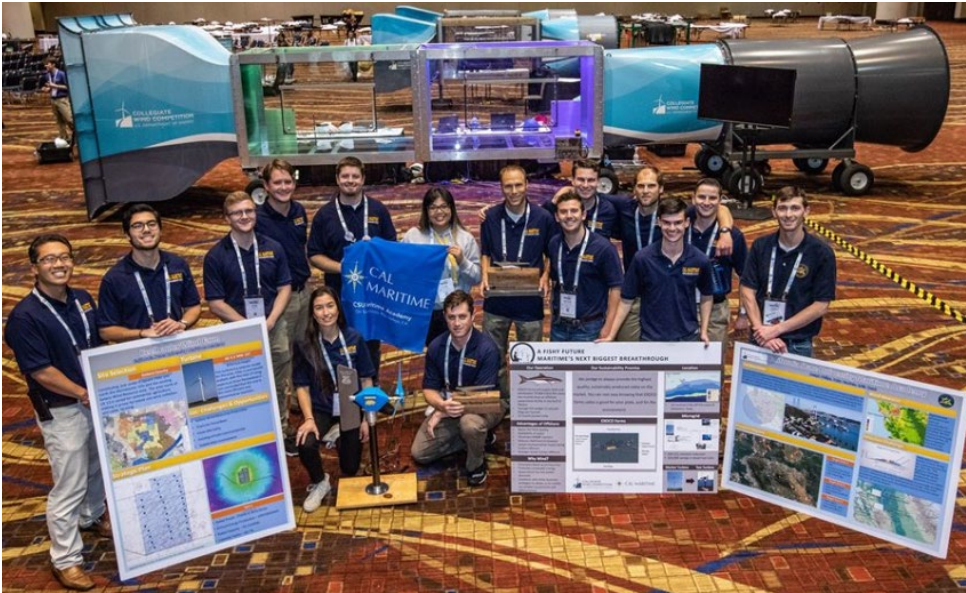
Senior Capstone Project – SAE Baja



Senior Capstone Project – SAE Baja



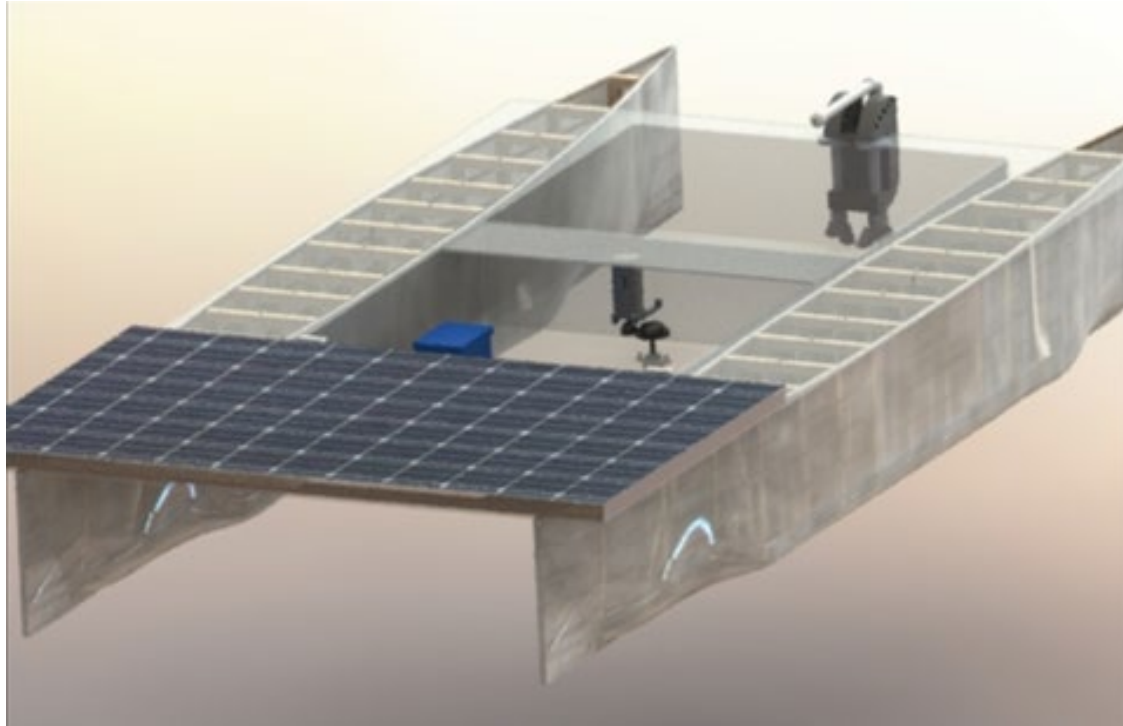
Senior Capstone Project – DoE Collegiate Wind Competition



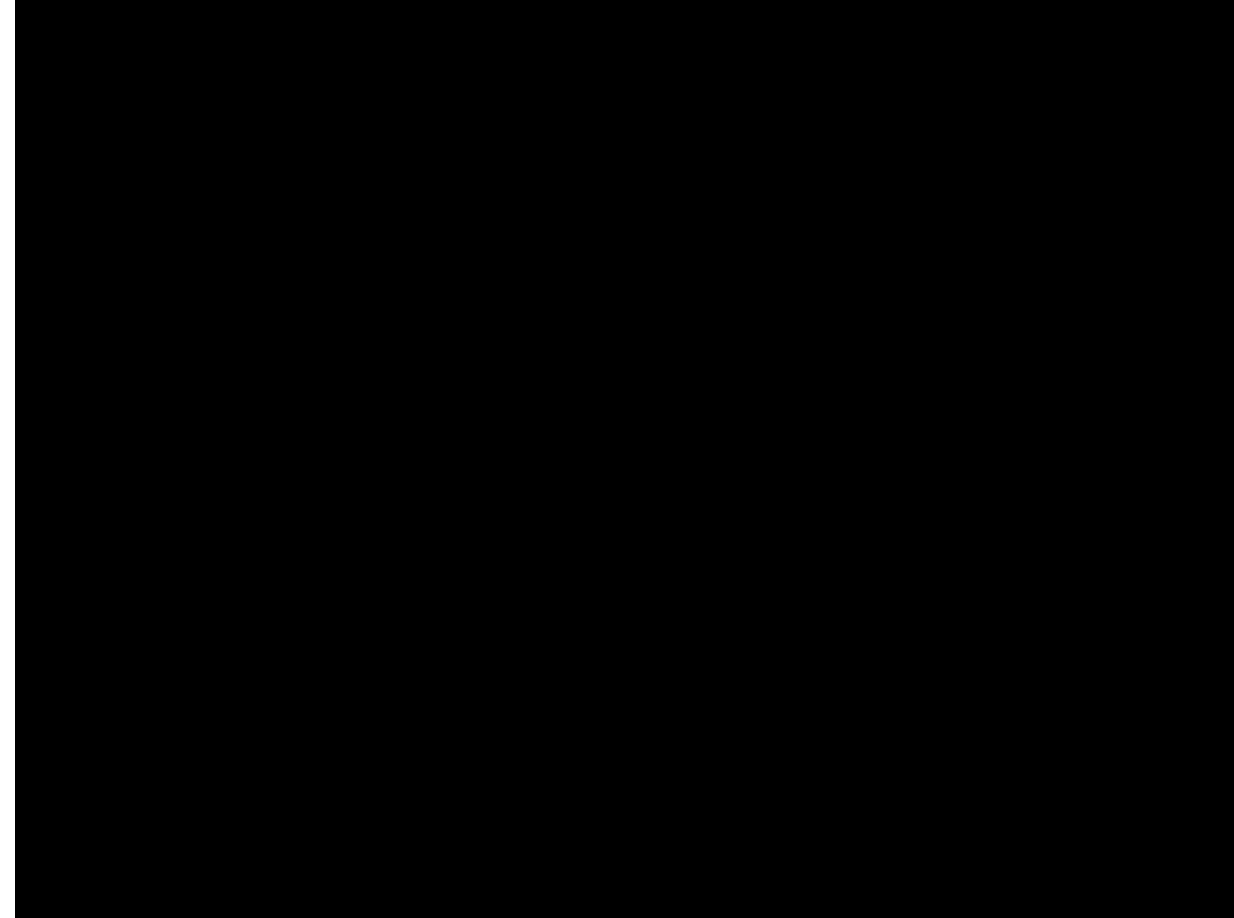
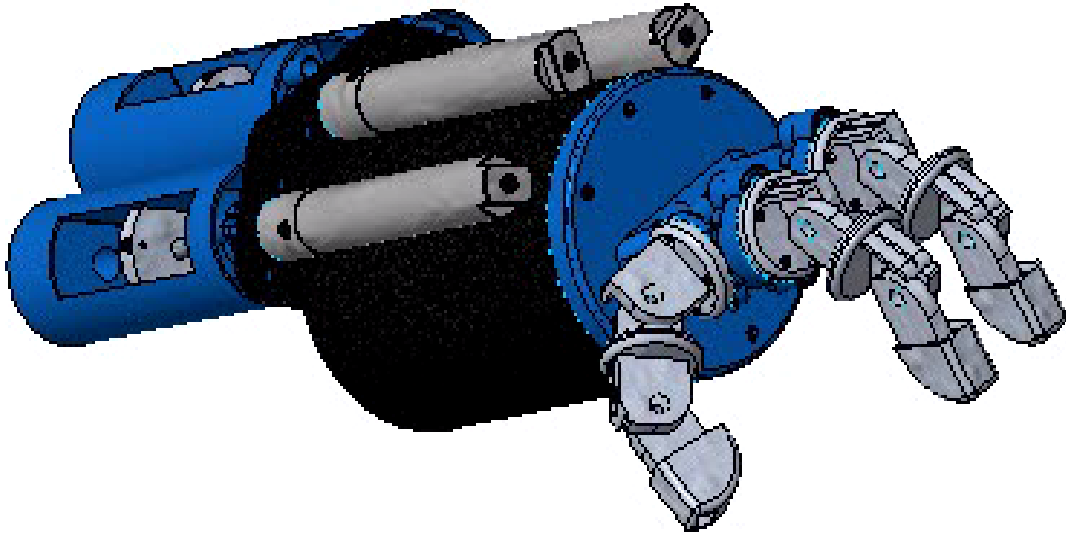
Senior Capstone Project – DoE Collegiate Wind Competition



Senior Capstone Project – SMUD Solar Regatta



Senior Capstone Project – Prosthetic Hand



Summer Experiences

Robert Blomberg, Senior, License Option

Gillian Hooper, Senior, General Option

John Van Dixhorn, Senior, General Option

CRU 150: Sea Training I

- Freshman Summer aboard Training Ship Golden Bear



Sophomore and Junior Summer Experience

License Option

- USCG 3rd Assistant Engineer License + BS Mechanical Eng.
- Commercial Cruise



- 2nd Training Cruise aboard TS Golden Bear

General Option

- BS Mechanical Eng. w/ Emphasis in Energy or Mechanical Design
- Sophomore & Junior Summer Co-ops (Internships)



BAE SYSTEMS

Makerspace

Mx. Erin Cole, Instructional Support (IS) and Makerspace Technician

ecole@csun.edu

What is the Makerspace?

- Free resource for working on projects
- A place for creativity!
- Tools, trainings, & events



Tools

- 3D printers
- Sewing & embroidery machines
- Laser cutter
- Soldering supplies
- Misc. hand tools
- PCB mill
- Vinyl cutter
- Basic prototyping supplies

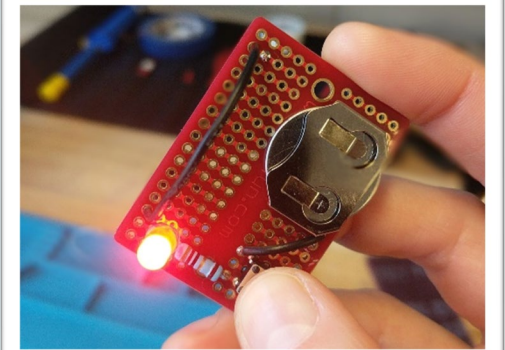
Trainings

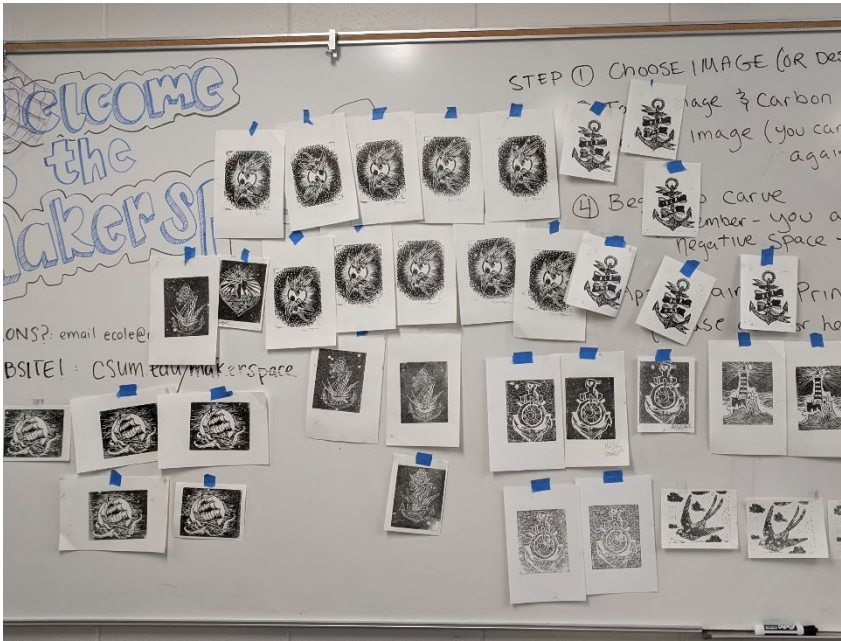
Current:

- 3D printers
- Soldering
- Sewing machine
- Laser cutter


Coming Soon:

- PCB mill
- Embroidery machine
- Vinyl Cutter

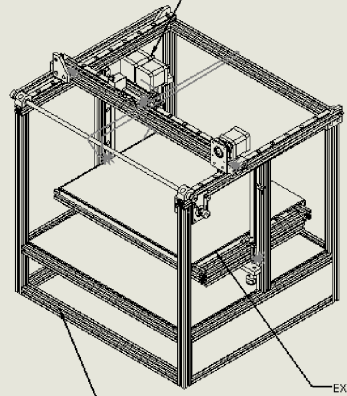




21

MAKER DAYS 

MAKE DETAILED 3D MODELS



EXPORT MODELS FOR 3D PRINTING

MAKE DRAWINGS & ASSEMBLIES

Learn to CAD with industry-standard software!

WHEN

FEB. 25, 16:00-17:00

WHERE

LIBRARY CLASSROOM

MAKERSPACE

TITLE

INTRO TO SOLIDWORKS

SIZE

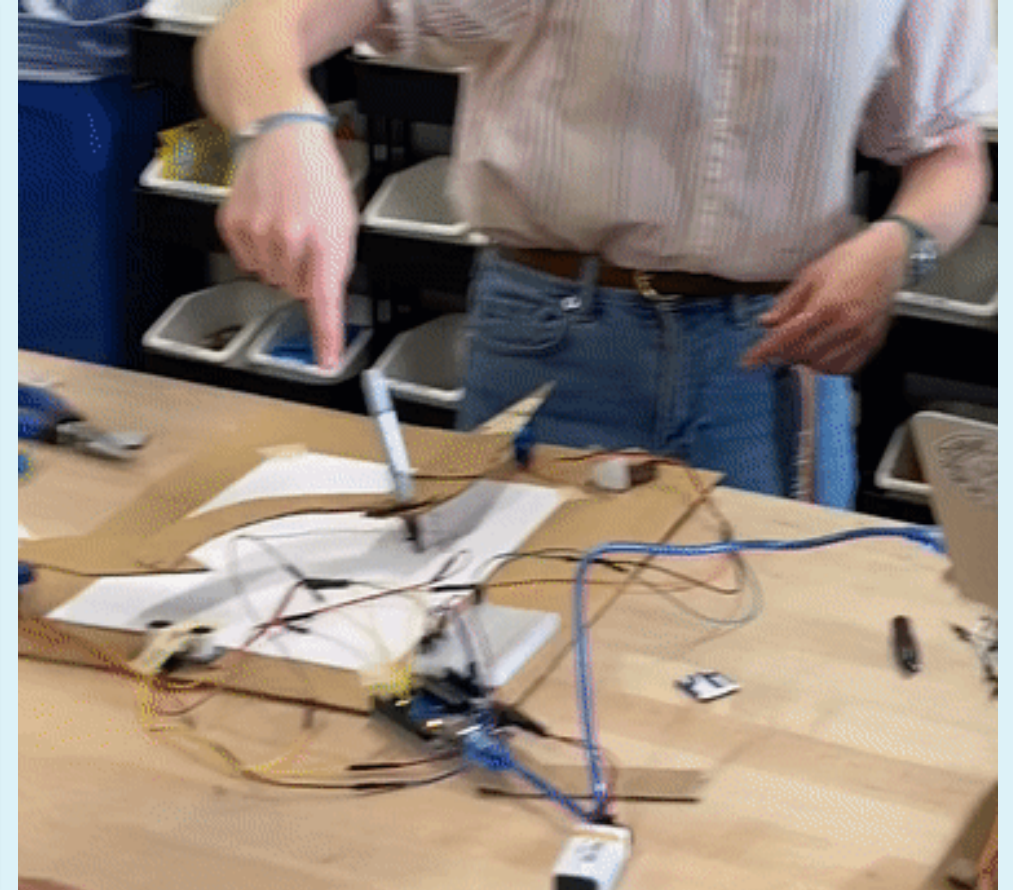
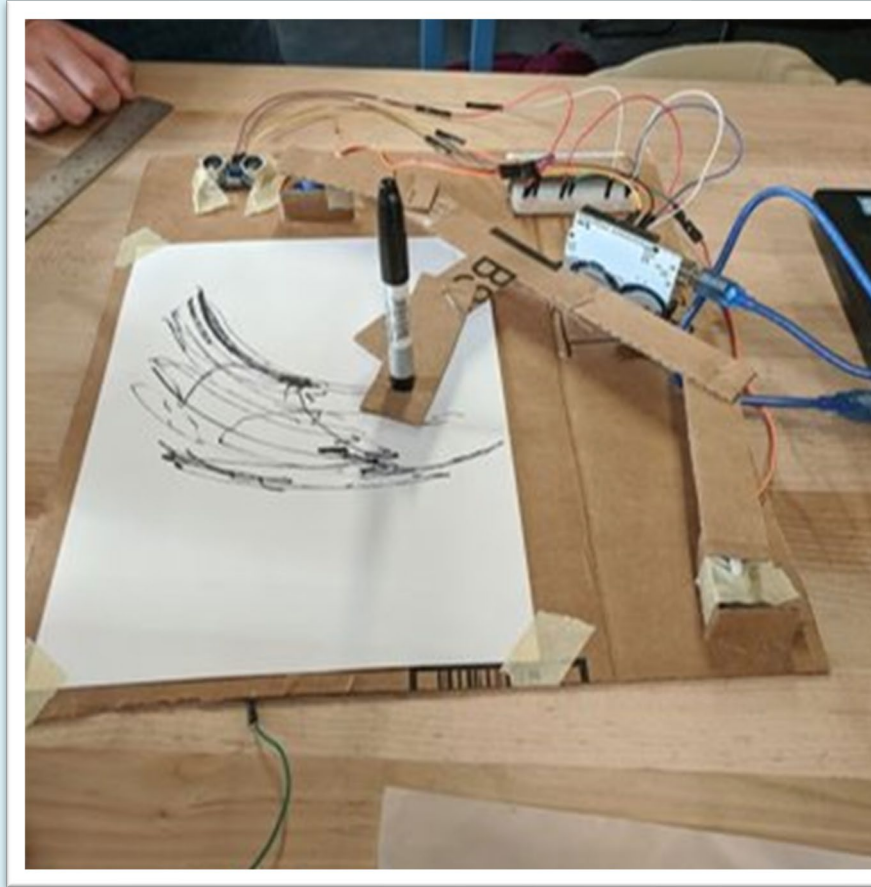
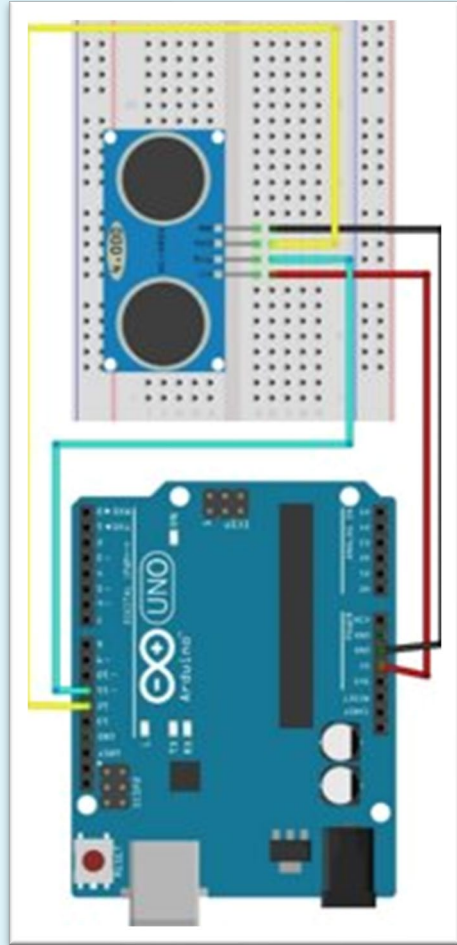
DWG. NO.

REV

A

SCALE: 1:6

SHEET 1 OF 1

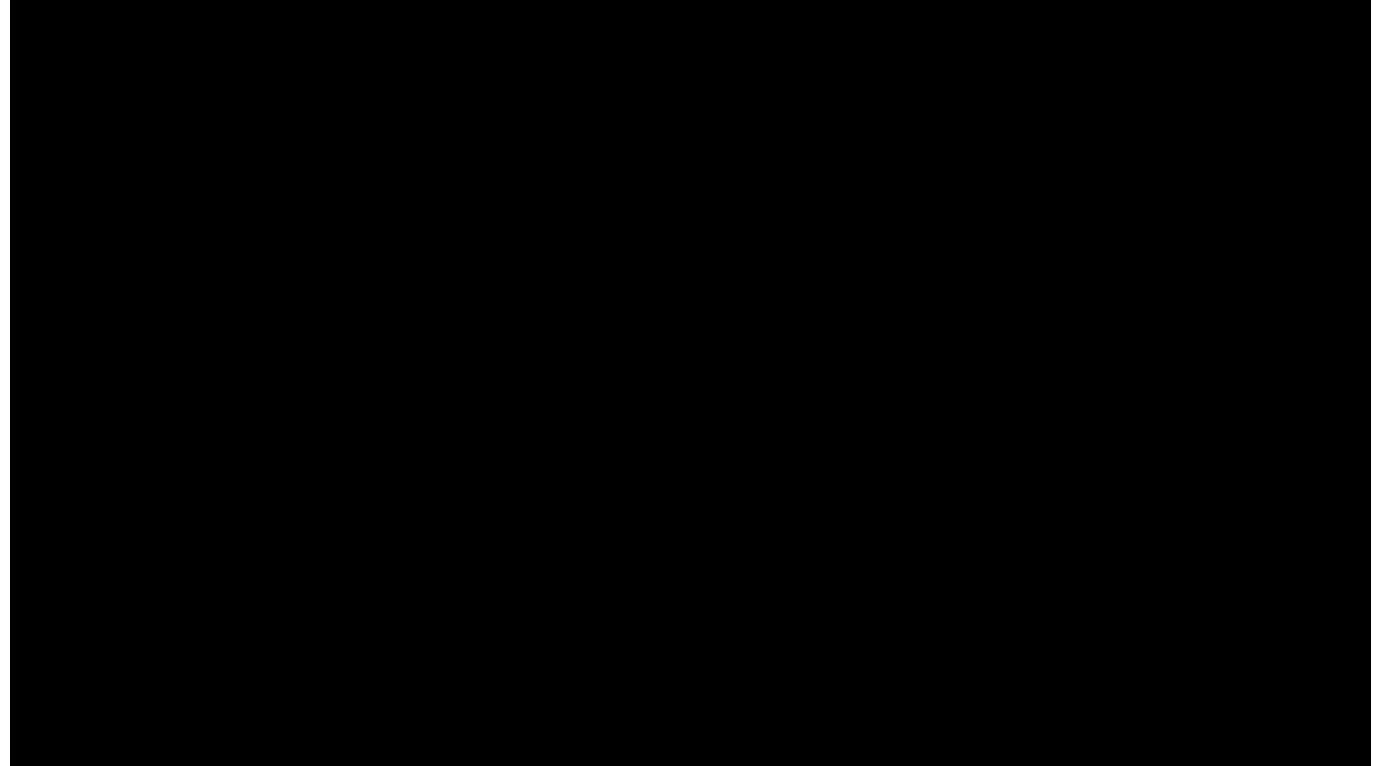


Machine Shop

Dr. Tomas Oppenheim, Assistant Professor

toppenheim@csum.edu

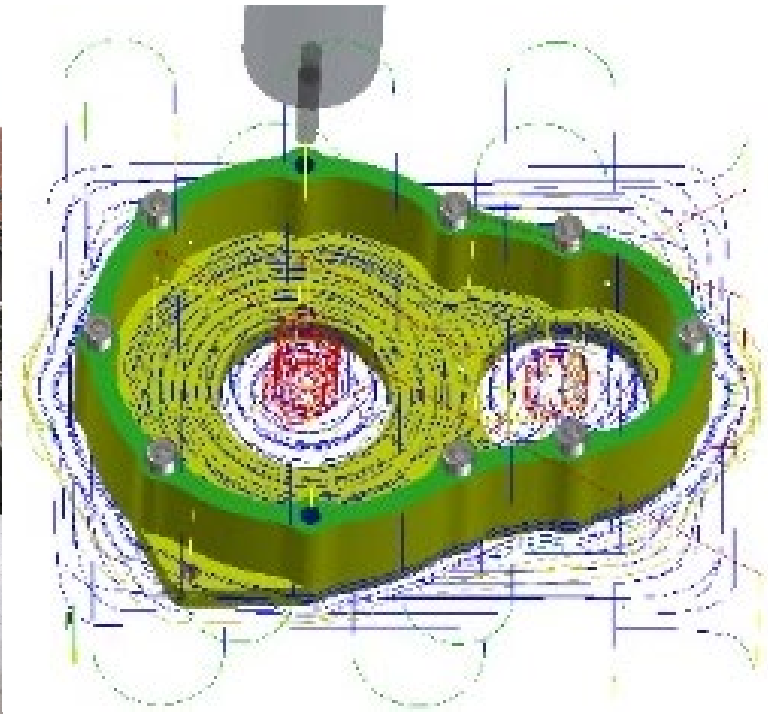
Machine Shop



Welding Shop



Machine Shop



Student Perspectives

Robert Blomberg, Senior, License Option

Gillian Hooper, Senior, General Option

John Van Dixhorn, Senior, General Option

Conclusion

Challenging but Worthwhile Program

- Small campus in the CSU System
- ME degree plus real world engineering experience
- Corps and leadership development



Questions

- Department Chair
 - Nader Bagheri, nbagheri@csum.edu
- ME Faculty
 - Tomas Oppenheim, toppenheim@csum.edu
 - William Tsai (Co-op Coordinator) wtsai@csum.edu
- Makerspace
 - Erin Cole, ecole@csum.edu
- University Advisor
 - Katie Hansen, khansen@csum.edu, advisor@csum.edu



CAL MARITIME

CALIFORNIA STATE UNIVERSITY MARITIME ACADEMY

www.csum.edu

Backup Slides





CAL MARITIME

CALIFORNIA STATE UNIVERSITY MARITIME ACADEMY

www.csum.edu