

ENGINEERING LAB & INNOVATION CENTER

**DR. CARL WHITESEL - ENGINEERING PROGRAM COORDINATOR
ENG. SUZAN ALLAHAM-ENGINEERING LAB MANAGER**

WHERE ARE WE?

IS Building

Engineering Lab and
Innovation Center

ENGINEERING
LAB →

Follow LAB Sign



SOUTH MOUNTAIN COMMUNITY COLLEGE
A MARICOPA COMMUNITY COLLEGE

7050 S. 24th Street Phoenix, AZ 85042

MARICOPA COMMUNITY COLLEGES

A Amphitheatre	MU Music	 Bookstore	 Computer Lab
AD Administration	NAU Northern Arizona University	 Cafeteria	 Division Offices
AAEC AZ Agribusiness & Equine Center Annex	NCC North Campus Complex	 Fitness Center	Language Arts (LA Building)
AR Art	OA Office Annex	 Police 602-243-8100	Math and Science (PS Building)
BE Business Education	PAC Performing Arts Center	 AED (Automated, External, Defibrillator)	Counseling (SS Building)
CB Classroom Building	PAC-C PAC-Classrooms	 Emergency Phone	myCareer, Library & Center for Teaching & Learning (BE Building)
FS Facilities Services	PS Physical Sciences	 Restrooms All Genders	Communication, Fine Arts & Social Sciences (PAC Building)
GYM Gymnasium Fitness Center	SES Student Enrollment Services	 Restrooms Gender Specific	 Bike Rack
IS Engineering Lab	SMCL South Mountain Community Library	 Accessible	 Community Entrepreneurship Center
LA Liberal Arts	SS Student Services	 Family Restroom with Changing Table	 International Ed. Services
LRC Learning Resource Center	SU Student Union		 Lactation Room
LS Life Sciences	TC Technology Center		 ATM Machine
	WAC West Annex Complex		

The Maricopa County Community College District (MCCCD) is an ERISA institution and an equal opportunity employer of diverse students and individuals with disabilities. All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, age, or national origin. A lack of English language skills will not be a barrier to admission and participation in the career and technical education programs of the District. The Maricopa County Community College District does not discriminate on the basis of race, color, national origin, sex, disability or age in its programs or activities. For Title IX concerns, call the following number to reach the appointed coordinator: 602-243-8499. For additional information, as well as a listing of all coordinators within the Maricopa County system, visit: www.maricopa.edu/diversity.

WHO ARE WE SERVING?

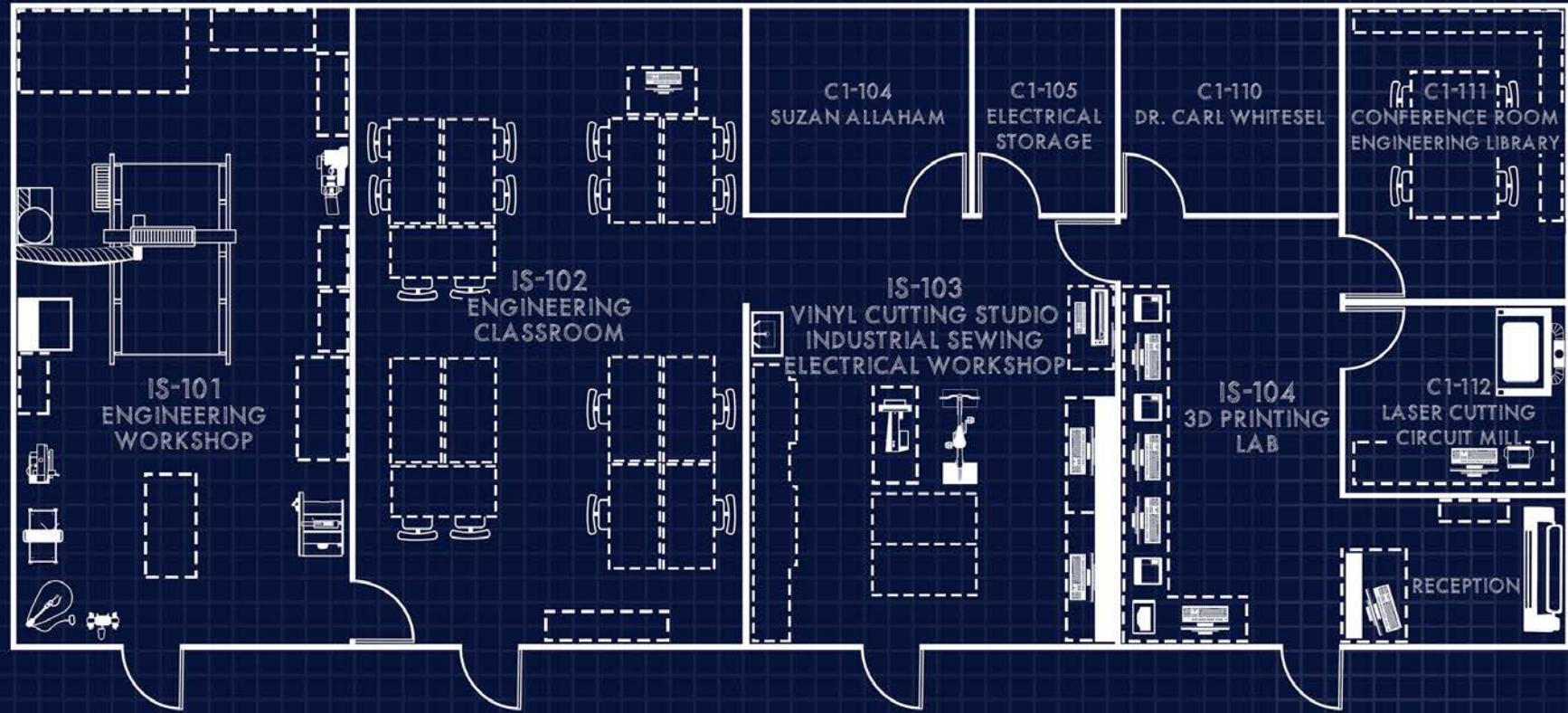
South Mountain Community College (SMCC) – 3 Campuses

- Students
- Faculty
- Staff
- Community

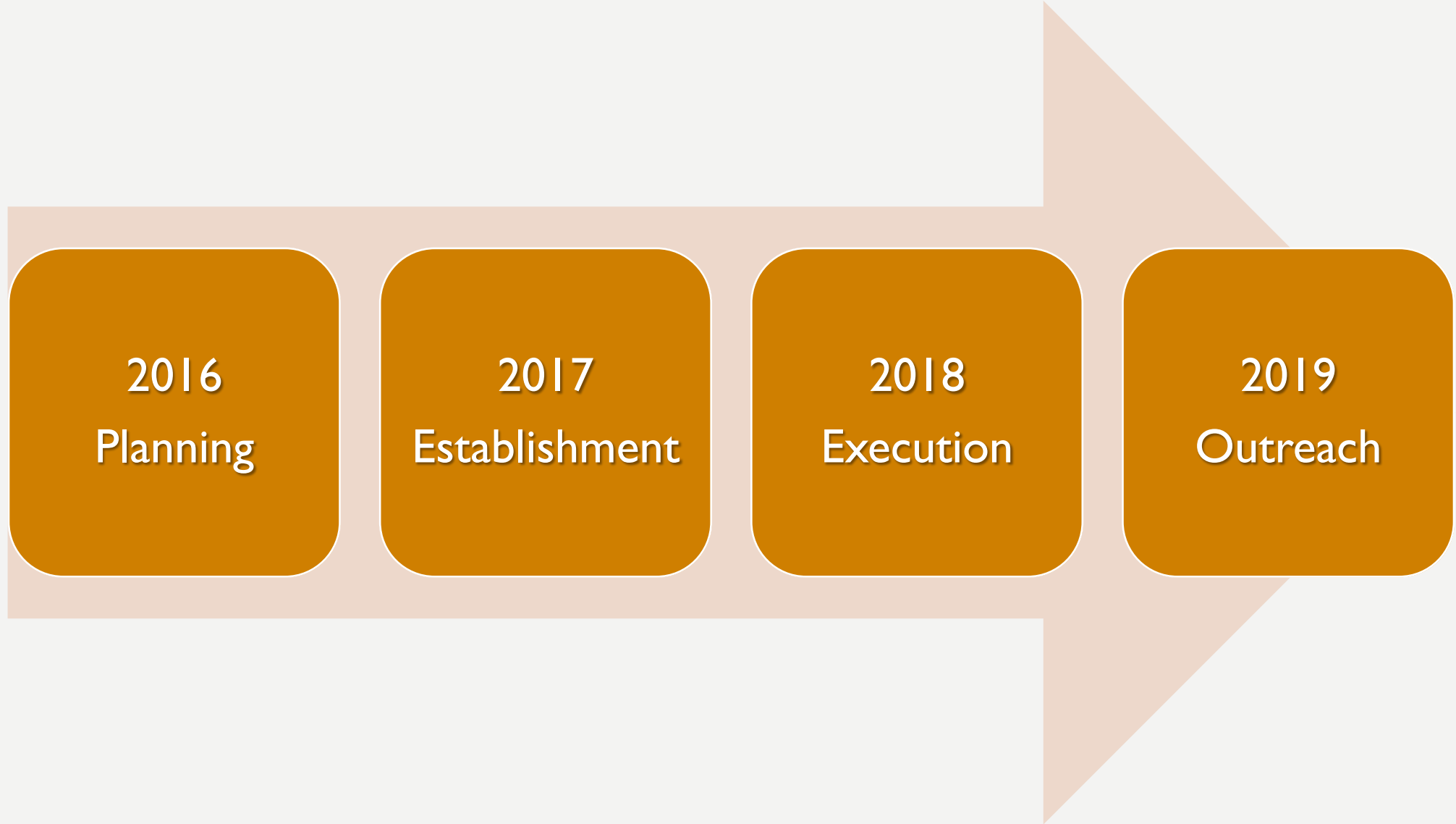
HOW BIG IS OUR LAB?

SMCC ENGINEERING LAB

2100 sqf



LAB'S HISTORY !



Summer 2016

- Relationship formed with Base11
- Desire to provide equipment for STEM-trained students

Winter 2016

- Dr. Carl Whitesel brought on the team to guide this project

2016

PLANNING

Spring 2017

- Outreach and support from local companies and employers established.

Summer 2017

Training with Base11

- Relationships with other college partners formed – Skyline College, Orange Coast College.
- Relationships with world-wide industrial partners established – Dassault Systemes.

Fall 2017

- Final requirements to accept lab donation completed.

2017

ESTABLISHMENT

January 2018

- Equipment delivered and installed
- Retail value **\$250,000.**

Spring 2018

- Faculty training on equipment.

Summer 2018

- Prop301 grant received to supplement and expand lab equipment.

Fall 2018

- “Soft” opening to all Engineering students and non-Engineering students.

2018

EXECUTION

Spring 2019

- Continued growth and reach our more student.
- Created Lab Logo.

Summer 2019

- Engineering Club 2 weeks.
- College Camp 2 weeks.

2019

OUTREACH

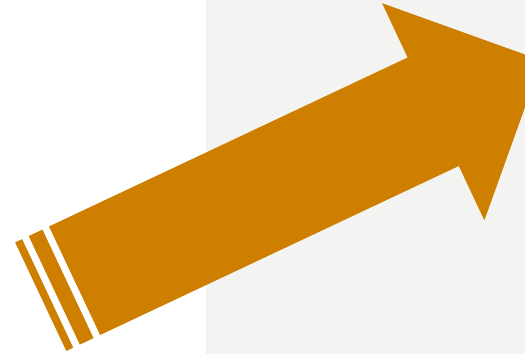
WHAT WE HAVE?

Machines

&

Tools

HP DESIGN JET T1700 PLOTTER PRINTER



SMCC ENGINEERING WORKSHOP RULES

- Sign in and fill out student waiver before entering workshop.
- Get instructor's permission before opening or using any tools.
- Wear proper attire and PPE.
- Read instructor's manual before using any heavy machinery.
- Do not operate heavy machinery when class is in session.
- No food or drink in lab.
- Clean up after yourself and put away any tools not in-use.

PosterMyWall.com



SINDOH DP200 3D PRINTERS



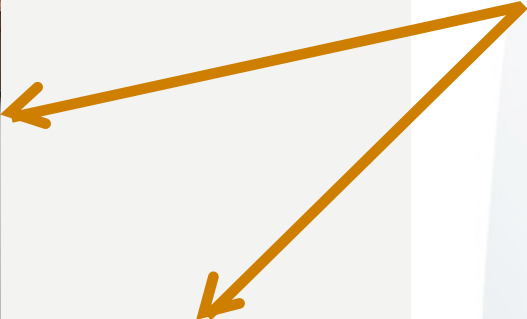
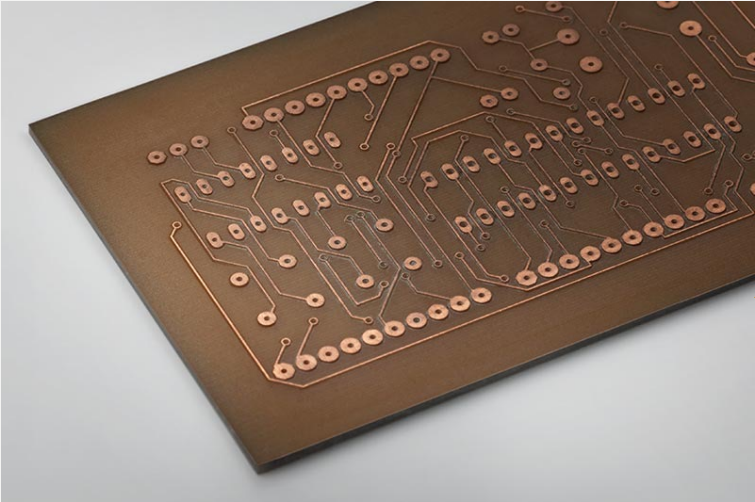
MAKERBOT 3D PRINTER & DIGITIZER



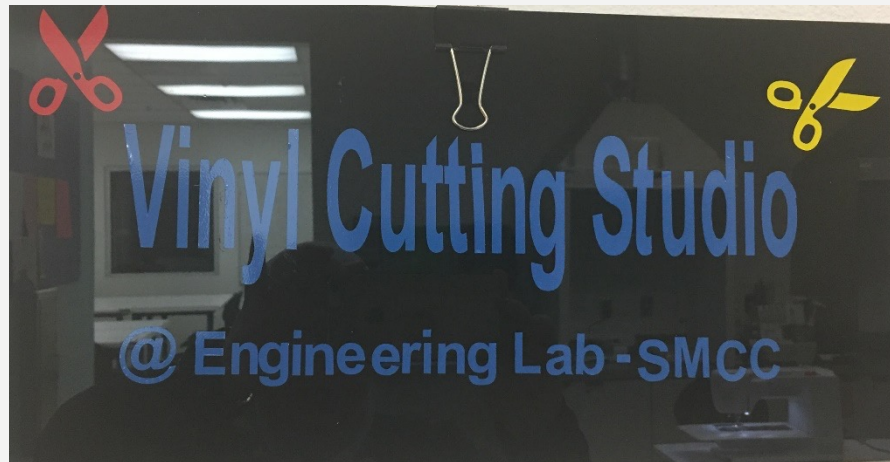
EPILOG LASER FUSION MODEL M2



MONOFAB – PRECISION MILL

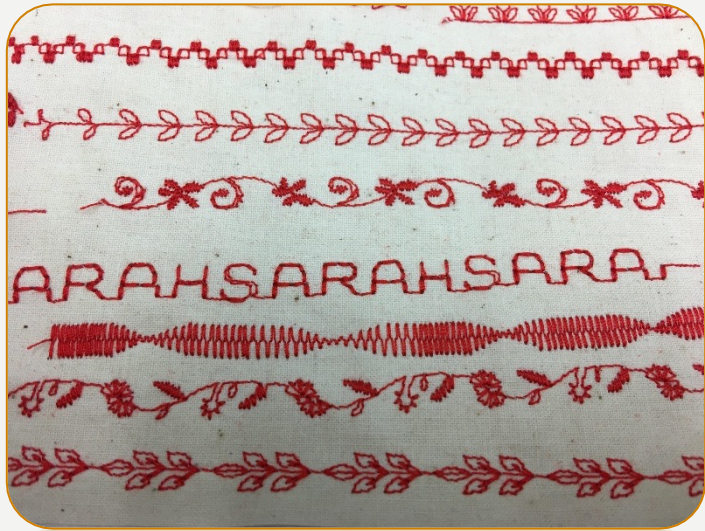


VINYL CUTTER



BERNINA B535

BERNINA EMBROIDERY L450



SHOPBOT CNC MILL



POWER TOOLS



PROJECTS @ENGINEERING LAB



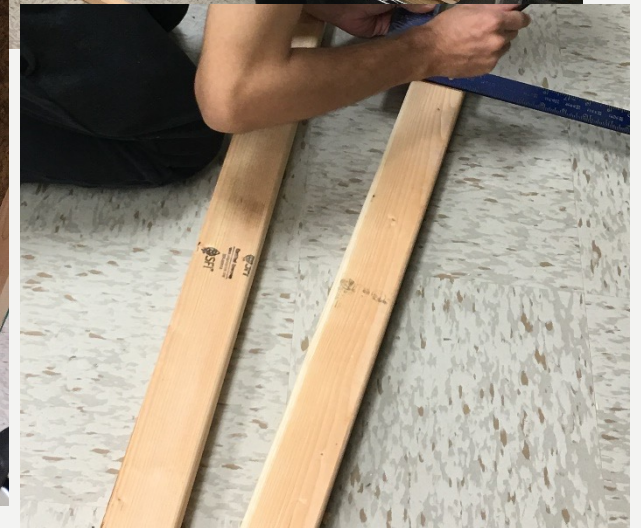
Wooden Arch Bridge



By ECE214 Class

PROJECTS @ENGINEERING LAB

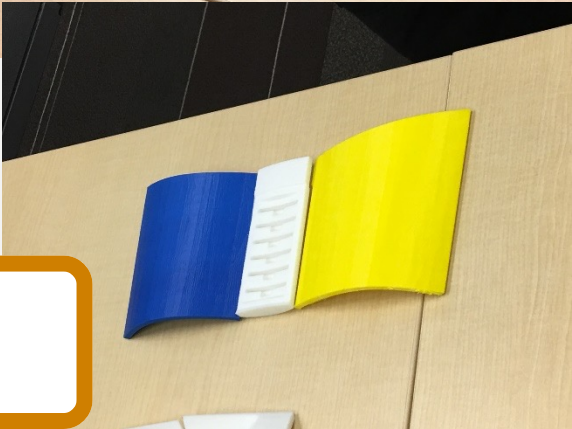
Vertical Storage Rack



By Matthew

PROJECTS @ENGINEERING LAB

**3D Printed Star Wars
Helmet**



By Phillip

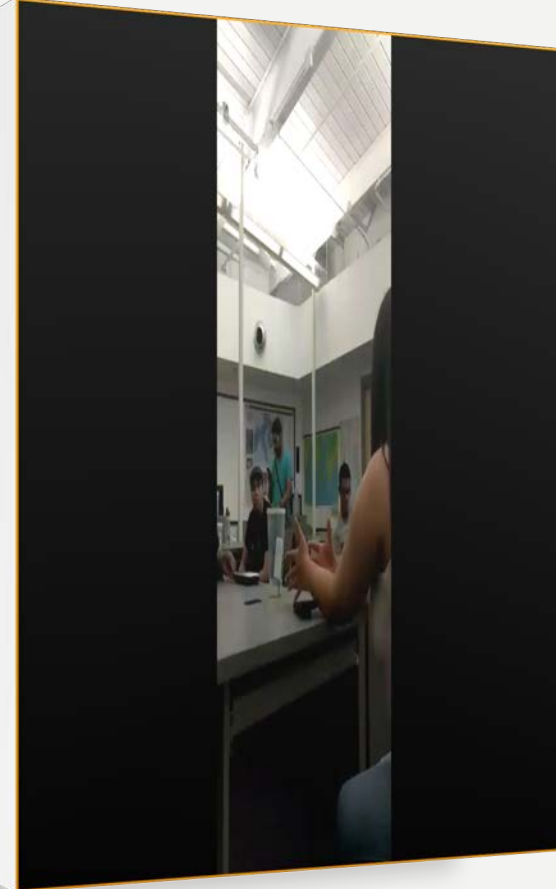
PROJECTS @ENGINEERING LAB

Holiday Coasters



By Matthew

VIDEOING OUR WORK

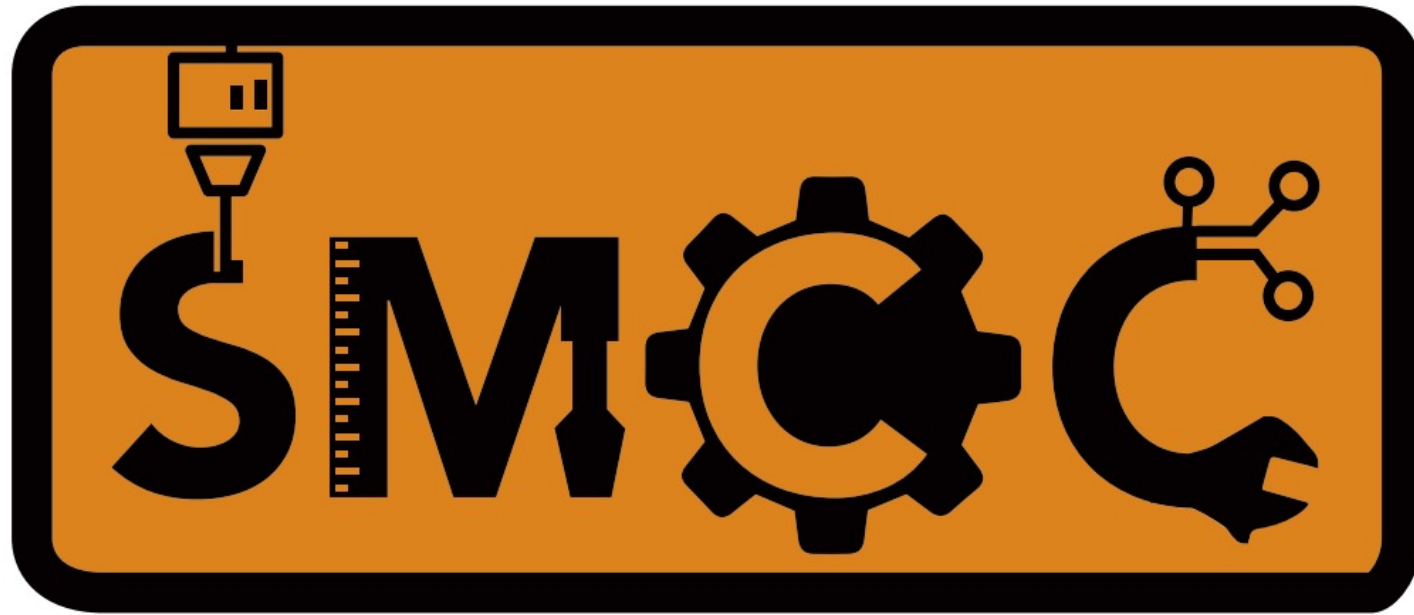


FRIDAYS @ ENGINEERING LAB



ENGINEERING LAB LOGO CONTEST

The winner is Sam Ekhle .



Engineering Lab



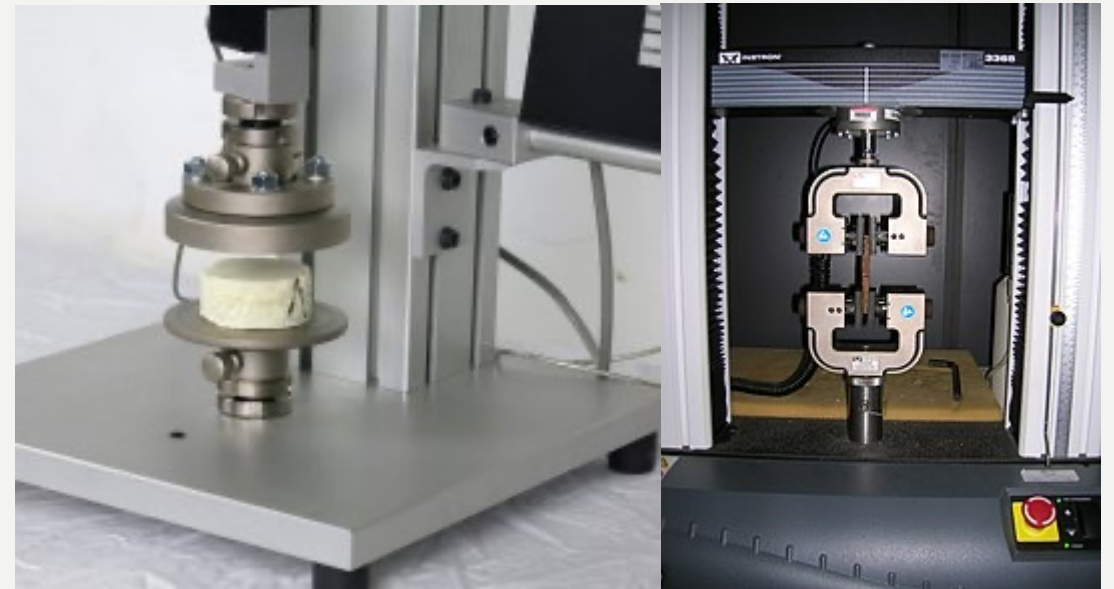
Everybody celebrate the winning



**THE
PRIZE**

COMING SOON.....

- ✓ Industrial Wind Tunnel – is arrived and under process to place it in lab's new building
- ✓ Grant funding for mechanical test equipment, but not limited to:
 - Tensile strength
 - Compression strength
 - Inertia



All above photos are only indicator

ENGINEERING PROGRAM TEAM



Dr. Carl Whitesel
Program Coordinator



Prof. Suzan Allaham
Lab Manager
Adjunct Faculty



Prof. Patrick Grates
Adjunct Faculty

STUDENTS



Matthew Spadafino
Student Work Study – Daily
operation of lab



Timothy Ragin
Student Work Study – Initial
setup and repairs of lab
equipment



Dawit Gemed
CPLC Internship Student - Daily
operation of lab



Mariaysela Varela
STEM-Train Intern project for
mechanics of materials

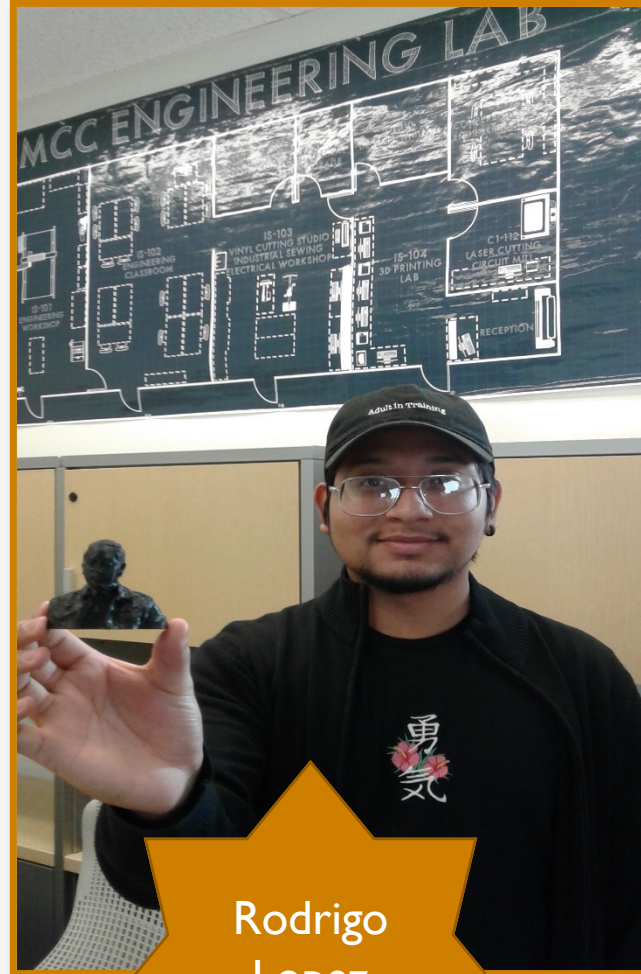


Antonio Aguilar
STEM-Train Intern project for
Raspberry Pi workspace setup

LAB'S VOLUNTEERS



Jean-Marc
Kamanda



Rodrigo
Lopez



Phillip
Houx

Day	Time
Monday	8:00 A.M. – 5:00 P.M.
Tuesday	8:00 A.M. – 5:00 P.M.
Wednesday	8:00 A.M. – 5:00 P.M.
Thursday	8:00 A.M. – 5:00 P.M.
Friday	8:00 A.M. – 3:00 P.M.

LAB'S GENERAL OPERATING HOURS

Day	Time
Monday	7:00 A.M. – 5:30 P.M.
Tuesday	7:00 A.M. – 5:30 P.M.
Wednesday	7:00 A.M. – 5:30 P.M.
Thursday	7:00 A.M. – 5:30 P.M.
Friday	Closed

LAB'S SUMMER SCHEDULE OPERATING HOURS



THANKYOU

PROGRAM COORDINATOR

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LAB MANAGER

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