ORANGE COUNTY SCHEDULE

RoboPlay Challenge
search and rescue

C-STEM DAY

UC**DAVIS**
C–STEM Center

SATURDAY
MAY 20TH, 2017

Message From the Director

Dear C-STEM Teachers and Students,

Welcome to C-STEM Day 2017!

We have planned an exciting day for our C-STEM students to show off their teamwork and problem-solving skills! As the UC Davis C-STEM Center continues to expand and grow with new team members, we continue to celebrate the achievements of our teachers and their students with support from parents and volunteers on C-STEM Day with the RoboPlay Competition.

We are proud to be a UC Approved Educational Preparation Program for Undergraduate Admission to all UC campuses. The C-STEM integrated mathematics, computing and robotics curriculum is implemented in over 200 schools across California. This year, we are expanding the C-STEM program in other states in the nation.

The C-STEM program is continuously striving to innovate our curriculum with more resources. We believe that it is important to provide students with a C-STEM pathway of UC A-G approved courses that schools can readily and easily integrate. Our C-STEM Math-ICT Curriculum provides K-12 students with up to 12 years of computer science education through hands-on integrated learning of math and computer science, starting in the first grade.

As we continue to develop C-STEM curriculum, we also develop educational computing and robotics technologies that allow teachers and students to access our content quickly and easily. Many of you have already experienced C-STEM Studio, a freely available tool that provides teachers and students a centralized resource platform to work with. Usage of RoboBlockly, another freely available tool, that allows for web-based robotic simulation using a drag and drop puzzle-piece like interface continues to soar. We are excited that all C-STEM software now can run in ultra-low-cost Raspberry Pi computers. Our professional development and curriculum provide teachers and students with the skills and knowledge necessary to be creative with physical computing and join the maker revolution.

We are so pleased to see familiar and new faces at this year's competition. Some of you have been participating in C-STEM Day since it began 7 years ago and we celebrate your commitment to academic excellence! We have 130 RoboPlay Challenge teams, 82 teams in Davis and 48 teams in Orange County. In addition, we have about 40 video competition submissions. I would like to thank all of our participants for their hard work, including the C-STEM teachers and students, volunteers, sponsors, and C-STEM staff.

Best of luck during the competition!

Dr. Harry H. Cheng
C-STEM Center Director and Professor

Organized by

UCDAVIS C–STEM Center & **IRVINE VALLEY COLLEGE**

C-STEM Day Schedule - May 20, 2017

TIME	EVENT
7:30 - 8:30 AM	Registration and Setup for RoboPlay Challenge Competition
8:30 - 8:40 AM	Welcome and Introduction
8:40 - 9:00 AM	RoboPlay Challenge Competition Introduction
9:00 - 12:00 PM	RoboPlay Challenge Competition Problem Solving
12:00 - 12:45 PM	Lunch Break
12:45 - 3:45 PM	RoboPlay Challenge Competition
3:45 - 4:00 PM	Break Time
4:00 - 5:00 PM	Awards Ceremony: • C-STEM Awards of Achievement • GIRL's Leadership Award • C-STEM Awards of Excellence • C-STEM Scholarship • RoboPlay Video Competition Winners • RoboPlay Challenge Competition Winners

Contact Information

C-STEM Center Director:

Harry Cheng
Email: hhcheng@ucdavis.edu
Phone: (530) 752-5020

C-STEM Program Manager
UC Davis Site:

Jennifer Mullin
Email: jsmullin@ucdavis.edu
Phone: (530) 752-8788

C-STEM Regional Coordinator
Orange County Site:

Merry Kim
Email: mkim209@ivc.edu
Phone: (949) 282-2724

COMMITTEES

C-STEM Day Volunteer Leadership

RoboPlay Chief Judge: **Rex Schrader**
Assistant Coordinator for C-STEM Day: **Stephanie Thai**
Assistant to RoboPlay Chief Judge: **Emma Kristovich**

Davis, CA

Regional Chair: **Jennifer Mullin**
Regional Co-Chair: **Zane Miller**
Head Judge: **Rex Schrader**
Deputy Head Judge: **Roger Nattkemper**

Irvine, CA

Regional Chair: **Merry Kim**
Regional Co-Chair: **Tiffany Nguyen**
Head Judge: **Chris Harrington**
Deputy Head Judge: **Ansel Teng**

RoboPlay Challenge Task Development Team

Sean Comick
June Gill
Frank Guan
Emma Kristovich
Tomonobu Nagaoka
Naomi Okiddy
Peyton Strait
Stephanie Thai

RoboPlay Challenge Task Testing Team

Yage Hu
Felix Le
Kaelan Mikowicz
Chandni Nagda
Michele Shi
Adam Zufall

Advisors for RoboPlay Challenge Task Creation Team

Rex Schrader
Roger Nattkemper
Dan Hull
Zane Miller

OVERVIEW

General Rules

1. You have 10 challenges to do in any order you like. Successful completion of each challenge earns your team points. The goal is to get as many points as possible.
2. Teams may bring as many laptops as they have students to the competition and keep them in their practice area (pit).
3. Only one laptop may be used at the competition table.
4. Use of other electronics during the competition, including other computers, calculators, cell phones, and other computing devices is not allowed.
5. Teams cannot use custom-made parts.
6. All challenge tasks must be completed using a computer program (no TiltDrive or CopyCat). Programs for controlling the robots must be written in Ch running in ChIDE from SoftIntegration, Inc.
7. There will be no internet access during the competition. If a team is caught using the internet during the competition, the team will be disqualified.
8. Once the competition has begun, the teams may speak to the Judges or support team for clarification on problems, but should not talk to anyone else outside of their team.

Competition Zone Rules

Competition Information

1. You are given three 17-minute competition periods to compete on the official board between 12:45pm and 3:45pm. (17 minute periods can be found on the RoboPlay Competition schedule page.)
2. In between each team's run, there will be a 3 minute passing period.
3. No robots may be run on the competition board during the 3 minute passing period.
4. Any challenge that is on-going when your 17 minute period ends will be immediately stopped and points will be calculated.
5. You are allowed to attempt each challenge as many times as you like within the allotted competition time.
6. If you attempt a challenge multiple times, only the points from the highest scoring run will be kept.
7. Challenges may not be "chained together" meaning you cannot do two challenges simultaneously with the same program.
8. Teams are responsible for setting up the board for each run of each challenge.
9. Teams may not use more than 4 I-bots and 1 L-bot simultaneously. Plus a LinkBot-I, LinkBot-L or dongle for wireless connectivity.

Practice Information

1. All teams will be provided a designated practice area (pit) to place their practice board.
2. You are given two 17-minute practice periods to practice on the official board between 10am and noon. (17 minute periods can be found on the RoboPlay Competition schedule.)
3. Each 17 minute period starts and ends when specified in the schedule. You will not be given 17 minutes from when you arrive. Please be prompt.

Challenge Scoring

1. You are allowed to attempt each challenge as many times as you like within the allotted competition time. All scores will be recorded, but only the highest is used.
2. Only one challenge may be run on the challenge board at a given time.
3. Challenges may not be "chained together" meaning you cannot be scored for two challenges at the same time.
4. Each challenge attempt, regardless of outcome, counts as a run. In the case of two teams with identical scores, the number of runs will be used as a tiebreaker, with the lowest number of attempts winning the tie.
5. Any challenge that is on-going when your 17 minute period ends will be immediately stopped and points will be calculated.
6. You may abort a run at any time by touching a robot or calling "abort". Aborted runs still count as attempts, and score zero points.
7. If your program is still executing but no penalty points are possible you may ask the judge for a "partial call" in order to abort the run and still receive partial points. The judge must agree to the "partial call" before touching any robots or the run will be scored as an "abort".
8. At the end of each run your judge will show you your run number and run score prior to submission. If you wish to contest the score for that run, you must call for a Head Judge at that time.
9. You are encouraged to keep a record of your challenge scores in the space provided at the bottom of each challenge.
10. Once you start your program then enter any random numbers, you may not interact with your computer. Interacting with your computer will count as an "abort".

Reminders for Students

General

- Measure everything with a measuring tape. Don't trust the given dimensions to be completely accurate.
- Read how assignments are scored to figure out the best strategy to get points.
- Ask questions if you are unclear about something.

Assigned Boards
- These will be the boards you will practice on and compete on.
- Make sure you know where your assigned board is at all times.
- Refer to diagram given or ask someone.

Practice/Competition Times
- 17 minute practice/competition times will be marked by a whistle being blown.
- Arrive 5 minutes early for your allotted practice/competition time and stand in the designated waiting area.
- Refer to the schedule brochure or nametag if you don't know when your practice/competition times are.
- Keep your nametag on at all times. You will need it to gain access to the board during your 17 minute period as well as to your pit area.

Random Numbers
- Many challenges have random numbers you will need to input into your program at the start of each run.
- You must use the scanf() function to read random numbers into your program.
- Random numbers will change at the start of every run. Your Table Judge will hold up and say the relevant numbers for each run.
- You may enter your random numbers only after pressing Run. Step away from the computer after entering your numbers.
- You may not strategically abort your challenge to get "better" random numbers. If your judge feels that you are aborting to get better numbers, you may be banned from attempting that challenge for the remainder of the current competition period.

Definitions and Common Terms

Location
>   Point ("at/on point N"):
>> Single Bot - Bot covers the dot
>> Bot Configuration - Bot Configuration covers the dot
>   House ("at/on house X"):
>> Single Bot - Bot covers the dot on the house
>> Bot Configuration - Bot Configuration covers the dot on the house
>   Road ("on a road/street"):
>> Single Bot - Wheels do not cross the centerline of the road except for turns
>> Bot Configuration - Center of Bot Configuration remains inside boundary of road
>   Near a House:
>> An object or Bot is near a house if a block placed between the object and the house graphic touches the Bot and the house graphic.

Time:

Immediately/Same Time:

An action happens "immediately" after or "at the same time" as another action if their difference in finishing time is less than or equal to 1 second.

Tips and Tricks

- Illustrations don't necessarily show the best configuration or path for a robot to complete a challenge.
- Use accessories or create multi-bot configurations unless specifically limited by the challenge text.
- Don't be afraid to try something "crazy". If it's crazy and it works … it's not crazy.
- If the whole challenge is too hard, go for partial points.

Sample scanf() code

1. Read a single integer into a variable
   Example Code:
   ```
   int distance;
   scanf("%d", &distance);
   ```
   Example Input:
   ```
   10
   ```

2. Read two letters into two variables
   Example Code:
   ```
   char pointA, pointB;
   scanf("%c %c", &pointA, &pointB);
   ```
   Example Input:
   ```
   N R
   ```

SCHEDULE FOR ROBOPLAY COMPETITION - DIVISION 1

SCHOOL	TEACHER	TEAM NAME	BOARD & PIT	PRACTICE TIMES	COMP TIMES
Corona del Mar Middle	Peter Selby	Asian Invasion	D1-A/1	10:00 – 10:17 11:00 – 11:17	12:45 – 1:02 2:25 – 2:42 3:25 – 3:42
Corona del Mar Middle	Peter Selby	Coder the Exploder	D1-A/2	10:20 – 10:37 11:20 – 11:37	1:05 – 1:22 1:45 – 2:02 3:05 – 3:22
Corona del Mar Middle	Peter Selby	Corona Del Mar C- Kings	D1-A/3	10:40 – 10:57 11:40 – 11:57	1:25 – 1:42 2:05 – 2:22 2:45 – 3:02
Costa Mesa Middle School	Racine Cross	Costa Mesa MS Diamond	D1-B/4	10:00 – 10:17 11:00 – 11:17	12:45 – 1:02 2:25 – 2:42 3:25 – 3:42
Costa Mesa Middle School	Racine Cross	Costa Mesa MS Boys Gold	D1-B/5	10:20 – 10:37 11:20 – 11:37	1:05 – 1:22 1:45 – 2:02 3:05 – 3:22
Costa Mesa Middle School	Mark Smith	Costa Mesa MS Silver	D1-B/6	10:40 – 10:57 11:40 – 11:57	1:25 – 1:42 2:05 – 2:22 2:45 – 3:02
Horace Ensign Intermediate	Todd Metcalf	SeaBee Infantry	D1-C/7	10:00 – 10:17 11:00 – 11:17	12:45 – 1:02 2:25 – 2:42 3:25 – 3:42
Horace Ensign Intermediate	Todd Metcalf	System11001	D1-C/8	10:20 – 10:37 11:20 – 11:37	1:05 – 1:22 1:45 – 2:02 3:05 – 3:22
Los Alisos Intermediate	Dan Moreno	Lobo STEM	D1-C/9	10:40 – 10:57 11:40 – 11:57	1:25 – 1:42 2:05 – 2:22 2:45 – 3:02
McPherson Magnet	Patricia Marzolo	Eggos	D1-D/10	10:00 – 10:17 11:00 – 11:17	12:45 – 1:02 2:25 – 2:42 3:25 – 3:42
McPherson Magnet	Patricia Marzolo	Seahorses	D1-D/11	10:20 – 10:37 11:20 – 11:37	1:05 – 1:22 1:45 – 2:02 3:05 – 3:22
McPherson Magnet	Lauri Truong	Robotopia	D1-D/12	10:40 – 10:57 11:40 – 11:57	1:25 – 1:42 2:05 – 2:22 2:45 – 3:02
McPherson Magnet	Lauri Truong	Unknown	D1-E/13	10:00 – 10:17 11:00 – 11:17	12:45 – 1:02 2:25 – 2:42 3:25 – 3:42

SCHEDULE FOR ROBOPLAY COMPETITION - DIVISION 1

SCHOOL	TEACHER	TEAM NAME	BOARD & PIT	PRACTICE TIMES	COMP TIMES
Rancho Santa Margarita Intermediate	Mark Bantle	Roadrunner Robotics	D1-E/14	10:20 – 10:37 11:20 – 11:37	1:05 – 1:22 1:45 – 2:02 3:05 – 3:22
Rancho Santa Margarita Intermediate	Mark Bantle	Roadrunner STEM	D1-E/15	10:40 – 10:57 11:40 – 11:57	1:25 – 1:42 2:05 – 2:22 2:45 – 3:02
Serrano Intermediate	Pamela Olaveson	Serrano A's	D1-F/16	10:00 – 10:17 11:00 – 11:17	12:45 – 1:02 2:25 – 2:42 3:25 – 3:42
Serrano Intermediate	Pamela Olaveson	Serrano 7th	D1-F/17	10:20 – 10:37 11:20 – 11:37	1:05 – 1:22 1:45 – 2:02 3:05 – 3:22
Serrano Intermediate	Darin Petzold	Serrano B's	D1-F/18	10:40 – 10:57 11:40 – 11:57	1:25 – 1:42 2:05 – 2:22 2:45 – 3:02
Serrano Intermediate	Darin Petzold	Serrano C's	D1-G/19	10:00 – 10:17 11:00 – 11:17	12:45 – 1:02 2:25 – 2:42 3:25 – 3:42
Sierra Vista Middle	Dieter Kutz	Charger 1	D1-G/20	10:20 – 10:37 11:20 – 11:37	1:05 – 1:22 1:45 – 2:02 3:05 – 3:22
Sierra Vista Middle	Dieter Kutz	Charger 2	D1-G/21	10:40 – 10:57 11:40 – 11:57	1:25 – 1:42 2:05 – 2:22 2:45 – 3:02
South Lake Middle	Sandra Lee	Lemon Linkbots	D1-H/22	10:00 – 10:17 11:00 – 11:17	12:45 – 1:02 2:25 – 2:42 3:25 – 3:42
South Lake Middle	Sandra Lee	South Lake Girls Code	D1-H/23	10:20 – 10:37 11:20 – 11:37	1:05 – 1:22 1:45 – 2:02 3:05 – 3:22
South Lake Middle	Nga Le	South Lake Tech Sharks	D1-H/24	10:40 – 10:57 11:40 – 11:57	1:25 – 1:42 2:05 – 2:22 2:45 – 3:02
South Lake Middle	Nga Le	South Lake Techie Girls	D1-X/25	10:00 – 10:17 11:00 – 11:17	12:45 – 1:02 2:25 – 2:42 3:25 – 3:42
South Lake Middle	Nga Le	E-Lemonaders	D1-X/26	10:20 – 10:37 11:20 – 11:37	1:05 – 1:22 1:45 – 2:02 3:05 – 3:22

SCHEDULE FOR ROBOPLAY COMPETITION - DIVISION 2

SCHOOL	TEACHER	TEAM NAME	BOARD & PIT	PRACTICE TIMES	COMP TIMES
Costa Mesa Middle School	Mark Smith	Costa Mesa HS	D2-X/27	10:40 – 10:57 11:40 – 11:57	1:25 – 1:42 2:05 – 2:22 2:45 – 3:02
Creekside High	Jason Greenwood	Awesome Sauce	D2-A/28	10:00 – 10:17 11:00 – 11:17	12:45 – 1:02 2:25 – 2:42 3:25 – 3:42
Foothill High	Jeff Farr	Youngest Ham	D2-A/29	10:20 – 10:37 11:20 – 11:37	1:05 – 1:22 1:45 – 2:02 3:05 – 3:22
Irvine High	Faten Sakallah	The WheelZ	D2-A/30	10:40 – 10:57 11:40 – 11:57	1:25 – 1:42 2:05 – 2:22 2:45 – 3:02
Irvine High	Faten Sakallah	LazerFist	D2-B/31	10:00 – 10:17 11:00 – 11:17	12:45 – 1:02 2:25 – 2:42 3:25 – 3:42
Pacifica High	Phuong Nguyen	Sea Dog 2	D2-B/32	10:20 – 10:37 11:20 - 11:37	1:05 – 1:22 1:45 – 2:02 3:05 – 3:22
Serrano Intermediate	Darin Petzold	Serrano Alumni	D2-B/33	10:40 – 10:57 11:40 – 11:57	1:25 – 1:42 2:05 – 2:22 2:45 – 3:02
Valley High	Minh Vu	ValleyFalcons	D2-C/34	10:00 – 10:17 11:00 – 11:17	12:45 – 1:02 2:25 – 2:42 3:25 – 3:42
Woodbridge High School	Kimberly Hermans	Common Official	D2-C/35	10:20 – 10:37 11:20 – 11:37	1:05 – 1:22 1:45 – 2:02 3:05 – 3:22
Woodbridge High School	Kimberly Hermans	Chaos Computer Club	D2-C/36	10:40 – 10:57 11:40 – 11:57	1:25 – 1:42 2:05 – 2:22 2:45 – 3:02

SCHEDULE FOR ROBOPLAY COMPETITION - DIVISION 3

SCHOOL	TEACHER	TEAM NAME	BOARD & PIT	PRACTICE TIMES	COMP TIMES
Foothill High	Jeff Farr	Young Ham	D3-A/37	10:00 – 10:17 11:00 – 11:17	12:45 – 1:02 2:25 – 2:42 3:25 – 3:42
Irvine Valley College	Chan Loke	The 'A' Team	D3-A/38	10:20 – 10:37 11:20 – 11:37	1:05 – 1:22 1:45 – 2:02 3:05 – 3:22
Irvine Valley College	Chan Loke	Space Bar	D3-A/39	10:40 – 10:57 11:40 – 11:57	1:25 – 1:42 2:05 – 2:22 2:45 – 3:02
La Quinta High	Kenny Snell	Blackhawks	D3-B/40	10:00 – 10:17 11:00 – 11:17	12:45 – 1:02 2:25 – 2:42 3:25 – 3:42
Los Amigos High	Helen Lee	Lobos Team A	D3-B/41	10:20 – 10:37 11:20 – 11:37	1:05 – 1:22 1:45 – 2:02 3:05 – 3:22
Los Amigos High	Helen Lee	Lobos Team B	D3-B/42	10:40 – 10:57 11:40 – 11:57	1:25 – 1:42 2:05 – 2:22 2:45 – 3:02
Northwood High	Ibeth Jaime Aguilar	hello world	D3-C/43	10:00 – 10:17 11:00 – 11:17	12:45 – 1:02 2:25 – 2:42 3:25 – 3:42
Northwood High	Ibeth Jaime Aguilar	this is my favorite	D3-C/44	10:20 – 10:37 11:20 – 11:37	1:05 – 1:22 1:45 – 2:02 3:05 – 3:22
Northwood High	Ibeth Jaime Aguilar	Team 11	D3-C/45	10:40 – 10:57 11:40 – 11:57	1:25 – 1:42 2:05 – 2:22 2:45 – 3:02
Pacifica High	Phuong Nguyen	Sea Dog 1	D3-D/46	10:00 – 10:17 11:00 – 11:17	12:45 – 1:02 2:25 – 2:42 3:25 – 3:42
Pacifica High	Angela Liogys	Sea Dogs #3	D3-D/47	10:20 – 10:37 11:20 – 11:37	1:05 – 1:22 1:45 – 2:02 3:05 – 3:22
Westminster High	Huy Pham	WHS Lions	D3-D/48	10:40 – 10:57 11:40 – 11:57	1:25 – 1:42 2:05 – 2:22 2:45 – 3:02

Acknowledgements

A very special thank you to Irvine Valley College, Corine Doughty, Dean of Instruction & EWD, SOCCCD Board of Trustees, Chancellor, Irvine Valley College President, and Vice President of Instruction for their support of the Orange County C-STEM Project and its success.

Our appreciation and recognition of the following individuals who believe in the importance of C-STEM and in the power of innovation and collaboration to create opportunities for students in Orange County:

- Ruth Abatzoglou, Santa Ana USD
- Kathy Adams, Irvine Valley College
- Kathy Boyd, Orange USD
- Gustavo Chamorro, LA/OC RC
- Christine Cherry, CTEp
- Marie Christie Dam, Prop 39 Director
- Vince Cooper & Team, Irvine Valley College
- Linda DiMario, Irvine Chamber of Commerce
- Joe Erven, McPherson Magnet
- Jeff Farr, Foothill HS
- Debra Friedman, Saddleback Valley USD
- Juan Morales Gutierrez, Irvine Valley College
- Chris Harrington, CSU Fullerton
- Milton Hernandez, Irvine Valley College
- Carol Hume, Coastline ROP
- Jeffry Hurlbut, Irvine Valley College
- Don Isbell, Santa Ana USD
- Patsy Janda, Irvine USD
- Jillian Johnson-Sharp, CTEp
- Merry Kim, Irvine Valley College
- Carolyn Larson, University HS
- Patricia Lim, Calit2, UC Irvine

- Grant Litfin, Tustin USD
- Chan Loke, Irvine Valley College
- Maria Madrigal, Digital Media Center
- Rachel Manders, Irvine Valley College
- Raul Manriquez & His Staff, University HS Beverly Matsuda, Northwood HS
- Connie Mayhugh, Huntington Beach UHSD
- Alisa McCord, OCDE
- Tiffany Nguyen, Irvine Valley College
- Bruce Noble, DSN - Energy
- Laura Ott, Saddleback Valley USD
- Connie Park, University HS
- Len Pettis
- Efrain Quintanilla, Irvine Valley College
- Debra Richardson, UC Irvine
- Sarah Santoyo, Rancho Santiago CCCD
- Dejah Swingle, Mt. San Antonio College
- Laurie Truong, Orange USD
- Keith Tuominen, Irvine USD
- Aurora Valencia, Irvine USD
- Michael Vossen, Newport-Mesa USD
- Peggy Webster, Newport-Mesa USD

Thank you to Irvine Valley College-ATEP, Irvine USD, University High School, CTEp, Newport-Mesa USD Office of College and Career Education, Coastline ROP, and UC Davis C-STEM Center staff, volunteers and participants in the fourth annual C-STEM Day in Orange County.

ORANGE COUNTY C-STEM

Participating Middle/High School, ROP and College Instructors

- Peter Selby (Physics) - Corona del Mar Middle School
- Racine Cross (Math) - Costa Mesa High School
- Mark Smith (Computer Programming/Math) - Costa Mesa Middle School
- Jason Greenwood – Creekside High School
- Jeff Farr (Engineering) - Foothill High School
- Todd Metcalf – (Math) Horace Ensign Intermediate
- Faten Sakallah – Irvine High School
- Chan Loke (Computer Science) - Irvine Valley College
- Kenny Snell – La Quinta High School
- Dan Moreno – Los Alisos Intermediate
- Helen Lee – Los Amigos High School
- Marilyn Cunneen (Digital Media Arts/Video Game/Virtual Enterprise) – Marina High School
- Patricia Marzolo - McPherson Magnet School
- Lauri Truong – McPherson Magnet School
- Ibeth Jaime Aguilar (Computer Science) - Northwood High School
- Angela Liogys – Pacifica High School
- Phuong Nguyen – Pacifica High School
- Mark Bantle (S.T.E.M.) - Rancho Santa Margarita Intermediate
- Pamela Olaveson – Serrano Intermediate
- Darin Petzold (Engineering/PLTW) - Serrano Intermediate
- Dieter Kutz – Sierra Vista Middle School
- Nga Le – South Lake Middle School
- Sandra Lee – South Lake Middle School
- Minh Vu (Engineering/CAD) - Valley High School
- Huy Pham (Science) – Westminster High School

ABOUT C-STEM ORANGE COUNTY PROJECT ORGANIZER & SPONSORS

IRVINE VALLEY COLLEGE CAREER TECHNICAL EDUCATION (CTE)

Career Technical Education (CTE) programs at Irvine Valley College are designed to prepare students for a high-skill, high-wage, high-demand career within the current job industry. Irvine Valley College offers over 30 career certificates designed for completion in two years or less. We welcome you to explore IVC's wide selection of outstanding Career Technical Education Programs, including Engineering, Biotechnology, Interactive Media Arts, Laser Technology and more. A Career Technical Education Counselor is available to assist you in exploring your educational and career options at Irvine Valley College. To schedule a counseling appointment with the CTE Counselor please call, 949-451-5592. For more info visit http://academics.ivc.edu/cte or email ivc-cte@ivc.edu.

DOING WHAT MATTERS FOR JOBS AND THE ECONOMY

Among the activities of the California Community Colleges Chancellor's Office, the programs of the Division of Workforce and Economic Development bridge the skills and jobs mismatch and prepare California's workforce for 21st century careers. The Division collaborates with employers, organized labor, local communities, and their community colleges.

The Opportunity

The opportunity exists for community colleges to become essential catalysts in California's economic recovery and jobs creation at the local, regional and state levels.

The Strategy

Doing What MATTERS for jobs and the economy is a four-pronged framework to respond to the call of our nation, state, and regions to close the skills gap. The four prongs are:

- Give Priority for Jobs and the Economy
- Make Room for Jobs and the Economy
- Promote Student Success
- Innovate for Jobs and the Economy

Goals

The goals of Doing What Matters for Jobs and the Economy are to supply in-demand skills for employers, create relevant career pathways and stackable credentials, promote student success and get Californians into open jobs.

The Road Ahead

A focus on priority/emergent sectors and industry clusters; take effective practices to scale; integrate and leverage programming between funding streams; promote common metrics for student success; remove structural barriers to execution.

California's community colleges are vital to the economy

The California Community Colleges play an important role in boosting our state's economy by serving more than 2.6 million students a year. In fact, one out of four community college students in the U.S. is enrolled in a California community college, making it the nation's largest system of higher education.

Our 112 colleges provide students with the knowledge and background necessary in today's competitive job market. With a wide range of educational offerings, the colleges provide workforce training, basic skills courses in English and math, certificate and degree programs and preparation for transfer to four-year colleges and universities. In a difficult economy, a college education is critical. Our campuses also serve as a natural gateway for veterans seeking a degree or job skills to transition to civilian life.

INFORMATION & COMMUNICATION TECHNOLOGY - DIGITAL MEDIA SECTOR NAVIGATION TEAM, ORANGE COUNTY

Information Communications Technologies, ICT, and Digital Media are now integrated into almost every technology, industry and job. Consequently, understanding ICT and Digital Media as a sector requires that we look at the producers of and the users of ICT and Digital Media.

For more information, visit www.ict-dm.net.

PROP 39

The goal of the Proposition 39 Clean Energy Workforce Program Grant is to improve existing clean energy programs at California Community Colleges and to grow and strengthen the regional approach to clean energy workforce development. This specific grant targets occupations in the commercial, industrial and institutional sectors of energy efficiency and clean energy generation. Energy efficiency programs – for the purpose of this Prop 39 grant -reduce demand side energy consumption in commercial, institutional and industrial buildings.

The Proposition 39 grant funds the LA/Orange County Regional Program Improvement Project. This project aims to grow and strengthen the LA/OC Clean Energy Regional Consortium, made up of regional partners interested in improving LA/Orange County community colleges' regional approach to clean energy workforce development. The project also aims to improve and expand existing clean energy programs at community colleges in the region.

For more information, visit www.ecusectordwm.com/prop-39/ .

BE A PART OF C-STEM

The UC Davis Center for Integrated Computing and STEM Education (C-STEM) aims to transform computing, science, technology, engineering, and mathematics (C-STEM) education through integrated learning, guided by two key objectives: To close the mathematics achievement gap that exists in K-12 education, and to develop students' 21st century problem solving skills in order to tackle real world concerns.

The C-STEM program has been implemented across various regions in California, and will soon be implemented in new areas across the United States. The program only works when everyone is involved to help students succeed: parents, teachers, school administration, and community.

We are looking forward to seeing you become part of C-STEM in any of the following ways:

Volunteer your time:
C-STEM events such as C-STEM Day wouldn't be possible without volunteers. No experience required! In addition, if you are a C-STEM teacher, there are numerous ways you can help the C-STEM program, at your local district, at conferences, or at other events.

Make a donation:
The C-STEM Center is currently looking for individual, corporate, and foundation sponsors to help fund C-STEM scholarships, events, and programs. We can work with you to design a sponsorship package that meets your needs and helps provide C-STEM programming and educational opportunities to more students across the nation.
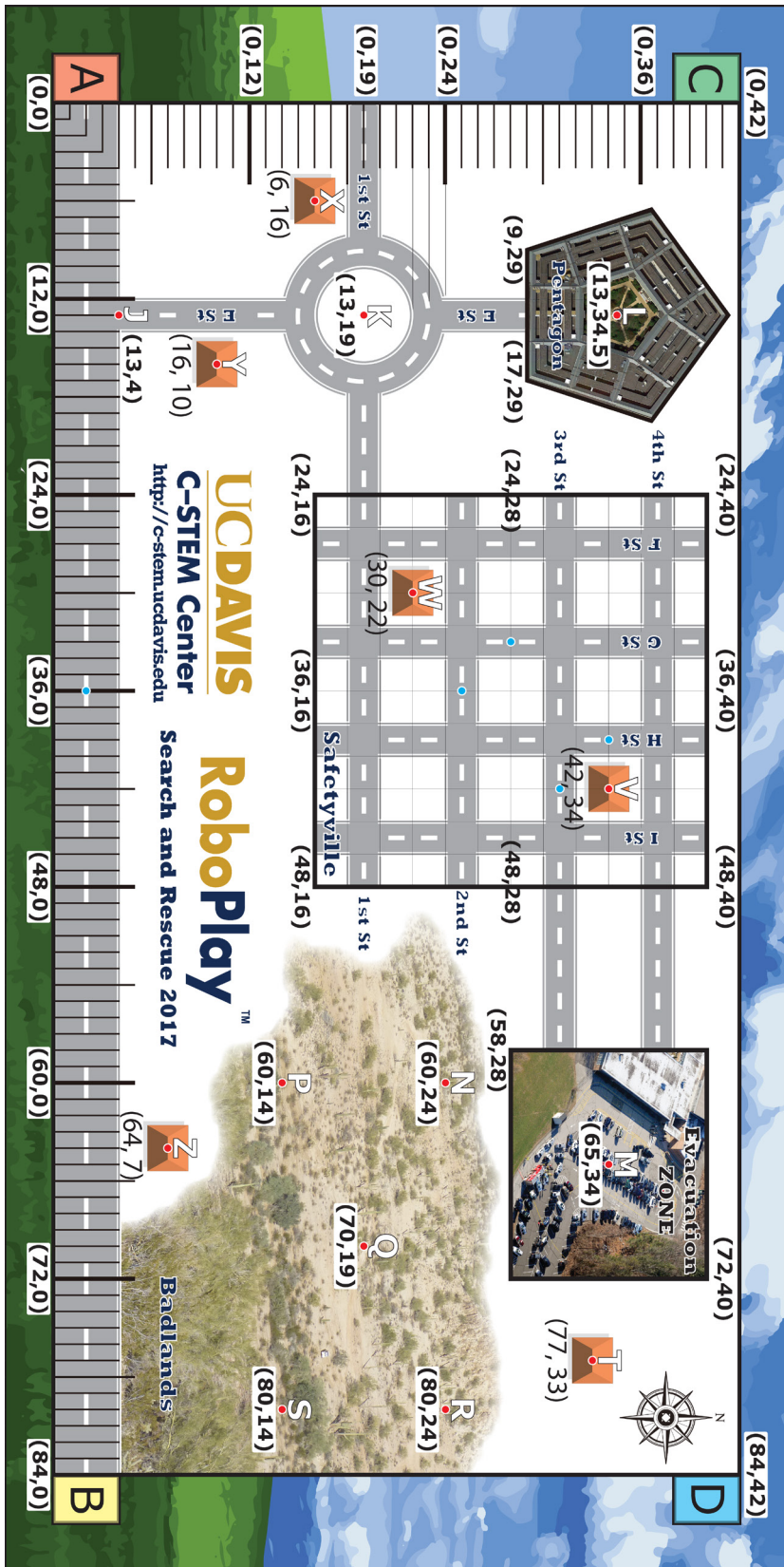
Talk to others about C-STEM:
Help bring C-STEM programming to your local school and district! If you liked what you saw at C-STEM Day, and would like to see it in your child's local school and district, contact Harry Cheng, C-STEM Center Director, (530) 752-9082, hhcheng@ucdavis.edu. It also helps to talk to your teachers and principals at your schools and help us connect with them!

To Participate in C-STEM Project in Orange County:
For more information specific to participating in Orange County C-STEM Project, please contact Merry Kim, C-STEM OC Coordinator at Irvine Valley College, (949) 282-2724.
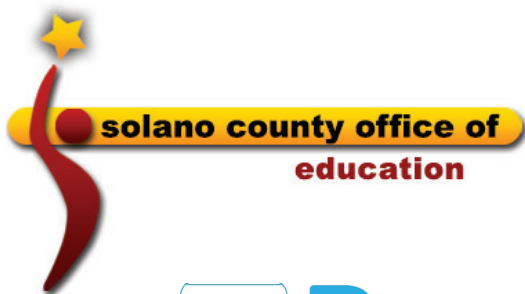
CHALLENGE BOARD

IRVINE VALLEY COLLEGE

ATEP
ADVANCED TECHNOLOGY
& EDUCATION PARK | TUSTIN, CA

Doing What MATTERS
FOR JOBS AND THE ECONOMY

Information Communications Technologies & Digital Media
Sector Navigation Team
CALIFORNIA COMMUNITY COLLEGES

California Clean Energy
LA/OC Consortium

Irvine Unified
School District

SoftIntegration®

NSF

NEWPORT - MESA
UNIFIED SCHOOL DISTRICT

CAREER TECHNICAL EDUCATION PARTNERSHIP
CTEp
Central Orange County

COASTLINE
REGIONAL OCCUPATIONAL PROGRAM
Innovate · Educate · Inspire

BECKMAN COULTER

UCDAVIS
UNIVERSITY OUTREACH AND
INTERNATIONAL PROGRAMS

California Department of
EDUCATION

UCDAVIS
COLLEGE OF ENGINEERING

Hewlett Packard
Enterprise

Yolo County
OFFICE OF EDUCATION

solano county office of
education

Barobo

DONALD BREN SCHOOL OF
INFORMATION & COMPUTER SCIENCES
UNIVERSITY of CALIFORNIA · IRVINE

http://c-stem.ucdavis.edu