

San Joaquin Delta College Engineering & Technology Day



Friday January 24th, 2025 SAN JOANQUIN DELTA COLLEGE 5151 Pacific Ave, Stockton, CA 95207



AFFORDABLE EDUCATION Visit Us @ www.deltacollege.edu







#### SAN JOAQUIN DELTA COLLEGE ENGINEERING & TECHNOLOGY DAY 32ND ANNUAL COMPETITION EVENT



San Joaquin Delta College Engineering/ Engineering Technology Department extends a warm welcome to all teams competing in the **2025** Engineering & Technology Competition event.

#### Index

General Information
Schedule6
Check List
Campus Maps8
SJDC Map
Parking Map
Holt Center Classroom Map
Drafting Competitions
Entry Form
Competition Seating Chart
Competition Day Sample Instructions
Competition Tentative Scoring Rubric
Desing Project Competition
Entry Form
Competition Instructions
Competition Day Testing Area Map
Competition Day Sample Instructions
Competition Scoring Rubric
Robotics Competition
Entry Form
Competition Instructions
Competition Scoring Rubric



#### SAN JOAQUIN DELTA COLLEGE ENGINEERING & TECHNOLOGY DAY 32ND ANNUAL COMPETITION EVENT



#### **Index (Continued)**

Contestants sample Contestant ID# Tags

Bus	Request Form	28
Pers	sonal Waivers and Release of Liability	30
ı	Media, Advertising and Logos	
ı	Media Release Form	
I	Personal Waiver of Liability	
Cam	npus & CTE Department Tours	35
Awa	ard Ceremony	38
٦	Tentative Schedule	
S	Seating Chart	
Con	ntestant ID# Tags	41
	SJDC Staff, Industry Volunteers & Student Volunteer Name Tags	



32<sup>ND</sup> ANNUAL COMPETITION EVENT



Engineering & Technology Day 2025

#### Dear Instructors:

The San Joaquin Delta College Engineering Department is pleased to invite students from your school to participate in the Thirty-Second Annual Engineering & Technology Day at Delta College on Friday, January 24th, 2025 from 8:30 a.m. to 2:30 p.m.

The day's activities will include drafting contests in the morning, a robotics competition and a "Maze Machine" design competition held from 9:30 a.m. to 1:30 p.m. This year plaques will be awarded for first, second, and third places for each competition. A Career Orientation Seminar and an Awards Ceremony will be held from 1:45 p.m. to 2:30 p.m. In addition, campus tours will be available from 9:30 a.m. to 1:30 p.m., as well as tours of specific facilities, such as welding, electron microscopy and others.

Entry forms and details of the Robotics competition and Maze Machine design competition are enclosed. The Robotics Competition may be entered by individual students or by teams with a maximum of two students. The Maze Machine design competition may have teams up to a maximum of four students. Students may participate in any of the competitions. Individual times will be provided for students/teams for the design competitions. Please contact us if you have questions about the competitions.

Students competing in the AutoCAD/Inventor/Fusion 360 drafting contest will not be allowed to use PGP files, custom menus, student-loaded software or other personal equipment on the day of the competition. The competition will be held in the Delta CAD lab, which uses Windows 7, AutoCAD 2024, Inventor 2024, and Revit 2024, Fusion 360-2024.

First-year and advanced students competing in the Architectural/Civil Drafting contest will be using AutoCAD or Revit.

Please note the deadline for receiving entries is 4:00 p.m., Friday, **January 10, 2025**. To ensure space for contestants, we will not be able to accept late entries. If an entry form and entry fee have not been received by the deadline date, the student will not compete. Please reproduce the forms as necessary.

Please prioritize your school's drafting contest entrants by indicating the contestant's rank (i.e., 1, 2, 3...) in the upper right-hand corner of the entry form. These numbers will be used if we have more applicants than available space. You will be notified if this situation arises. As we have reached maximum capacity in the past, we may be required to apply this guideline.





32<sup>ND</sup> ANNUAL COMPETITION EVENT



As in previous years, <u>contestants must be present at the awards ceremony to receive an award.</u> If the award recipient is not present, then the award will be given to the next ranking contestant.

Delta College Career Technical Education has funds to pay for bussing as needed by participants. Attached is a Bus Request Form that needs to be returned as soon as possible. We hope to accommodate every request for bus costs, but it will depend upon final costs so the requests will be filled on a first come-first served basis. Please request an estimated cost from your District's transportation department and submit it with the request form. This form may be sent before the other forms are completed. After the day of the competition, an invoice will need to be submitted for payment. Payments cannot be made without an invoice. For additional information regarding bus request, please contact Patricia Ochoa directly at (209) 954-5089, or via email at: patricia.ochoa@deltacollege.edu

With the cost of education increasing, high school students need to know what facilities and options are available at their local community college. Engineering & Technology Day will help provide this information. We hope you will encourage your students to participate in this event.

We look forward to seeing you and your students at Engineering & Technology Day – 2025. All questions concerning this competition should be directed at Danell Hepworth. Please reach her via phone at (209) 954-5230 Division Office and leave her a message, or email her directly at: danell.hepworth@deltacollege.edu

Cordially,

#### Osvaldo Escalona, MsEngr, P.E.

Prof., Applied Science, Business, & Technology Division San Joaquin Delta College osvaldo.escalona@deltacollege.edu (209)954-5230

#### Danell Hepworth, P.E.

Prof., Applied Science, Business, & Technology Division San Joaquin Delta College <a href="mailto:danell.hepworth@deltacollege.edu">danell.hepworth@deltacollege.edu</a> (209)954-5230



5151 PACIFIC AVE. STOCKTON CA, 95204



#### SAN JOAQUIN DELTA COLLEGE ENGINEERING & TECHNOLOGY DAY-2025 32<sup>ND</sup> ANNUAL COMPETITION EVENT



#### Schedule January 24, 2025

Design Project Submission & Volunteer Check In		Holt 132	8:30-9:15 am
Instructor Check in Drafting Competition AutoCAD/Inventor Drafting	g Contests*	Holt 140	8:30-9:15 am
Grades 9 – 10	First Year	Holt 130	9:00 am – 10:35am
Grades 11 – 12	First Year	Holt 130	10:40 am – 12:15 pm
Grades 10 – 12	Advanced	Holt 130	9:00 am – 12:15 pm
Architectural/Civil Drafting	g Contests		
Grades 9 – 12	First Year	Holt 130	9:00 am – 12:15 pm
Grades 10 – 12	Advanced	Holt 130	9:00 am – 12:15 pm
Robotics Competition* (Practice & Competition)		TBD	9:30-1:30 pm
Maze Machine Design* Campus Tours Instructors' Meeting Lunch (provided) Career Orientation/Awards Cer	emony	Holt 131 Holt 132 (Meet outside) Holt 140 Danner Hall Atherton Auditorium	9:30-1:30 pm To be determined. 10:45 am-11:30 am 12:15 pm-1:00 pm 1:45-2:30 pm

<sup>\*</sup>Times may vary depending on the number of contestants in each category

NOTICE: Regular classes will be in session during Engineering Day activities. Please do not disturb classes meeting in the areas that you visit.

Busses will drop students at <u>L3</u> Parking Lot, Busses will park at <u>B3</u>

SEE CAMPUS MAP & PARKING MAP ON THE FOLLOWING PAGES....

<sup>+</sup>Individual teams will be given assigned competition times.







Check List

Check When Complete	Task	Description	Due Date
	Turn in all paperwork and have participants register for the Drafting Contest Competition	Submit Student Entry Form – <b>Drafting Contest</b> , and mail with entry fee. See Entry Form for additional details	4:00 pm on Friday, January 10, 2025
	Turn in all paperwork and have participants register for the Design Project Competition	Submit Student Entry Form – <b>Design Project Competition</b> , and mail with entry fee. See Entry Form for additional details	4:00 pm on Friday, <b>January 10, 2025</b>
	Turn in all paperwork and have participants register for the Robotics Competition	Submit Student Entry Form – <b>Robotics Competition</b> , and mail with entry fee. See Entry Form for additional details	4:00 pm on Friday, <b>January 10, 2025</b>
	Turn in Bus Request Form	Submit this form to request <b>funding for a bus</b> . These forms will be on a first come – first served bases. See Entry Form for additional details.	First come – First Served Basis
	MAKE SURE THAT FORMS ARE COMPLETE WITH ALL REQUIRED SIGNATURES (If a participant is under 18 – they will need parental/guardian signatures).  ALPHABETIZE liability releases and media release forms by students' last name. Mentors and other adult volunteers must also complete forms.	Please alphabetize by last name and place all paperwork in an envelope with the name of your school on the front and address to:  Applied Science, Business & Technology Division Holt Building, Room 140 San Joaquin Delta College 5151 Pacific Ave. Stockton, CA 95207  If you waited until the last minute, personally. drop off the packet to Holt 140, before the end of the business day.	4:00 pm on Friday, January 10, 2025
	* SJDC media release  * SJDC liability waiver  Only those participants who have turned in forms will get event wristbands and lunch.	No late paperwork will be accepted, and your team will be disqualified after the due date  Absolutely no exceptions.	4:00 pm on Friday, January 10, 2025
	Engineering & Technology Day 32 <sup>nd</sup> Annual Competition	Teams are highly encouraged to find out about the Career Technical Education (CTE) programs offered at SJDC. See <a href="https://deltacollege.edu/department/cte-and-workforce-development">https://deltacollege.edu/department/cte-and-workforce-development</a> for information.	Friday January 24th 2025 (See schedule)



QR Code for Event Information & Electronic Package Download <a href="https://www.deltacollege.edu/engineering-day">https://www.deltacollege.edu/engineering-day</a>

32<sup>ND</sup> ANNUAL COMPETITION EVENT

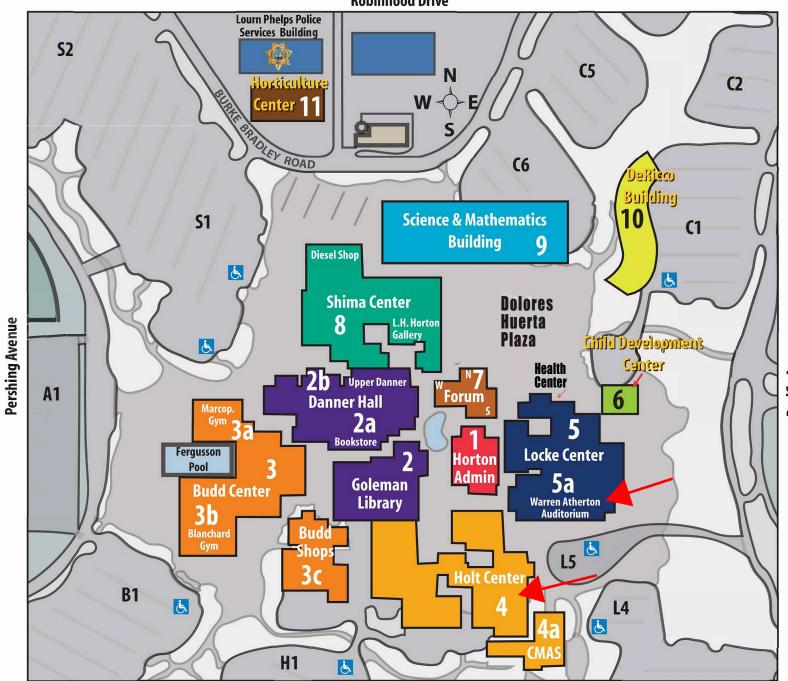


# CAMPUS MAPS & HOLT CENTER MAP

32<sup>ND</sup> ANNUAL COMPETITION EVENT



#### **Robinhood Drive**



March Lane

4 Holt, 4a - Center for Microscopy & Allied Science

Locke, Tillie Lewis, Al Muller Studio, 5a - Warren Atherton Auditorium, Box Office

PARKING LOT LEGEND

A = Athletic

B = Budd

C = Cunningham

H = Holt

L = Locke

S = Shima

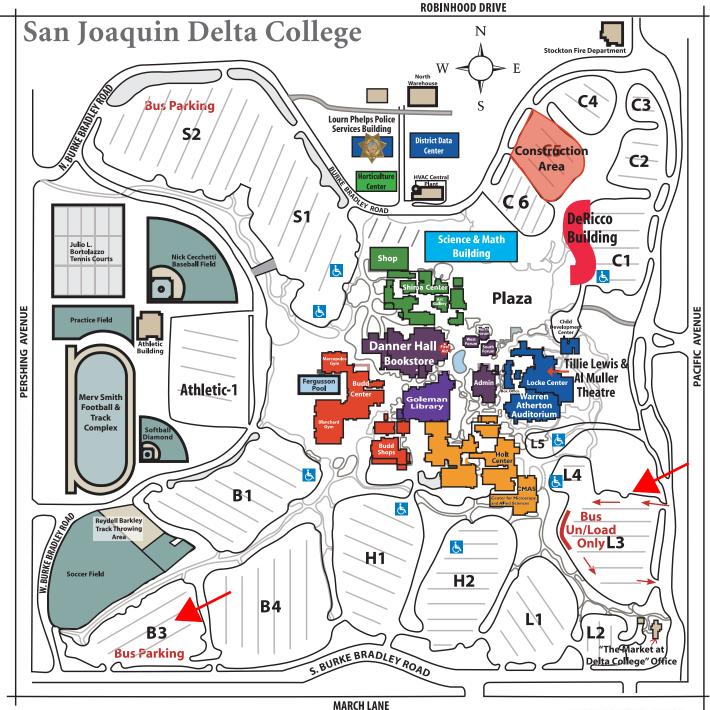


Pacific Avenue



32<sup>ND</sup> ANNUAL COMPETITION EVENT





#### **Special Event Bus Information**

Bus Un/Loading is available in the **L3** parking lot only WEEKDAY bus parking is allowed in the **B3** parking lot The speed limit in all lots is 10mph

SJDC Police Department 209-954-5000

#### **PARKING LOT LEGEND**

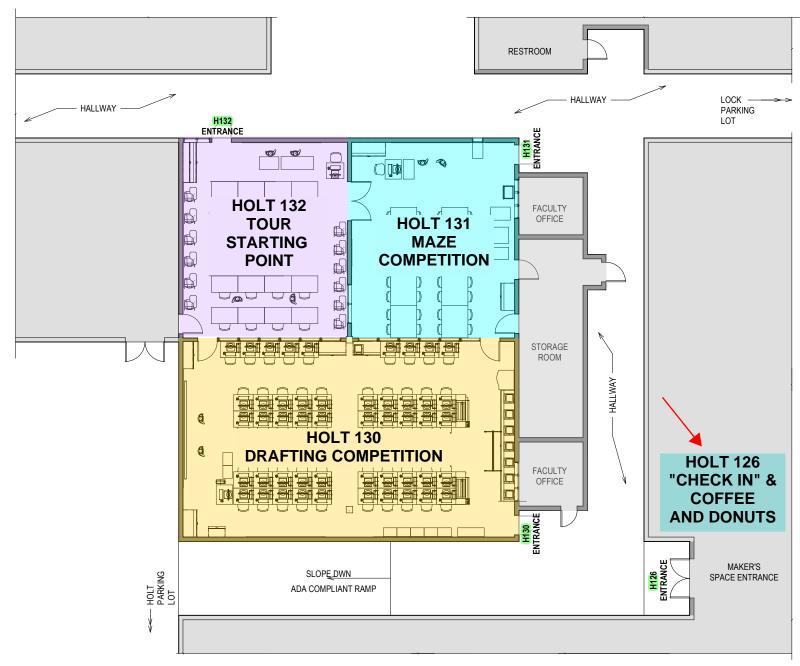
- A = Athletic
- B = Budd
- C = Cunningham
- H = Holt
- L = Locke
- S = Shima





32<sup>ND</sup> ANNUAL COMPETITION EVENT





## ENGINEERING DEPARTMENT COMPETITION MAP



32<sup>ND</sup> ANNUAL COMPETITION EVENT



# DRAFTING COMPETITION

**Drafting Concepts** 

AutoCAD/Inventor Drafting Contests\*

Grades 9 – 10	First Year	Holt 130	9:00 am – 10:35am
Grades 11 – 12	First Year	Holt 130	10:40 am – 12:15 pm
Grades 10 – 12	Advanced	Holt 130	9:00 am – 12:15 pm

Architectural/Civil Drafting Contests

Grades 9 – 12	First Year	Holt 130	9:00 am – 12:15 pm
Grades 10 – 12	Advanced	Holt 130	9:00 am – 12:15 pm









#### Student Entry Form - Drafting Contests

Clearly print	t or type all information.	
Student:	Last Name	First Name
	Last Ivaine	
Instructor: _		
		enter only one drafting contest. Students may compete use check the drafting contest in which you wish to
Drafting Cor	ntest:	
Begin	ning AutoCAD/Inventor Drafting Contest, Gra	ades 9 – 10 (First Year Drafting Students Only)
Begin	ning AutoCAD/Inventor Drafting Contest, Gra	ades 11 – 12 (First Year Drafting Students Only)
Adva	nced AutoCAD/Inventor Drafting Contest, Gra	ades 10 – 12
Begin	ning Architectural/Civil Drafting Contest, Gra	ides 9 – 12
Adva	nced Architectural/Civil Drafting Contest, Gra	des 10 – 12
	orm must be received by <mark>4:00 pm on Friday, Ja</mark> m. Make checks payable to SJDC. Entry forms	nuary 10, 2025. A \$2.00 entry fee must be attached to should be mailed or delivered to:
Building, Ro	Delta College Avenue	
All questions	s concerning this competition should be direct	ed to Danell Hepworth via email:



danell.hepworth@deltacollege.edu or call at (209)954-5230 Division Office and leave her a message.



32<sup>ND</sup> ANNUAL COMPETITION EVENT



## DRAFTING DESIGN COMPETITION SEATING CHART





32<sup>ND</sup> ANNUAL COMPETITION EVENT



#### Thank you for being with us!

The following pages will contain important information that has been put together such that you know exactly what to expect on the day of the competition.

As a drafting contestant you have received a package which contains information about you the contestant. Information such as School name, student name, competition time, and competition location (Refer to Appendix for Name Tag Example). The Engineering Drafting Laboratory will be subdivided into different sections, you have been provided a map such that you are aware of the seating arrangement. Additional signs will be placed around the room such that you the contestant understand where to sit

Please arrive 5 minutes before the competition. The proctors will hand you the problem according to your expertise level:

#700's – Advanced AutoCAD/Inventor Drafting #500's – Beginning AutoCAD/Inventor Drafting (9-10 grades) #600's – Beginning AutoCAD/Inventor Drafting (11-12 grades) #800's – Beginning Architectural/Civil Drafting #900's – Advanced Architectural/Civil Drafting

Students, you have a card with your contestant ID number printed on it. Ensure that you are seated in the correct seating section.

#### STUDENT: DO NOT PUT YOUR NAME ON YOUR DRAWING, ONLY PUT YOUR NUMBER.

You are **NOT** allowed to have a flash drive. You will be disqualified if you use a flash drive. You are allowed to save to the Desktop for temporary storage.

When you are finished, you must turn in your drawing and the copy of the problem. You will be given hardcopy guidelines in addition to your problem giving you further instructions for printing and file management.

Beginning Auto CAD/Inventor Drafting (9-10 grades) students must be finished by 10:35 so that the Beginning Auto CAD/Inventor Drafting (11-12 grades) students can start by 10:40 so please remember that by 10:25 you need to finish up, remember you need time to print. Grades (11-12) and Grades (10-12) students should be finished by 12:15. Please remember that by 12:00 you need to finish up, so that you have time to print.

Architectural and Civil Drafting Contestants in both First Year and Advanced are allotted the whole entire time. Please remember that by 12:00 you need to finish up, so you have time to print.

When you are finished you are finished with your drawings, and you have submitted it, the Proctors will begin assessing the drawings. When finished assessing all drawings, the Proctor will have a Reporting Sheet with the Top 3 Winners from each category.

There will be industry and student volunteers near you. Do not hesitate to raise your hand and ask questions if you have any.

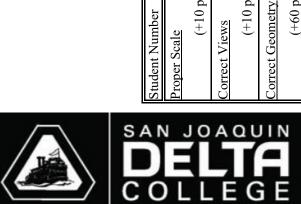


32<sup>ND</sup> ANNUAL COMPETITION EVENT



# Drafting Contest Judging Rubric Example

DRAFTING - CCMPETITIO



(+10 possible points))

(+10 possible points))

(+60 possible points))

roper Line Types & Line Weights

(+5 possible points))

orrect Text & Text Height

(+5 possible points))

(+10 possible points))

32<sup>ND</sup> ANNUAL COMPETITION EVENT



## MAZE DESIGN COMPETITION

Maze Machine Design<sup>+</sup>

Holt 131

9:30-1:30 pm

+Individual teams will be given assigned competition times.



#### SAN JOAQUIN DELTA COLLEGE ENGINEERING & TECHNOLOGY DAY-2025 32<sup>ND</sup> ANNUAL COMPETITION EVENT



#### Student Entry – Maze Machine Design Project Competition

Clearly letter or type all information

Student Team:		
	Last Name	First Name
School:		
Instructor:		
Гlll	stan mana than an a Mara Maala	but them count he were then one decime out on

Each school may enter more than one Maze Machine, but there cannot be more than one design entered per student/team.

Each team will be given an assigned time for judging on the day of the competition. The team must report to Holt 131 five minutes before the assigned time.

You must submit this form to enter a Maze Machine. This entry form must be received by 4:00 pm on Friday, January 10, 2025. A \$4.00 entry fee per team must be attached to the entry form. Make checks payable to SJDC. Entry forms should be mailed or delivered to:

Applied Science, Business & Technology Division Holt Building, Room 140 San Joaquin Delta College 5151 Pacific Avenue Stockton, CA 95207

All questions concerning this competition should be directed to Danell Hepworth via email: <a href="mailto:danell.hepworth@deltacollege.edu">danell.hepworth@deltacollege.edu</a> or call at (209)954-5230 Division Office and leave her a message.





#### SAN JOAQUIN DELTA COLLEGE ENGINEERING & TECHNOLOGY DAY-2025 32<sup>ND</sup> ANNUAL COMPETITION EVENT



#### Maze Design Competition

#### Objective:

The objective of this contest is to design, build and test a "Rube Goldberg- like device" which will carry a golf ball through a planned course, incorporating as many lifting mechanisms as possible, and return the ball to the starting point. The design must satisfy the limitations and specifications given below. The device will be constructed prior to the competition. The total number of team members shall not exceed four.

#### **Device Materials:**

The device or "Maze Machine" may be constructed using any available materials except ignitable fuels or propellants producing heat or flames. Each device must pass a safety inspection before operation. Uncontrolled or unshielded falling or launched objects, hazardous materials or spills, hazardous flammable substances, rocket engines, cigarette lighters, fireworks, gun powder, faulty wiring, or any other potential hazard can lead to disqualification. High school teachers are responsible for the assurance that the device will besafe and not present a hazard to either operators or observers. Suggested lifting mechanisms include energy storage devices such as dropping weights, rubber bands, springs, spring-wound motors, electric motors, or air pumps. Motors must not exceed 9 volts DC. No energy sources from outside the device will be allowed, except gravity. The ball will be a standard (regulation size and mass) golf ball. The golf ball used for the competition will be furnished by the contest supervisor.

#### Device Size and Weight:

The Maze Machine must fit within an imaginary box 1.0 meter long x 0.75 meter wide x 0.75 meter high, but it need not be enclosed. All portions of the path through which the ball will travel and all lifting mechanisms shall be accessible and visible during the competition. The ball may travel through pipe or tubing. A 1.0 meter x 1.0 meter x 1.0 meter minimum flat, level area will be provided for the device to rest on during the competition. There is no weight limitation. Contestants must have their device set-up and ready to test when called upon to start. The competition is from 9:30 am to 1:30 pm on Engineering and Technology Day.

#### Verification of Travel Path:

Each team will submit a flow diagram to the contest supervisor which describes the path the golf ball will travel, and the lifting mechanisms incorporated in the design, listing in sequence the travel of the ball and the type of energy storage used for each lifting mechanism. The one-page flow diagram must be easy to follow, well organized, neatly done, and contain brief text as necessary. It should include the planned distance of rolling travel of each path segment and planned height change of each lifting mechanism. These values will then be measured and verified by the contest judges.







#### SAN JOAQUIN DELTA COLLEGE ENGINEERING & TECHNOLOGY DAY-2025 32ND ANNUAL COMPETITION EVENT



#### Maze Design Competition

#### Device Activation and Ball Travel:

The Maze Machine will start when one of the contestants places (not pushes or forces to move) the ball at the starting point. Energy storage devices within the maze may be activated/set prior to start. Once the device has started, the contestants must step back from the device and wait behind a line designated by the contest supervisor. The ball must travel the path as designated by the submitted flow diagram and return to the starting point where the ball was dropped. If the ball stops or leaves the path of travel and must be restarted, three restarts will be allowed. One member of the team may restart, with the restart point being the original starting point. Two minutes will be allowed for modification or adjustment of the device for each restart. If more time is needed, the entry will be disqualified. There will be a 15 point penalty for each restart. If the ball does not follow the path as shown on the flow diagram, there will be a 15 point penalty for each lifting mechanism that is by-passed or missed.

#### **Scoring:**

- \*One point awarded per inch of rolling travel made by the golf ball.
- \*Five points awarded per inch of <u>maximum</u> vertical travel; from the lowest point the golf ball reaches to the highest point.
- \*Fifteen points awarded for each <u>distinctly different</u> lifting mechanism which operates successfully. A successful lifting device must lift the golf ball from a previously horizontal or downwards path at least 6" above its previous height.
- \*Fifteen point penalty for each restart as described above.
- \*Fifteen point penalty for each lifting mechanism that is by-passed or missed. The entry will be disqualified if the golf ball does not return to the starting point. The entry will be disqualified if a flow diagram is not submitted.

First, second, and third place plaques will be awarded to the three entries earning the most points.

In the event of a tie, the device with the most lifting mechanisms which operated successfully will be the winner.

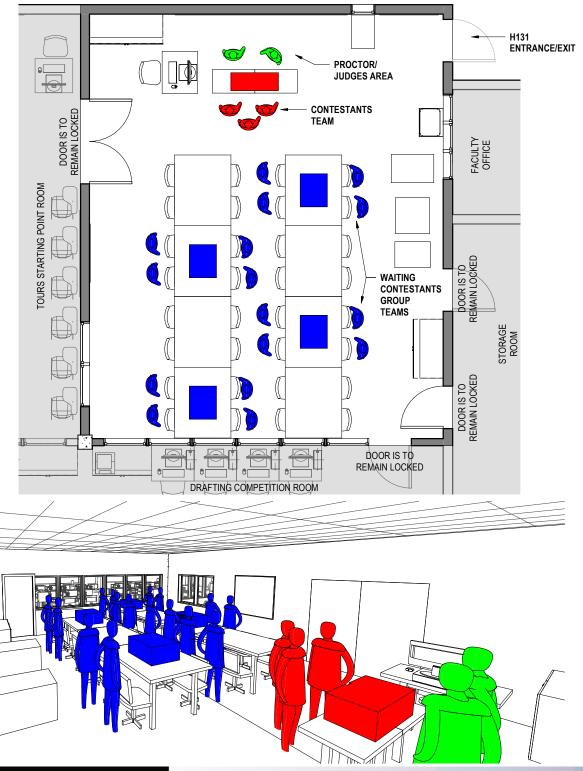




32<sup>ND</sup> ANNUAL COMPETITION EVENT



#### MAZE DESIGN COMPETITION TESTING AREA MAP







32<sup>ND</sup> ANNUAL COMPETITION EVENT



#### Thank you for being with us!!

The following pages will contain important information that has been put together such that you know exactly what to expect on the day of the competition. In the **Maze Design Competition Section**, you will find the following information:

Maze Design Competition Overview Scoring Rubric Maze Design Competition Room Map

Each Team group of contestants had received a package. This package contains School name, student names, competition time, and competition location (Refer to Appendix for Name Tag Example). Individual teams have been given an allotted time for testing.

The Maze Design Team of Competitors will arrive to Holt 131 for competition based on the schedule, provided in your package.

Students Groups you have a card with your number printed on it. Ensure that you arrive at the correct time to be considered for testing. Students not arriving at the correct time will be considered forfeited.

Student Groups can remain at **Holt 131** and observe other competitors until your time to participate is up. When the student group is finished, you must clear the testing area for the next team to be judged.

Student volunteers will be available to help judge in any way. If you have any questions or concerns do not hesitate to ask for help.

When the group of students has finished, your proctor will assess your group. When the Proctors are finished assessing all the groups, they will fill out the Reporting Sheet with the Top 3 Winners.



32<sup>ND</sup> ANNUAL COMPETITION EVENT



#### MAZE MACHINE COMPETITION

			1	
Team Number				
1-m x 0.75-m x 0.75-m Size Qualification				
(yes or no - PLUS OR MINUS 2cm)				
Flow Diagram Submitted				
(yes or no - disqualified if no)				
One point per inch of rolling travel				
Five points per inch of maximum vertical travel				
Fifteen points for each Distinctly Different lifting mechanism that opperates successfully (lift at least 6 inches)				
Fifteen point penalty for each restart				
Fifteen point penalty for each lift mechanism that is missed or by-passed				
Golf Ball returns to start position - (disqualified if no)				
TOTAL POINTS				
TOTAL LIFTING MECHANISMS (IN CASE OF A TIE)				

#### **Maze Design Competition Rubric**

Team Number			
20"x20"x20" Size Qualification			
(yes or no - PLUS OR MINUS 1/2")			
Weight Qualification (10 lb max)			
(yes or no - RECORD WEIGHT)			
First Attempt			
(Time)			
Second Attempt			
(Time)			
Third Attempt			
(Time)			
BEST TIME			





32<sup>ND</sup> ANNUAL COMPETITION EVENT



## ROBOTICS COMPETITION

Robotics Competition<sup>†</sup> (Practice & Competition)

9:30-1:30 pm





#### SAN JOAQUIN DELTA COLLEGE ENGINEERING & TECHNOLOGY DAY-2025 32ND ANNUAL COMPETITION EVENT



#### Student Entry Form - Robotics Competition

Clearly print or type all information.

Student Team:

Last Name

First Name

School:

Instructor:

Each school may enter more than one Robot, but there cannot be more than one machine entered per student/team.

Each team will be given an assigned time for judging on the day of the competition. The team must report to Room: "TBD" five minutes before the assigned time.

You must submit this form to enter a Robot. This entry form must be received by 4:00 pm on Friday, January 10, 2025. A \$4.00 entry fee per team must be attached to the entry form. Make checks payable to SIDC. Entry forms should be mailed or delivered to:

Applied Science, Business & Technology Division Holt Building, Room 140 San Joaquin Delta College 5151 Pacific Avenue Stockton, CA 95207

All questions concerning this competition should be directed to Danell Hepworth via email: <a href="mailto:danell.hepworth@deltacollege.edu">danell.hepworth@deltacollege.edu</a> or call at (209) 954-5230 Division Office and leave her a message.





#### SAN JOAQUIN DELTA COLLEGE ENGINEERING & TECHNOLOGY DAY-2025 32ND ANNUAL COMPETITION EVENT



#### Robotics Competition

#### Objective:

The objective of this contest is to design, build, and program a robot to navigate a fixed course while avoiding any obstacles.

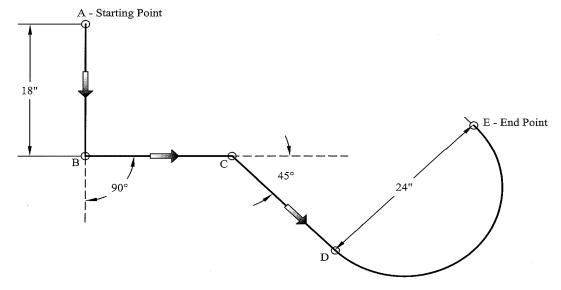
#### Description:

The students' task is to program an autonomous mobile robot of their choice to navigate a determined fixed course. There will be one or two obstacles on the path that must be successfully avoided by the robot without any collision. The robot must be brought to the competition ready to compete and it must navigate the entire course avoiding all the obstacles on the way by going around them autonomously without being remotely controlled. After avoiding the obstacle, the robot must then return and follow the original path. Students can attach and use any sensors for the navigation as they wish. It is recommended that the robot is programed before the competition and only small modifications are to be made on the day of competition. You can modify the program or adjust any mechanical parts of your robot including the sensors on the competition day. Make sure that you have enough battery power to last the entire course. Servos will not run properly with weak batteries. Students may participate individually or in groups of two.

The course will be taped on the floor in the competition area and one or two obstacles will be placed on the path; however, you MUST bring your own robot and a laptop, or any other tools that will assist you to modify your code or adjust the mechanical parts of your robot on the competition day. Each robot will be given an official score based on accuracy of the requirements given by the course. Practice time will be available on the day of the competition. The students are allowed two official runs, with the higher of the two recorded as the official score.

#### Path:

Below is a sketch of the path. Each linear line segment is 18" (1.5 ft) long. The semi-circle has a diameter of 24" (2 ft).







#### SAN JOAQUIN DELTA COLLEGE ENGINEERING & TECHNOLOGY DAY-2025 32<sup>ND</sup> ANNUAL COMPETITION EVENT



#### Robotics Competition

#### Scoring:

Scoring will be based upon the following standards:

- 1. The robot can move in a straight line from point A to point B: 4 points
- 2. The robot can make the 90° left turn and continue from point B to point C: 4 points
- 3. The robot can make the 45° right turn and continue from point C to point D: 6 points
- 4. The robot can continue from point D to point E in a semi-circle: 6 points
- 5. The robot must follow the path even after detecting and avoiding an obstacle. That is, wherever the robot is, the tape under it should not be visible from the top. Deviation from the path will cause point deductions.
- 6. The robot can avoid all the obstacles by going around them and then return and follow the original path: 8 points
- 7. End Point: At the end, 2 points if the center of the robot stops exactly on top of point E; 1 point if any part of the robot is on top of point E.

Path	Points allowed	First Run	Second Run
A to B	4		
B to C	4		
C to D	6		
D to E	6		
Obstacles Avoided	8		
End Point	2		
Total	30		



32<sup>ND</sup> ANNUAL COMPETITION EVENT



## BUS REQUESTS FORM



#### SAN JOAQUIN DELTA COLLEGE ENGINEERING & TECHNOLOGY DAY-2025 32<sup>ND</sup> ANNUAL COMPETITION EVENT



#### Bus Request Form

Clearly print or type all information.

You must submit this form to request funding for a bus. These forms will be processed on a first come- first served basis so it is advised that you send this form in as soon as possible. You may send this form before other forms are finalized and sent. An estimated cost should be requested from your District's Transportation Department. If District school buses are not available for use, please contact us for alternatives.

After the day of competition, an invoice will need to be submitted for payment. Payment cannot be made without an invoice.

School:	
Instructor:	
Estimated Bus Costs:	
Estimated Number of Students Attending:	
Estimated Trainiber of Students Attending.	

Bus Request Forms should be mailed or delivered to:

Applied Science, Business & Technology Division Holt Building, Room 140 San Joaquin Delta College 5151 Pacific Avenue Stockton, CA 95207

Or Forms can be emailed to <u>kelly.arceo@deltacollege.edu</u> with "Engineering Day – Bus Request" in the subject line.

All questions concerning this competition should be directed to <u>Danell Hepworth</u> via email: <u>danell.hepworth@deltacollege.edu</u> or call at (209) 954-5230 Division Office and leave her a message.



32<sup>ND</sup> ANNUAL COMPETITION EVENT



## **PERSONAL** WAIVER X RELEASE **O**F LIABILITY **FORMS**



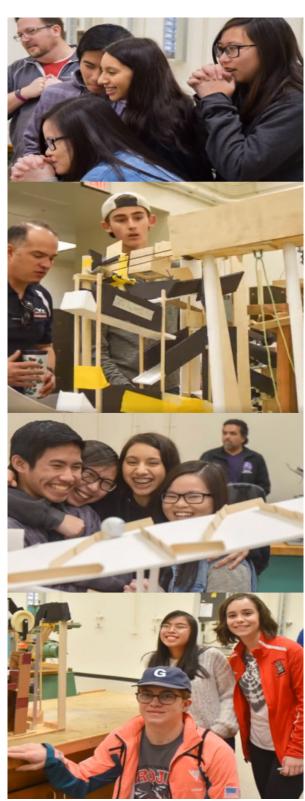
32ND ANNUAL COMPETITION EVENT



#### Media, Advertising and Logos

This is an educational event which is often covered by media. All teams will be required to do a team photo shoot with their respective design project and participate in the group photo.

All teams, by individually signing the media release, agree to be photographed and/or videotaped while on during competition.





#### SAN JOAQUIN DELTA COLLEGE ENGINEERING & TECHNOLOGY DAY-2025 32ND ANNUAL COMPETITION EVENT



#### Media Release Form

Are you over 18? (Circle one) YES / NO

Event and Location of Photo/Video or Audio Recording:

32th Annual Competition Event – Engineering & Technology Day 2025

Event Date: Friday January 24th, 2025

I, the undersigned, do hereby consent to the use and give San Joaquin Delta College marketing team permission to record my image and/or voice and grant SJDC all rights to use these sounds, still or moving images in any media whatsoever for promotional, advertising, or other purposes to increase awareness about the CTE programs offered at SJDC.

I agree that all rights to the sound, still or moving images, and any and all plates, negatives, recording tape, memory and/or digital files belong to SJDC.

I waive all claims to compensation or damages based on the use of my image or voice, or both, by SJDC. I acknowledge I am participating on a voluntary basis and have not been promised, nor do I expect, any compensation for my participation.

I also waive the right to inspect or approve any finished photograph or video or audio recording.

I understand that this consent is perpetual, that I may not revoke it, and that it is binding on me, my heirs and assigns.

I am 18 years of age or older and I am competent to contract in my own name or I am the parent and/or legal guardian of the minor person named below.

I have read this consent form before signing below, and I fully understand the contents, meaning and impact of this consent form.

Participant's Name (please print):	
Signature:	Date:
Phone:	
Address:	
If the participant is under 18 years of age, a parent or legal guardian mustated above on behalf of the participant.	st sign below agreeing to and acknowledging the terms
Parent/Guardian Name (please print):	
Signature:	
Address (if different):	
Phone (if different):	





#### SAN JOAQUIN DELTA COLLEGE ENGINEERING & TECHNOLOGY DAY-2025 32ND ANNUAL COMPETITION EVENT



#### SJDC Personal Waiver of Liability

#### **Please Print**

Name	School	Email
Phone	Mentor Name	Are you over 18? (Circle one)
		YES / NO

The effect of your execution of this document will prevent you, your heirs, assigns, personal representative(s), next of kin, guardian(s) and legal representative(s) ("releasor(s)"), from making any claims against San Joaquin Delta College, its directors, officers, representatives, agents and employees of ("releasees") arising out of, in consequence of, or in any manner relating to your presence at or near entry upon the school located at: 5151 Pacific Ave. Stockton CA 95207 ("premises") during the period of: Friday, January 24th, 2025

**Release, Waiver And Indemnity:** In consideration of being permitted to enter the Premises, I, on behalf of myself, heirs, assigns, personal representatives, next of kin, guardians and legal representatives hereby:

- 1. Release, Waive, Discharge, and Covenant Not to Sue the Releases for all claims, loss, damage, expense and liability on account of any injury, including death, arising from the negligence or other acts or omissions, howsoever caused, arising out of, in consequence of or in connection with my presence at or near, or entry upon the Premises.
- 2. Agree to Indemnify, Defend, Protect and Hold Harmless the Releases from all claims, loss, damage, expense and liability they may incur arising from any claim brought by myself, on my behalf, or by my heirs, assigns, personal representatives, next of kin, guardians or legal representatives and excepting only such loss to the extent it directly results from the sole negligence or willful misconduct of Releases.

<u>Acknowledgement of Risks</u>: I understand and am aware that being at or near the Premises and the engagement in activities on the Premises poses risks of injury or death. The possible risks include, but are not limited to:

- 1. Injuries arising from slipping, falling, tripping;
- 2. Injuries arising from supervision or instruction, negligent or otherwise; or
- 3. Being struck by, colliding with, or injured by falling objects, other participants or vehicles, equipment, materials, supplies or structures.

#### **General Terms And Conditions:**

- 1. The partial or complete invalidity of any one or more provisions of this Release of Liability and Indemnity Agreement shall not affect the validity or continuing force and effect of any other provision.
- 2. This Release of Liability and Indemnity Agreement is intended to be as broad and inclusive as permitted by the laws of the State of California.
- 3. No oral representations, statements or inducements apart from the foregoing written agreement have been made.





Signed:

#### SAN JOAQUIN DELTA COLLEGE ENGINEERING & TECHNOLOGY DAY 32<sup>ND</sup> ANNUAL COMPETITION EVENT



#### Personal Waiver of Liability - continued

This Release of Liability and Indemnity Agreement extends to and includes any and all claims, liabilities, injuries, damages and causes of action that the parties do not presently anticipate, know, or suspect to exist, but that may develop, accrue or be discovered in the future.

#### RELEASOR EXPRESSLY WAIVES ALL RIGHTS UNDER CALIFORNIA CIVIL CODE SECTION 1542, WHICH PROVIDES:

"A general release does not extend to claims which the creditor does not know or suspect to exist in his or her favor at the time of executing the release, which if known by him or her must have materially affected his or her settlement with the debtor."

**Knowing and Voluntary Execution:** I have carefully read this Release of Liability and Indemnity Agreement and fully understand its contents. I understand that by signing this document I am waiving valuable legal rights and agree to be bound to the terms and conditions set forth above.

IF YOU ARE OVER 18, you may sign, otherwise please have your guardian complete the Consent and Release.

Dated:

Print Name:		
School and Team Name:		
Parent's Consent and Release for	Minor:	
I certify that I am the parent/legal guardian of this minor who is under the age of 18, and I acknowledge that I have read this Agreement and fully understand its contents. I understand that by signing this document I am waiving valuable legal rights of this minor, and agree to be bound fully by the terms and conditions set forth above.		
Signature of Parent or Guardian:		
	Date:	



32<sup>ND</sup> ANNUAL COMPETITION EVENT



# CAMPUS TOURS

Campus Tours To be determined.



32<sup>ND</sup> ANNUAL COMPETITION EVENT



Engineering & Technology Day

- Campus & CTE Department Tours

Dear Instructor and Participants:

I hope this message finds you well. We are in the final stages of organizing the tour schedule for Engineering Day. Due to additional interest from several Career and Technical Education (CTE) departments wishing to showcase their programs, we are adjusting the schedule to accommodate these exciting opportunities.

The final tour schedule will be included in the revised event package, which will be posted on the Engineering Day homepage prior to the event. Additionally, copies of the schedule will be handed out on the day of the competition.

Thank you for your patience and understanding as we work to enhance your experience. We look forward to seeing you at the event and sharing all the innovative projects and departments with you.

If you have any questions, please don't hesitate to reach out.

Best regards,

#### Osvaldo Escalona, MsEngr, P.E.

Prof., Applied Science, Business, & Technology Division San Joaquin Delta College osvaldo.escalona@deltacollege.edu (209)954-5230





32<sup>ND</sup> ANNUAL COMPETITION EVENT





## THIS PAGE HAS BEEN LEFT BLANK INTENTIONALLY

## THIS PAGE IS TO INCLUDE CAMPUS TOUR SCHEDULE

32<sup>ND</sup> ANNUAL COMPETITION EVENT



## AWARD CEREMONY

Career Orientation/Awards Ceremony

Atherton Auditorium

1:45-2:30 pm





32<sup>ND</sup> ANNUAL COMPETITION EVENT





### Career Orientation & Award Ceremony (Tentative Schedule)

Opening Remarks & Welcome

1:45-1:50 pm

Opening Host Name Applied Business & Technology San Joaquin Delta College

Career Orientation Panel

1:50-2:15 pm

Industry Volunteer Name Industry Volunteer Title Company

Industry Volunteer Name Industry Volunteer Title Company

Industry Volunteer Name Industry Volunteer Title Company

Q&A session

**Award Ceremony** 

2:15-2:25 pm

Closing Remarks

2:25-2:30 pm

Awards and lunch provided by San Joaquin Engineering Council







32<sup>ND</sup> ANNUAL COMPETITION EVENT



Each winning team is requested to proceed to the front of the stage to receive their award and be congratulated by the career orientation panel. This moment is not only an acknowledgment of your achievements but also an opportunity to capture a group picture to commemorate the occasion. Your presence at the front of the stage will allow for a more interactive and celebratory experience. We appreciate your cooperation in making this event memorable for everyone involved. Congratulations to all the winning teams!

Participants are kindly requested to take their seats towards the front of the auditorium. While the seating chart is for general reference, we recommend that attendees choose seats closer to the front to ensure optimal visibility and engagement with the event. Your cooperation in seating towards the front will contribute to a better overall experience for everyone involved. Thank you for your understanding and cooperation.

The Ceremony Final location and the corresponding seating chart are currently in the process of being finalized. As of now, the displayed seating chart is intended for general reference purposes only and may not accurately represent the final arrangement. **Final Ceremony Award Location will be finalized based on final participants count**. We apologize for any inconvenience this may cause and appreciate your understanding as we work towards completing the details. Once the auditorium location and seating arrangements are finalized, we will update the information accordingly. Thank you for your patience.



32<sup>ND</sup> ANNUAL COMPETITION EVENT



# NAME TAGS SAMPLES

Competitor ID # & Team ID # will be provided before or on Competition Day



**Industry Volunteer** 

Assignment:\_

#### SAN JOAQUIN DELTA COLLEGE ENGINEERING & TECHNOLOGY DAY

32<sup>ND</sup> ANNUAL COMPETITION EVENT



#### INDUSTRY AND/OR SJDC STAFF VOLUNTEERS (NAME TAGS)

Name:
Company:
SJDC Volunteer Assignment:
Name:
Company
Company:

#### STUDENT VOLUNTEER (NAME TAGS)

<b>Student Volunteer</b>	
Assignment:	<del> </del>
Name:	<del> </del>
Available	
Time:	





32<sup>ND</sup> ANNUAL COMPETITION EVENT



#### NAME TAG EXAMPLES (DRAFTING COMPETITIONS)

Location: Holt 130 (Beginning CAD 9-10)

Contestant ID #:

**Location: Holt 130** (Beginning CAD 11-12)

Contestant ID #:

Location: Holt 130 (Advanced CAD 10-12)

Contestant ID #:

Location: Holt 130 (Beginning Arch/Drafting)

Contestant ID #:

**Location: Holt 130** 

(Advanced Arch/Drafting)

Contestant ID #:

#### NAME TAG EXAMPLES (DESIGN COMPETITIONS)

Competition Time: 9:45am

Location: Holt 131 (Maze Machine)

Team ID #:

#### NAME TAG EXAMPLES (ROBOTICS COMPETITIONS)

**Competition Time: 11:15am** 

**Location:** TBD (Robotics)

Team ID #:



5151 PACIFIC AVE. STOCKTON CA, 95207

