



The Amazing Spaghetti Machine Contest

2017 contest rules

If you are uncertain or unclear regarding these rules please email us:
spaghettimachine-eng@unimelb.edu.au

Competition entry and registration

Registrations open: 9am (AEDT) Monday 13 March 2017

Registrations close: 5pm (AEDT) Friday 17 March 2017

- Registration will be via an online form on the contest website available from 9am on Monday 13 March 2017.
- The contest is open only to Victorian high-school students enrolled in year 10.
- A maximum of twenty-seven (27) teams will be accepted in the 2017 contest. Registrations will be accepted in the order in which they have been made. Once the limit of 27 teams has been reached any further applicants will be notified that all places have been filled. A list of successfully registered teams will be posted on the contest website on Monday 20 March. Successful teams will also be notified at this time by email.
- Only one team per school may register for the contest.
- Each entry must nominate a school staff member to act as Team Supervisor and contact point for the team.

Design

- Each team will be required to build a machine according to the task set by the University of Melbourne.
- The task will be announced on the contest website on Monday 20 March 2017. Building can commence from this date.
- The machine should be able to complete the task as set by the contest organisers.
- The machine should be contained in an area no larger than 1.3m (W) x 1.3m (D) x 1.5m (H). The machine may be smaller than these dimensions.
- The machine must be transportable in order to take part in the judging event at the University of Melbourne.
- The machine must have a minimum of 12 steps. There is no maximum number of steps. A 'step' is defined as the transfer of energy from one action to another action (eg a series of dominoes collapsing that then triggers another action is a step).

- Identical transfers of energy in succession should be considered one step (eg two separate sets of domino lines in succession, with one line triggering the next is considered one step).
- Machines have a minimum time limit of 30 seconds, and a maximum time limit of 2 minutes in which to complete the task.
- The machine should not present a safety risk to either its operators or to spectators standing within 1 metre of it. This should be achieved through appropriate safeguards within the design, and the avoidance of dangerous materials or parts within the machine structure. Machines that are not considered safe by event organisers at the judging event will not be allowed to operate.
- The machine must not contain any:
 - Hazardous materials
 - Explosives
 - Naked flame
 - Live animals
- A maximum of two items within the machine may be run by power cords connected to a wall-socket power outlet. A power board running from a wall-socket power outlet will be provided for each team's display area, from which these two power cords may run if needed. There is no limit on the use of batteries and other non-wall socket power sources.

Vouchers

- To assist with construction of their machine, successful registrants of the contest will receive a \$70 store voucher for Bunnings Warehouse.
- These vouchers are to be used for buying parts or materials for the team's spaghetti machine.
- Schools are not required to return the unspent portions of vouchers at the end of the construction period.
- Once sent, vouchers and their security are the responsibility of the Team Supervisor. Lost or stolen vouchers will not be replaced.
- Vouchers are to be used only by the Team Supervisor or team members. Selling, auctioning, or exchanging of vouchers is forbidden and will result in the team responsible for the voucher being disqualified from competition.
- If a school withdraws from the competition before the vouchers are used they will be required to return the vouchers to the University of Melbourne to:

Attn: Cassie Gardiner
Recruitment Coordinator
Melbourne School of Engineering
University of Melbourne VIC 3010

Judging and prizes

- Judging will take place at the University of Melbourne's Parkville campus on the afternoon of Friday 11 August 2017, with time for teams to set up in the morning. Exact running times will be provided closer to the event.
- All teams will be allocated a designated area on the floor of the judging venue in which to setup their machine.
- Teams will have a maximum setup time of 4 hours to complete the setup of their machines at their designated area prior to the commencement of judging.
- At the end of the contest, teams will be required to pack up and remove their machine from the contest venue.
- The order of machine presentation will be determined by drawing teams from a hat at the end of the official setup period.
- There will be two rounds of judging with each team 'running' their machines once per round. Teams will have the time between their first and second round runs to reset their machines in preparation for the next run.
- After the machine launches, human intervention or interaction with the machine while running (i.e. to 'fix' a problem or reset a step) is permitted, but will attract a small penalty for each interaction.
- All entries will be judged on various aspects of design and performance including:
 - Reliability of machine (ability of the machine to achieve the task with minimal human interaction over two separate runs)
 - Timing of machine (the task should be completed in a time span between 30 seconds and 2 minutes)
 - Variety and sophistication in the use of different types of energy transferral within the machine.
 - Innovative and original use of materials in machine construction, in particular recycled or re-purposed parts and material.
 - The entertainment and amazement value of the machine, and the team's use of display materials in their display area to illustrate the machine's function and their creative process.
- A score will be given to each team at the completion of the second run of their machine, with a running tally being publicly announced and recorded at the contest venue.
- At the conclusion of the judging event prizes and awards will be presented to contest winners and winners of sub-categories (detailed below). All prize winners will also be published online at the contest website after Friday 11 August 2017. The judges' decision is final and no appeals or protest will be heard.
- Prizes will be presented to the team and will be the responsibility of the Team Supervisor.
- The prizes for the winning team are:
 - A 'Spaghetti Champions' trophy
 - \$250 cash prize (to go towards a team celebration event nominated by the team supervisor)
 - \$400 online voucher, to be spent at the discretion of the winning school

- In addition to the overall award for best machine there will be additional awards given out on the day of competition for achievement in different aspects of design and presentation, as noted in the judging categories listed above.
- An 'Audience Choice' award will also be awarded and decided by the following process:
 - One vote will be allowed for every person attending the event, visitors and spectators alike, via an entrance ticket doubling as a ballot paper.
 - The team with the most votes will receive the Audience Choice award.

Photos and video

- Persons present during the judging event at the University of Melbourne's Parkville campus on Friday 11 August 2017 will be permitted to take photos and video.
- The University of Melbourne may also take photos and video of person attending the contest, as well as teams and Team Supervisors. Photos and video may appear on the contest website, internal reporting documents and the University's promotional material for similar events. Please direct all enquiries relating to this to: spaghettimachine-eng@unimelb.edu.au
- Teams will be encouraged to submit and upload images of their machine to Melbourne School of Engineering social media channels such as Instagram during the contest and in the lead up.