Tasks

Tasks and challenge description

Point can be gathered by achieving milestones and by winning special prize.

Even if you don't win the competition, you can improve your ranking by achieving milestones :)

Line Tracking - Milestones

Straight line 3 meters, 5 cm width. Start with wheel on the line. Robot needs to stay on the line and stop at the end of the line.

90° line 2 lines of 1 meters at 90 degrees, 5 cm width. Start with wheel on the line. Robot needs to stay on the line and stop at the end of the line.

Milestone		Points
Straight line following (slow speed)	5s	1
Straight line following (medium speed)	3s	3
Straight line following (high speed)	1.5s	5
90° line following (slow speed)	5s	1
90° line following (medium speed)	3s	3
90° line following (high speed)	1.5s	5

Wall Tracking - Milestones

Same as with lines but with walls

Milestone	Points
Straight wall following (slow speed)	1
Straight wall following (medium speed)	3
Straight wall following (high speed)	5
90° wall following (slow speed)	1
90° wall following (medium speed)	3
90° wall following (high speed)	5

3D Printing - Milestones

Milestone	Points
Print at least one part	1
Customize one of the base design and use it	3
Create a totally new part and use it	5

Misc - Milestones

Milestone	Points
Play an anthem before each run with the robot	1
Full robot painting	4
No glue or patafix used (final version on second competition)	3

Competitions

Thursday - Line following race

Each team will be given 10 min to do the best time on a track

During this time they can perform as many runs as they want.

A ‘run’ needs to start on the starting line and ends when the robot has made one round and stopped. A run is invalid if the robot leaves the line.

The robot can be picked up at any time to start a new round. The best time will be the one that counts.

Position	Points
1	10
2	8
3	6
Manage to finish	4

Friday - Line and Maze race

Each team will be given 15 min to do the best time and reach the center of the maze.

During this time they can perform as many runs as they want.

A ‘run’ needs to start on the starting line and ends when the robot has reached the center of the maze. A run is invalid if the robot leaves the line or hits a wall.

The robot can be picked up at any time to start a new round. The best time will be the one that counts.

Position	Points
1	10
2	8
3	6
Manage to finish	4

Special Prizes

Milestone	Description	Points
Best Video	Teams will vote on short 2 min presenting the team and work/achievement during the lab days	5

Best looking mouse	Teams will vote on the best looking mouse	5
Best soldering and wiring	Teams will vote on the best soldering and wiring job	5