

**\*General Rule:** Check the general rule before reading this game rule. Please be aware that the general rules apply equally to all events during the competition.

**\*Attention:** Please be aware that this is a provisional version of the rules, there may be some changes. Especially, since the size and weight of the testing material are still on progress, there may be new updates.

## Creative Category

League  
Junior/  
Challenge

Participation  
1~3  
Person Robot

Construction  
On  
Site

### 1. Game Description

Participants are required to design, construct, and present their robots based on the theme presented by IROC. There are no limitations on material or size, so participants can express their imagination freely. This game is conducted face-to-face or non-face-to-face.

### 2. Robot

**2-1. Robot type** There is no limitations in type or material of the robot, and the material may also be used freely based on their production intention. However, any material threatening others are restricted.

**2-2. Robot size** Size of the robot has no limit within the given area if played face-to-face, and no limit if played non-face-to-face. However, participant takes all responsibility on all problems due to size of the robot when producing and presenting.

**2-3. Construction and presentation condition** Construction and presentation condition is organized differently depending on whether progressed face-to-face or non-face-to-face progress.

- Face-to-face: Software, props, or background can be made in advance, but other parts except the controller must be built on-site.
- Non-face-to-face: All parts including software, props, and background can be made in advance. Zoom video call must be available on tripod and presenter and the robot must be shown perfectly.

**2-4. Power** No limitation

**2-5. Operation** Autonomous movable independent power must be used, and combustion engine is not allowed to use.

**2-5-1.** Robot must work as written in the production plan.

**2-5-2.** Example of failure

**2-5-2-1.** Walking robot that cannot walk.

**2-5-2-2.** Washing robot that cannot wash or do an action related to washing.

**2-5-2-3.** Climbing robot that cannot climb.

### 3. Playfield regulation

**3-1. Playfield** There is no extra playfield, but only the table of 1,800mmx600mm (W x H) and spare spaces around the table may be used freely as long as they are not interrupting other teams. The size of the table may change under the situation of

**\*Arbitrary usage of the regulation may be held liable for copyright infringement.**

**\*General Rule:** Check the general rule before reading this game rule. Please be aware that the general rules apply equally to all events during the competition.

**\*Attention:** Please be aware that this is a provisional version of the rules, there may be some changes. Especially, since the size and weight of the testing material are still on progress, there may be new updates.

competition site.

#### 4. Competition

**4-1. Main Theme** The main theme will be announced via homepage at least 40 days ahead of production plan due date.

##### 4-1-1. Main Theme in 2022

## Smart City

**4-2. A national preliminary round** Will be held by entering the production plan by UCC, and the result will be noticed on website.

**4-2-1.** Each team must prepare a UCC typed production plan within 1minute constituting intention of production, purpose, function, and characteristics in creative and effective way.

**4-2-2.** UCC production plan must contain production cost of the robot.

**4-2-3.** The capacity limitation of production plan must be under 200MB. If exceeds, 10 point will be deducted.

**4-2-4.** The resolution has to be higher than 1280x720. If not, 10 points will be deducted.

**4-2-5.** Format of the file has to be AVI, WMV, MP4, MOV (Other formats are not allowed.)

**4-2-6.** Name of the file must be “year of the production\_name of the school\_name of the team\_name of the movie\_name of the team mates.format.extention”.

i.e.) 2020\_Robot Elementary school\_Robot team\_Healthrobot\_Rophie Kim\_Roa Kim.AVI

**4-2-7.** Name of the email must be same as the name of the file.

**4-3.** Competition will be held for 2 days at the stadium, producing robot on-site and presenting it to the referee and answering the questions of the judges. The result will be noticed via website.

##### 4-4. First day(Face-to-face)

**4-4-1.** Construction time of the robot is total 5 hours. (Except lunch time)

**4-4-2.** Judges can freely request or ask questions while constructing the robot, and if participants show insincerity during inquires, points can be deducted.

**4-4-3.** Points will be deducted for participant whom with insincere attitude toward the competition.

**4-4-4.** All teams should finish constructing the robot in given time. If not, the points will be deducted based on the table below.

##### <Deduction of exceeding time>

Time	5min	10 min	15 min	20 min	25 min	Over 30 min
Point	-1 pt	-2 pt	-3 pt	-4 pt	-5 pt	-6 pt

##### 4-5. Second day(Face-to-face)

**4-5-1.** Judges will move randomly during presentation to evaluate presenting skills of the participant and function of robot.

**4-5-2.** Modification and repair of the robot is prohibited while presenting. However,

**\*Arbitrary usage of the regulation may be held liable for copyright infringement.**



**\*General Rule:** Check the general rule before reading this game rule. Please be aware that the general rules apply equally to all events during the competition.

**\*Attention:** Please be aware that this is a provisional version of the rules, there may be some changes. Especially, since the size and weight of the testing material are still on progress, there may be new updates.

during inevitable situations such as damage of robot, battery outage, the participant may repair robots with the authorization of referee and staff.

**4-5-3.** Judges can freely request or ask questions while constructing the robot, and if participants shows insincerity during inquires, points can be deducted.

**4-5-4.** Points will be deducted for participant whom with insincere attitude toward the competition.

**4-5-5.** All teams can present their robots to general public.

#### **4-6. Paper evaluation(Face-to-face)**

In final stage, teams will undergo a written evaluation during the contest testing their creativity. Participants will be tested either on the first or the second day. If evaluation is conducted on first day, extra production may be given on the second day, and rule 4-5-5 will be applied.

#### **4-7. First day(Non-face-to-face)**

**4-7-1.** Construction time of the robot is total 1days. (Detailed schedule will be noticed via website.)

**4-7-2.** The presentation will be held on the second day, and the order of the presentation will be determined by the lottery of the judges. (Order will be announced via homepage.)

**4-7-3.** Points will be deducted for participant whom with insincere attitude toward the competition.

**4-7-4.** All teams should finish constructing the robot in a given time. If time exceeds, points will be deducted based on the table below.

##### **<Deduction based on the exceeded time>**

Time	5min	10 min	15 min	20 min	25 min	Over 30 min
Point	-1 pt	-2 pt	-3 pt	-4 pt	-5 pt	-6 pt

#### **4-8. Second day(Non-face-to-face)**

**4-8-1.** When presenting, the judges grade presentation ability and movement based on the order of lottery. If delayed during video call, there will be a deduction in points and will be pushed back to the next sequence.

**4-8-2** Modification and repair of the robot is prohibited while presenting. However, inevitable situations such as damage of robot, battery outage. In such cases, the participant may repair robots with the authorization of referee and staff.

**4-8-3.** Judges can freely request or ask questions while constructing the robot, and if participants shows insincerity during inquires, points can be deducted.

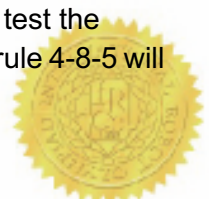
**4-8-4.** Points will be deducted for participant whom with insincere attitude toward the competition.

**4-8-5.** All teams may present their robots to general public.

#### **4-9. Paper evaluation(Non-face-to-face)**

In final stage, teams will undergo a written evaluation during the contest to test the creativity. Participants will be tested either on first or second day, and the rule 4-8-5 will be applied.

**\*Arbitrary usage of the regulation may be held liable for copyright infringement.**



**\*General Rule:** Check the general rule before reading this game rule. Please be aware that the general rules apply equally to all events during the competition.

**\*Attention:** Please be aware that this is a provisional version of the rules, there may be some changes. Especially, since the size and weight of the testing material are still on progress, there may be new updates.

## 5. Evaluation and Rank decision

**5-1. Evaluation criteria** Judges will evaluate according to the criteria below, and the sum of the points will be compared to choose rankings. Evaluation criteria is organized differently based on the progress, whether held face-to-face or non-face-to-face.

### <Standard Sheet (Face-to-face)>

Construction (60pts)			Presentation (20pts)	Research (20pts)
Creativity of robot	Cooperative problem solving	Completeness of appropriate theme	Robot presentation and explanation	On-site creativity evaluation
6/12/18/24/30	4/8/12/16/20	2/4/6/8/10	4/8/12/16/20	4/8/12/16/20

### <Standard Sheet (Non-face-to-face)>

Construction (20pts)		Presentation (60pts)			Research (20pts)
Creativity of robot	Completeness of suitability to the theme	Cooperative problem solving	Robot presentation and explanation	Technical understanding	On-site creativity evaluation
2/4/6/8/10	2/4/6/8/10	2/4/6/8/10	4/8/12/16/20	6/12/18/24/30	4/8/12/16/20

## 5-2. Tiebreakers

If tied, the rankings will be decided by the followings.

**5-2-1. No.1** Result with no deductive point will have a higher ranking than below.

**5-2-2. No.2** Result with higher functionality over cost point will have a higher ranking than below.

**5-2-3. No.3** Result with higher cooperative problem solution point will have a higher ranking than below.

**5-2-4. No.4** Team with younger average age will have a higher ranking than below.

**5-2-5. No.5** Result with higher creativity point will have a higher ranking than below.

**5-2-6. No.6** Result with higher presentation and explanation point will have a higher ranking than below.

**5-2-7. No.7** Result with higher completeness point will have a higher ranking than below.

**\*Arbitrary usage of the regulation may be held liable for copyright infringement.**

