

Toronto Metropolitan University

Engineering Competition Fall 2024

Innovative Design Rulebook

## 1.1 Goal

The innovative design competition is prepared entirely outside the realm of the MEC. Competitors choose their own topic, prepare research and develop a design. The designs must be new and innovative and address a void in society.

1.2 Team Composition

The innovative design team may comprise one (1) to six (6) competitors. Should the presenting team be a subset of the project team, the remaining members of the project team must sign a letter authorizing the presentation of the project for it to be eligible for the competition.

# 1.3 Topic/Project Eligibility

The topic should adhere to the following criteria:

* The project must be technical in nature
* The project must have a design component
* The project must assess social, environmental and economic ramifications of implementation

While the above list provides a guideline to project selection, no projects will be disallowed due to the topic selection. The judging criteria provide a component which analyzes the applicability of the project’s topic.

# 1.4 Language

The design summary, presentation display, and presentation can be done in either English or French but must be consistent in language.

# 1.5 Resources

## 1.5.1 Personnel Required

### *1.5.1.1 Judges*

A minimum of three (3) judges (and in any excess, an odd number of judges) are required to assess the problem-solving abilities, proposed solution, communication skills and team dynamics of the competitors. Judges in this category should come from a variety of backgrounds including communications, sales, and technical or consulting engineering experience related to the topic.

### *1.5.1.2 Competition Lead*

The Competition Lead is responsible for the logistics and implementation of the Innovative Design competition. The Competition Lead must be available to competitors and judges at any time for questions and requests.

### *1.5.1.3 Official Timekeeper*

The Official Timekeeper is typically the Competition Lead who enforces the time limits and the rules governing the displays.

## 1.5.3 Equipment Provided by MEC

The following equipment will be made available to all competitors during the competition time period:

* A table to display presentation
* Electrical power supply for each team
* Internet source

## 1.5.4 Allowed External Resources

There is no restriction on the resources which competitors are allowed to bring to the competition. A list of resources must be provided to the Competition Lead in accordance with Section 1.6.1.

# 1.6 Procedure/Timeline

## 1.6.1 Pre-Competition

| 12 days prior to MEC | **Announcement of Constraints**  Space constraints and other logistical constraints must be described to the competitors (maximum display dimensions, maximum display height, use of flammable or dangerous products prohibited, etc.). |
| --- | --- |
| 5 days prior to MEC | **Design Summary**   * A one (1) page brief, detailed in Section 1.6.5 (Deliverables).   **Layout and Specific Needs**  *Competitors must convey the following information to the Competition Lead:*   * Any specific needs (layout, electrical, power supply, etc.) must be specified via Resource Request, detailed in section 1.5.4 (Allowed External Resources) * A sketch of the anticipated layout, including placement of the display board and any equipment or models. * The planned shipping modes of displays or equipment including arrival time. |
| 12 hours prior to MEC | **Set-up**   * Competitors set up their displays the evening before the display. Compliance with the dimension constraints are checked at this time.   **Competition Briefing**   * The Competition Lead will host a competition briefing, attended by the competitors and judges, where details of the competition timeline and judging structure are discussed. There will be time allowed for questions. * At the briefing, each team will be asked for a copy of their presentation handouts, described in Section 1.6.5 (Deliverables). |

## 1.6.2 Judging

The judges, either individually or in groups of not more than three (3), will walk among the displays during the judging period. The competitors must give a twenty

(20) minute presentation, followed by a ten (10) minute question period, at their displays. They must use only the resources at their display to illustrate their work. Competitors will be required to give their presentation more than once as each judge must see all displays, but not at the same time.

## 1.6.3 Timekeeping

The following rules will be adhered to with respect to timekeeping.

* Time is not halted when a judge asks a question during the presentation
* The remaining time must be indicated to the competitors ten (10) minutes, five
* (5) minutes, and one (1) minute before the end of the allotted time for the presentation
* A visual countdown must be given during the last thirty (30) seconds of the presentation
* Presenters will be asked to stop their presentation if they exceed twenty (20) minutes
* Time to both ask and answer questions during the question period is counted

## 1.6.4 Presentation Order

* Presentation order shall be determined randomly
* Presentation order shall be announced thirty (30) minutes before the presentations commence. All teams are required to be present at this announcement
* Teams are not allowed to switch places in the presentation order
* The judges may view the presentations either individually or in small groups of up to three people
* Competitors will be required to give their presentation more than once
* The order should allow all the judges to visit all the displays
* The order shall prevent the judges from visiting the displays in the same order

## 1.6.5 Deliverables

### *1.6.5.1 Design Summary*

Prior to the competition, the team must submit a design summary. The purpose of this summary is for the judges and organizers to be prepared ahead of time with regard to the topics. This summary will follow conventional formatting characteristics (12-point front, 1.5 line spacing, 1” paper margins) and is limited to one (1) page. The summary must include, but is not limited to:

* Team Name
* Team Members
* Design topics and description

### *1.6.5.2 Presentation*

If a slideshow presentation is to be utilized, a hard copy of all slides must be prepared for each judge. The page layout must include three (3) slides per page with space for notes.

# 1.7 Assessment and Judging

* The panel must have an odd number of judges
* The panel must comprise a minimum of three (3) judges. There is no maximum number of judges
* Feedback forms shall be provided to each team following the announcement of winners but prior to the end of MEC

## 1.7.1 Judging Matrix

| **Innovative Design Judging Matrix** | | |
| --- | --- | --- |
| Project | Design Justification | /25 |
| Environmental, Social and Economic Feasibility | /25 |
| Technical Feasibility/Innovation | /20 |
| /70 | | |
| Presentation | Voice, Articulation, and Timing | /10 |
| Responses to Questions | /10 |
| /20 | | |
| Written  Abstract | Content Quality | /5 |
| Contains all key presentation information | /5 |
| /10 | | |
| Total /100 | | |

## 1.7.2 Penalty Matrix

* For every minute the presentation exceeds the time limit, two (2) points deduction
* For each day of late submission, five (5) points deduction
* For every three (3) grammar or spelling mistake in the abstract, one (1) point deduction