EVENT DESCRIPTION

Are you ready to drive change and revolutionize the future of transit? WIMTACH of Centennial College in partnership with the Toronto Transit Commission (TTC), is thrilled to announce:

THE BUS OF THE FUTURE HACKATHON
Imagine. Innovate. Impact
(March 26th, 27th and 28th, 2024)

This hackathon aims to find solutions that leverage cutting-edge emerging technologies while being rooted in empathy for our operators and riders. The focus areas include, but are not limited to:

- Emerging Technologies: Exploring the potential of emerging technologies.
- Safety: Enhancing both operator and customer safety experiences by minimizing risks.
- Accessibility: Ensuring that the future of transportation caters to everyone, regardless of their physical abilities.
- Efficiency: Designing aesthetically pleasing and comfortable buses of the future with a focus on ergonomics.
- Sustainability: Developing eco-friendly solutions aimed at reducing vehicle emissions and promoting environmental responsibility.

To participate in this exciting hackathon, attendees should possess variety of skillsets, as the hackathon challenge is quite diverse.

Below are the required skillsets:

- **Mechanical and Electrical Engineering:**
  Experience in design and fabrication of compact devices
  Expertise in CAD (3D modeling) and creating mechanisms (Mechanisms of Machines)
  Knowledge of basic electrical systems for powering and controlling devices
  Experience in designing and fabricating specialized tools
- **Mechatronics:**
  Knowledge of integrating mechanical and electrical components to create a functional device.
- **Health Science:**
  Knowledge in first aide and medical emergency response
- **Automotive:**
  Knowledgeable in the latest technology for cars, trucks, and buses
  Knowledge in Global Transportation Trends, Non-Structural Panel Replacement, Plastic Panel Refinishing, Vehicle and Body Construction, Vehicle Management Electronics and Emissions Systems, vehicle designs, among others

- **Police Foundations:**
  Knowledgeable in current laws, Community policing principles, Physical fitness, Emergency Management and Public Safety
- **Software Engineering:**
  Experience in developing real-time systems and applications, ensuring that software components respond to events and inputs in real-time, which might be crucial for certain aspects of the project**.**
- **Teamwork:**
  Collaborative skills to work effectively in a team, as this project involves multiple aspects of engineering and technology.
- **Problem Solving and Creativity:**
  Thinking outside the box to overcome challenges and come up with innovative solutions. Ability to troubleshoot and resolve any issues with the device's operation.
- **Communication and Presentation:**
  Ability to convey ideas, progress, and results effectively to judges.

DATE OF EVENT:

- Tuesday, March 26th, 2024 (from 9:00 AM to 5:00 PM)
- Wednesday, March 27th, 2024 (from 9:00 AM to 5:00 PM)
- Thursday, March 28th, 2024 (from 9:00 AM to 5:00 PM)

PARTICIPATING STUDENTS!

This exciting event offers a unique opportunity to join forces with a diverse group of like-minded peers in teams of seven (7). Each team will need expertise of at least one of each of the required Centennial College Schools. We highly recommend embracing this diversity of skills to foster innovation and creativity. Together, your team will collaborate intensively, dedicating seven (7) hours per day throughout the event. Join us in this dynamic environment where your skills and ideas will be key to the success of your project!

A supervised tour of the bus stationed at the School of Transportation is planned for March 22nd, 2024, exclusively for the group's team leaders, therefore, groups must be formed by March 21st.

Given the limited spots and specific skills required for this Hackathon, we encourage you to register as soon as possible to secure your place.

To register for "The Bus of the Future Hackathon" you must use your my.centennial email, and follow the links below based on your registration preference:

- **Group Registration:** If you are registering as a team of seven students, please use the following link: Group Registration-TTC Hackathon.xlsx

- **Individual Registration:** If you prefer to register as an individual and would like us to assign you to a team, please use this link: Individual Registration-TTC Hackathon.xlsx

As token of appreciation, each participant will receive:

1. Gift Card
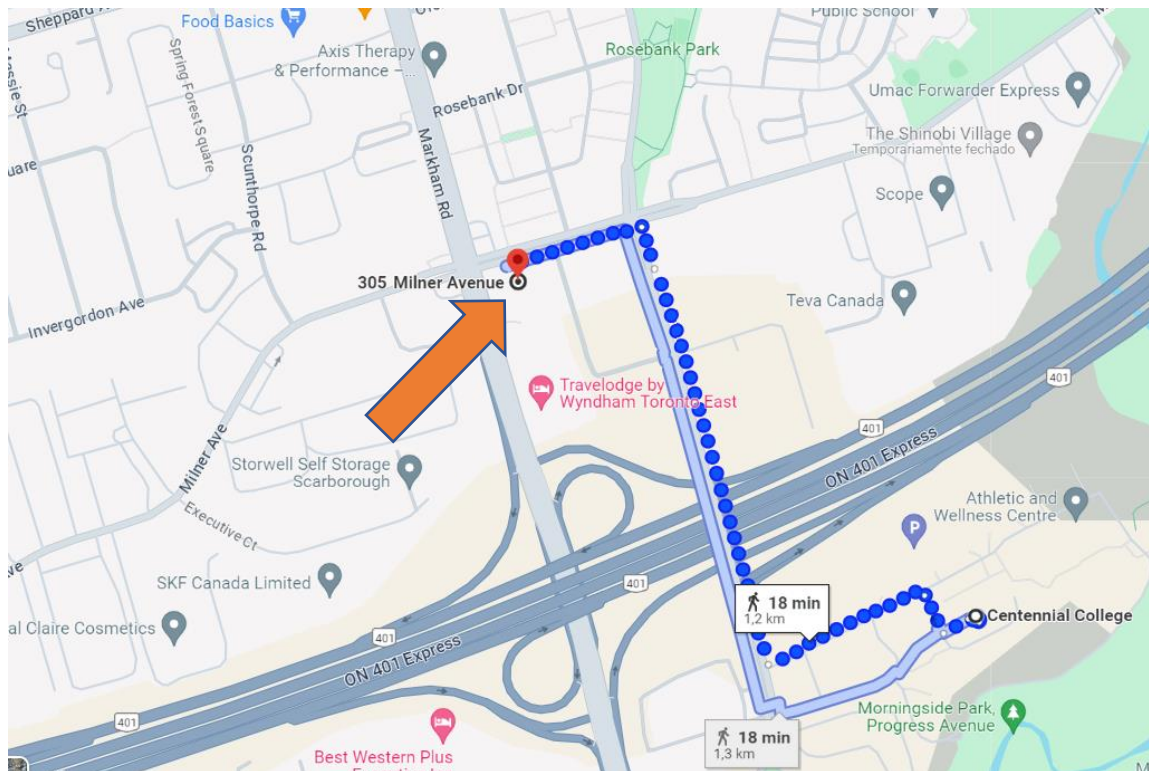2. Certificate of Participation
3. Gift of appreciation from TTC

The registration deadline for this upcoming hackathon is **March 20, 2024.**

If you have any further questions or need additional information, please feel free to contact Andrea Cavalheiro (acavalheiro@centennialcollege.ca).

LOCATION:

WIMTACH Office
305 Milner Avenue, Suite 112, Toronto, ON M1B 3V4

EVENT BREAKDOWN:

Day 1: Tuesday, March 26th, 2024	
9:00am – 10:00am	Introduction & Hackathon challenge briefing.
9:00am-9:15am	Introduction & Opening Remarks by Purnima Tyagi (Director, WIMTACH and Social Innovation Research)
9:15am-9:45am	Introduction by Bem Case (Executive Director, TTC Innovation and Sustainability)
9:45am-10:00am	Ground rules briefing
10:00am – 5:00pm	Work Session
10:00am-12:00pm	2hrs Independent Work session
12:00pm-1:00pm	Lunch Break
1:00pm-3:00pm	2hrs Independent Work session
3:00pm-3:30pm	Game Break
3:30pm-5:00pm	1.5hrs Independent Work session
5:00pm	Send Off for Day 1
Day 2: Wednesday, March 27th, 2024	
9:00am – 5:00pm	Work Session
9:00am-9:30pm	Breakfast
9:30am-12:00pm	2.5hrs Independent Work Session
12:00pm-1:00pm	Lunch Break
1:00pm-3:00pm	2hrs Supervised Work session (Q&A with TTC)
3:00pm -5:00pm	2hrs Independent Work Session

5:00pm	Send Off for Day 2
Day 3: Thursday, March 28th, 2024	
9:00am – 5:00pm	Work Session
9:00am-9:30pm	Breakfast
9:30am-12:00pm	2.5hrs Independent Work Session
12:00pm-1:00pm	Lunch Break
1:00pm- 5:00pm	Group Presentations, Judging, & Awarding.
1:30pm-1:50pm	Group 1 presentation; Q & A
1:50pm-2:10pm	Group 2 presentation; Q & A
2:10pm-2:30pm	Group 3 presentation; Q & A
2:30pm-2:50pm	Group 4 presentation; Q & A
2:50pm-3:20pm	Break
3:20pm-3:40pm	Group 5 presentation; Q & A
3:40pm-4:00pm	Group 6 presentation; Q & A
4:00pm-4:20pm	Group 7 presentation; Q & A
4:20pm-5:00pm	Awarding of Winners

**15Mins Presentations & 5 Mins Q & A

THINGS TO BRING

- Laptop
- All chargers you need throughout the duration of the hackathon
- Extension cord (If needed)
- Any electronics you might need
- An enthusiasm to learn and a strong drive to win!