



**UNIVERSITY
OF WINDSOR**
STUDENT CHAPTER



University
of Windsor

2022-2023 Outstanding Section/Chapter Award (Annual Report)

Executive Board:

	Name	Contact	Degree program
President	Haesung Ahn	ahn112@uwindsor.ca	PhD Civil Engineering
Vice-president	Dhwani Shah	sha181@uwindsor.ca	PhD Civil Engineering
Secretary-Treasurer	Saeideh Esmaili	esmaeil4@uwindsor.ca	MASc Civil Engineering

Number of student chapter members: 7

Number of alumni chapter members: 9

<https://www.uwindsor.ca/engineering/research/497/canadian-institute-transportation-engineers>

About the ITE Canada UWindsor Student Chapter

The ITE Canada University of Windsor Student Chapter began in September 2020 with an aim to promote the field of transportation engineering to the student community, provide a platform for learning and support to prepare students for transportation engineering careers, and build connections with academic and industry partners in the ITE community. Dr. Hanna Maoh of the Civil and Environmental Engineering department is currently serving as the chapter's faculty advisor.

The University of Windsor is home to two growing transportation research groups, the *Transportation Systems Innovation (TSI) lab*, which provides training opportunities for undergraduate and graduate students in transportation engineering, and the *Cross Border Institute (CBI)*, a multidisciplinary research body specializing in cross-border logistics and security that provides an avenue for graduate students to engage in transportation research. Transportation-specific courses at the University of Windsor are offered, beginning at the third-year undergraduate level, with additional required and elective offerings in the fourth year. At the graduate level, transportation topics include integrated transportation and land use modelling, advanced GIS data modelling, freight transportation analysis, traffic operations and control, road safety analysis, and intelligent transportation systems. The current student chapter members are actively pursuing research in a number of these areas of research specialization.

The chapter aims to provide a platform for providing information to students on various topics of interest in transportation engineering. A seminar series has begun through the chapter, inviting guest speakers from various backgrounds in industry and academia to speak on the projects, challenges, and opportunities they have encountered in their own experience in transportation and to engage in discussion with the chapter's members. As the chapter grows, collaborative events with other institutions and chapters will be implemented, along with social and networking events for chapter members and technical tours to provide hands-on experience. The undergraduate and graduate students interested in transportation will be welcomed and encouraged to participate in chapter events and enroll as chapter members. We hope to build a hub for information, education, support, and networking to promote the field of transportation engineering and prepare our students for successful careers in the transportation engineering profession.



Award requirements

Regular Meetings (10 points)

Since last year's annual report submission, the ITE Canada University of Windsor Student Chapter has continued holding regular monthly chapter meetings, along with a seminar series. Attendance to the seminar

events has been open to chapter members and other undergraduate and graduate students within the Faculty of Civil and Environmental Engineering at the University of Windsor. Chapter members have also been invited to present their own research, offering a platform to practice in preparation for conferences and receive feedback from knowledgeable transportation student colleagues. To date, the following meetings have been held/are planned for the end of the current academic semester:

No.	Meeting Date	Location	Meeting Type	Presentation/Speaker
1	Feb 7, 2022	Virtual	Chapter meeting	Chapter executive board
2	Feb 28, 2022	Virtual	Seminar	Mr. Haesung Ahn – PhD candidate in the Civil and Environmental Engineering Department, University of Windsor
3	Mar 28, 2022	Virtual	Seminar	Dr. William Anderson – Director of Cross-Border Institute at the University of Windsor
4	Apr 11, 2022	Virtual	Chapter meeting	Chapter executive board
5	Apr 25, 2022	Virtual	Seminar	Ms. Paula Nguyen – Technical and Transaction Advisory in Transportation, Jacobs Strategic Consulting
6	May 2, 2022	In-person	Chapter meeting	First in-person chapter meeting after COVID-19
7	May 24, 2022	Virtual	Seminar	Mr. Jeff Hagan – Transportation Planning Senior Engineer, City of Windsor
8	Jul 25, 2022	Virtual	Chapter meeting	Chapter executive board
9	Sep 9, 2022	Virtual	Chapter meeting	Chapter executive board
10	Oct 14, 2022	Virtual	Chapter meeting	Chapter executive board election
11	Nov 24, 2022	Virtual	Seminar	Dr. Mark R. Ferguson – Senior Research Associate, McMaster Institute for Transportation and Logistics
12	Dec 14, 2022	In-person	Chapter meeting	Year-end chapter meeting
13	Jan 26, 2023	In-person	Chapter meeting	Chapter executive board
14	Jan 26, 2023	In-person	Seminar	Ms. Yujin Park and Ms. Chaeyoung Lee – PhD candidate and MASc candidate in the Statistics Department, Ewha Womans University, South Korea
15	Jan 31, 2023	Virtual	Chapter meeting for a field trip	Chapter executive board and Windsor-Detroit Bridge Authority (WDBA) outreach managers
16	Feb 27, 2023	In-person	Chapter meeting	Chapter executive board
Upcoming events				
17	Mar 23, 2023	Virtual	Chapter meeting	Chapter executive board
18	Mar 30, 2023	In-person	Field trip	ITE experts – Presentation regarding Gordie Howe International Bridge at Windsor at the Detroit Bridge Authority (WDBA) community office
19	Apr 6, 2023	In-person	Seminar	Dr. Umair Durrani – Research assistant at the University of Windsor (Alumni of Windsor Chapter)
20	Apr 2023	Virtual	Chapter meeting	Chapter executive board
21	May 2023	Virtual	Chapter meeting	Chapter executive board
22	May 2023	Virtual	Seminar	Speaker TBD – Alumni of Windsor Chapter – Tips for transportation engineering job markets

Mr. Haesung Ahn was the first presenter of the series of seminars for this academic year. He is a PhD candidate in the Civil and Environmental Engineering Department at the University of Windsor. Mr. Ahn presented his research topic regarding the impact of curfew on transit demand and in-vehicle density, which was also presented at the annual conference of the Canadian Society for Civil Engineering (CSCE) in Whistler, BC, from May 25-28, 2022. Like a mock test, he was able to have an opportunity to practice the presentation for the conference in advance. During the presentation, the chapter members were able to learn that a government-driven policy can bring about unexpected impacts on transit user behaviours, which also can induce a negative impact on the spreading COVID-19 virus among the users. The UWindsor Chapter has been encouraging all members to share their research presentations to fine-tune their presentation skills before the conferences.

Dr. William Anderson, Director of the Cross-Border Institute (CBI) at the University of Windsor, shared some information about the Gordie Howe International Bridge project, especially in terms of politics, economics and procurement of a major infrastructure project. In his presentation, Dr. Anderson highlighted the economic impact of the new infrastructure on the Canadian economy. He concluded that the Gordie Howe International Bridge would save billions of dollars in terms of trade movements, improve cross-border accessibility, and provide the certainty necessary to induce investments in productive assets.

Next, another seminar was held at the end of April 2022. Ms. Paula Nguyen of Jacobs Solutions presented a topic related to transportation projects that the Strategic Consulting team at Jacobs has worked on, ranging from rail to aviation to bridges. Also, she introduced Jacobs' global capabilities and emerging industry trends. The chapter members could learn what transportation projects are under development in the real world.

At the beginning of the summer, in May, Windsor chapter members finally had an in-person meeting after the long journey of COVID-19. Due to the pandemic, many members have not had any chance to meet in person, so the in-person meeting was a joyful moment to see face-to-face and greet each other. The financial support from ITE Canada headquarter made the atmosphere of the first event comfortable and enjoyable with light refreshments.

The chapter invited a guest speaker, Mr. Jeff Hagan, from the City of Windsor, on May 24. He shared the Vision Zero initiatives to make the road network safer, healthier, and more equitable for all city users. He presented the data-driven, equity-focused approach to achieving their goals in the city. This seminar was very practical for our chapter members to learn how the administrative unit established the plans and made the residents feel safer and more comfortable.

During the October chapter meeting, the chapter announced newly elected executive members. The dedicated new executive member for the chapter shared their potential operation plans with the members, especially conducting more in-person meetings and field trips and recruiting new members, including undergraduate students. With lessened COVID-19 restrictions, the chapter welcomed the new executive members in person and dreamed of setting plans to enforce the relationship between local universities and businesses.

At the year-end meeting in December, the chapter members enjoyed the in-person meeting with joyful refreshments. In particular, the chapter had a meaningful moment to appreciate former presidents of the chapters: Dr. Georgiana Vani (1st president) and Terence Dimatulac (2nd president). The present executive members gave the former presidents Starbucks gift cards as an honorarium. That was a heartwarming moment and reminded other members that the chapter would appreciate any member's efforts for the chapter.

At the first seminar in January 2023, the chapter had a wonderful opportunity to expand its research cooperation boundaries. Under a research project funded by South Korea's Ministry of Science, South Korean students have contributed to the global advancement in self-driving automobile technology. Statistics-based six students from Ewha Womans University in Seoul, the largest women's university in the world, have stayed in the Windsor area and participated in parts of \$460,000 research projects. (<https://www.uwindsor.ca/dailynews/2022-08-08/east-meets-west-autonomous-vehicle-research>)

Both research sides: Transportation engineering and Statistics have enhanced their academic abilities by exchanging their research knowledge. They have experimented using a driving simulator to collect drivers' behaviour data and analyzed it based on state-of-the-art statistical methodologies. Also, as a part of their project: machine learning research regarding identifying malware in Autonomous Vehicles (AVs) has been developed in cooperation with the computer science department at the university. All these international and interdisciplinary research cooperations have contributed to the chapter members' intellectual insights. They shared the project results during last week's chapter meeting with UWindsor members, and the executives reimbursed their presentation efforts by offering gift cards.

The chapter will hold monthly meetings and seminars to learn from each other by sharing research topics. Every speaker will receive gift cards, and this will encourage the members to participate in the chapter activities more eagerly. Also, the executives contacted the local firms: Windsor–Detroit Bridge Authority (WDBA), to visit the Gordie Howe International bridge construction site as a field trip. The bridge is well known as one of the Windsor area's biggest projects related to transportation engineering. Maintaining a strong relationship between local academics and firms will create better cooperation opportunities and could offer students insights to develop themselves for their potential careers. The field trip will be conducted on March 30, and we shared our inquiries, covering overall transportation topics about the bridge and advice for being a professional transportation engineer.

Student/Younger Member Support (15 points)

The Windsor Chapter is working diligently to ensure a strong basis for student support through the chapter. Since the launch of the seminar series, undergraduate engineering students have shown interest in the chapter and have been invited to participate. The purpose of the seminars is to educate students on different issues and opportunities in the field of transportation and to bring awareness to the vast array of specialty areas tied to transportation research and practice. An informational poster is prepared for each chapter event, made available to the current chapter members, and distributed to the Civil Engineering graduate and undergraduate student body. Students at any level are encouraged to reach out for the virtual meeting details, where they are welcome to participate in the discussion.

The seminar series is meant to invite discussion on a variety of transportation-related topics, which will not only be relevant to the research activities of the students but also aim to ignite an interest in areas of transportation that students may be less familiar with. Inviting seminar speakers from both academic and industry backgrounds will also aid students in building connections and provide insights into the types of career opportunities available. The chapter aims to provide a platform for student learning and support in preparation for a career in transportation. To this end, the chapter executives keep an open line of communication to answer inquiries from students, accept suggestions, and provide resources. Additionally, chapter alumni are welcome to remain in contact with the chapter, participate in chapter events, network, and provide insights and guidance to current chapter members.

Application of Technical Knowledge (10 points)

As we reported, we will have a field trip event at the Gordie Howe International Bridge office. We created detailed inquiries to improve the chapter members' technical knowledge, including state-of-the-art technologies that will be applied on the bridge and the professional requirement to become a transportation engineer. The WDBA experts will be our mentors and might have more opportunities for mentoring events for the chapter members in the future. The chapter will continue to reach out to them.

For the time being, the chapter encouraged its members to share their work in the form of graduate seminars to inform other students regarding their current research and present tools and models they develop and implement. Beginning with the Fall 2023 semester, the chapter plans to conduct various transportation-related software demos and/or “crash courses” to let the students know such programs exist and demonstrate how these can be applied and help with their research work.

Networking Events (10 points)

Contact information is shared among chapter members to maintain constant communication regarding upcoming chapter events. The chapter has introduced the Communications Officer position, which is responsible for maintaining the chapter’s social channels and informing student members of upcoming events and opportunities. During the chapter’s monthly meetings, we take the time to share not only the trajectory of the chapter but also information regarding current events (e.g., conferences) related to the industry to keep the chapter members informed and up to date with all opportunities available to them. In addition, the chapter strives to promote meaningful experiences for its members by conducting transportation-related seminars from speakers of various transportation backgrounds. Building these connections is very valuable to the student chapter members, as they are connected to individuals with a wealth of experience in the field who can provide specific guidance and advice and potentially serve as contacts for future career opportunities. Also, the chapter is currently planning to reach out to other ITE Canada student chapters to establish possible joint events in which different students from different chapters can share their current research work.

K-12 STEM Outreach (10 points)

As the chapter is still quite new, we have not had the opportunity to host any outreach events yet. However, such outreach will certainly be part of the future work of the chapter once everything settles down. We believe there is great value in inspiring the next generation of transportation engineers, and outreach events at the K-12 level are an excellent opportunity to spark interest early. The chapter will endeavour to collaborate with local elementary and high schools to organize engaging events for their students, such as setting up competitions centring around transportation topics.

New Member Recruitment (10 points)

As mentioned in the regular meetings section, the Windsor chapter is expanding its boundaries to invite new members within the university and other nations. Thanks to some of our professors with South Korean educational backgrounds, the chapter has cooperated with South Korean universities: Ewha Womans University and the University of Seoul. Six students came from Ewha university, one post-doctoral researcher and one master's student from the University of Seou are cooperating with the chapter members for a variety of research topics under the Mitacs program. The cooperation came from good results of the previous Mitacs program in 2021: one master's student visited during the pandemic era. UWindsor and USeoul members submitted many papers: Conference proceedings: Canadian Society for Civil Engineering (CSCE) conference in Whistler, BC, the 57th Canadian Transportation Research Forum (CTRF) conference in Montreal, QC, the 102nd Transportation Research Board (TRB) conference in Washington D.C., and other journal papers under review. The cooperation of the two universities has led to this year’s new researcher invitations based on the previous year’s good performance. The chapter will keep increasing global cooperation to recruit new members.

Also, the chapter is currently developing a recruitment strategy for the upcoming semester and academic year. We are planning to speak with the 4th-year undergraduate Capstone class to encourage them to be part of ITE Canada and to let them know the benefits of the regular events the chapter conducts. The chapter also established a communications officer position in the last year to handle the Windsor Chapter's social media accounts and advertise the chapter's current and upcoming events. Here, we are able to reach out to non-member engineering students to attend seminars, chapter events, and regular chapter meetings.

To date, the chapter's events have been well-received by both undergraduate and graduate students. Chapter memberships are open to undergraduate and graduate students with interest in transportation. Seminar events and software demonstrations are intended to inform undergraduate students of the field of transportation engineering and spark an interest in the field, either leading to graduate studies or the pursuit of a career in the transportation industry. Moreover, information about the chapter is made available to anyone through the chapter's official website and social channels. In general, graduate students researching under our faculty advisors will continue to be offered the opportunity to join the chapter. Information will also be forwarded to the graduate cohort and invited to the chapter meetings and events.

As the chapter grows, the long-term vision includes expanding outreach efforts to other departments and faculties within the University with interest in transportation. For example, the Mechanical Engineering Department is heavily invested in automotive research, and the Electrical Engineering Department conducts ongoing research into connected and autonomous vehicle technologies. Students in both of these departments could benefit from the chapter's seminars and discussions and could offer unique insights. Similarly, Computer Science and Kinesiology Faculties students may have transportation-related research interests, dealing with big data analytics or human-machine interactions. As connections are made across departments and faculties, expanding the scope of the seminars and events that the chapter can host, the aim is to attract interest from students in a wide range of domains, each with a unique perspective.

Diversity and Inclusion (5 points)

The chapter's executive committee comprises a diverse group, including one male and two female members from different ethnic backgrounds. The current student membership also belongs to various backgrounds. The chapter focuses on engaging in discussion and sharing transportation information, and we aim to empower any students interested in this field to pursue it. We believe that inclusivity and diversity are key components to creating a platform for building up transportation professionals. Chapter membership is open to students at the undergraduate and graduate levels, regardless of background or gender, and the chapter's recruitment policies and campaigns, which are currently being developed, will reflect this. Concerning the events that have already taken place through the chapter, which are open to chapter members and any interested non-members, a diverse range of guest speakers have been and will continue to be invited. These events have all been very well-received and generated excellent discussion among the group.

Training/Professional Development (5 points)

In addition to monthly seminars, the Windsor chapter plans to conduct various transportation-related software demonstration events led by different student members experienced in their application and in collaboration with other student chapters. This would provide a platform for our students to showcase technical aspects of the software packages with which we have experience and to learn additional technical skills from other chapters. Also, the chapter plans to provide a platform for student members to practice giving conference presentations. Since not all chapter members may be able to attend conferences during their academic training, we believe that it is important to provide an opportunity to develop professional presentation skills. This would be done in a supportive environment, where valuable feedback could be gleaned from fellow student members familiar with the topics at hand.

Field Trips/Technical Tours (5 points)

A technical tour is planned for the end of March with the Windsor-Detroit Bridge Authority, where chapter members will have an opportunity to learn about the new Gordie Howe International Bridge. Field trips and technical tours will certainly continue to be a part of the chapter's planned events, as these types of activities allow students primary and hands-on experience with the transportation topics we study. As the home of Canada's busiest border crossing, Windsor offers a unique location for the first-hand study of transportation issues with tangible results. The construction of the new international bridge crossing presents a real

opportunity for such a field trip event, where student members can learn about the planning and implementation process of such a massive undertaking. Opportunities for technical tours also include partnerships with local consulting firms. The consultants with whom the chapter can network would be eager to showcase their projects and invite our chapter members to learn about their activities while providing a networking opportunity to equip our student members for entering the workforce as transportation professionals.

Service Projects (5 points)

Interaction with the community has been limited due to the recent pandemic situation. However, community service projects will be a part of the chapter's future work. It is important for our chapter members to be engaged in their community. We believe that participating in service projects will lead the student chapter members toward developing a compassionate and well-rounded character as they head toward their professional careers. The chapter will coordinate with the Civil and Environmental Engineering department, the Engineering Student Society, and industry partners to organize service events.

Funding Support (5 points)

In the past year, the Windsor Chapter opened a bank account and started collecting membership dues from its current members. Since the chapter is still young and does not yet conduct events with expenses, the executives decided to collect an annual membership of \$10 from its current members. In addition, the chapter also received a one-time allowance worth \$500 from the main CITE office. A small monthly interest is also deposited in the chapter's account. As of February 2023, the chapter holds \$608.84, and the expenses incurred include the monthly bank service charge, which is \$3.50, refreshments for in-person meetings, and an honorarium for seminar speakers.

The chapter is planning to reach out to outside sponsors to find valuable chances of funding for members of this chapter. Thanks to the *Transportation Association of Canada Foundation (TAC)*, the *Norman Esch Foundation*, and the *Cross Border Institute (CBI)*, the *RC Spencer Associates Graduate Scholarship* has supported several students every year from 2015 to the present. Additionally, we plan to reach out to other local consulting firms or institutions to find additional avenues of support for our members and develop a robust relationship between the chapter and local neighbours. The chapter funds are earmarked for guest speaker endowments, off-site chapter events, and sponsorships of student members for attending conferences.

Leadership ITE (5 points)

As the chapter is still quite new, we have not had the opportunity to support members for the Leadership ITE events. The chapter is currently developing a database of alumni contact information to ensure that member graduates are still able to network through the student chapter and engage with chapter events. The executive board continues to forward CITE leadership events and scholarship information to members and alumni, ensuring that they are aware of the opportunities for involvement with CITE at large. The guest speakers that have been invited through the chapter's seminar series also encourage and advise our members on improving their leadership skills and becoming successful transportation professionals and leaders.

Advocacy (5 points)

With the previous seminars, transportation specialists and researchers have provided insights to our chapter members into very practical processes from their experience in the field. For instance, Paula, Technical and Transaction Advisory in Transportation, Jacobs Strategic Consulting, shared their recent projects and opportunities available at Jacobs. Similarly, Jeff, City of Windsor, presented the Vision Zero initiatives in the city. He pointed to very important and practical considerations that must be considered when the new initiatives directly impact saving people's lives. Each speaker can offer valuable insights and advice to our

chapter members. The chapter plans to continue hosting seminars to develop the members' knowledge and capability as professional transportation engineers and researchers.