



Lakehead University Great North Concrete Toboggan Race Team

Student Club Constitution V1 – August 2025

1. Name

- 1.1. The name of the organization shall be “Lakehead University Great North Concrete Toboggan Race Team” or “LU-GNCTR Team” in short.

2. Purpose

- 2.1. LU-GNCTR and its members shall abide by these bylaws and policies of Lakehead University, Lakehead University Student Union (LUSU), as well as the Organizing Committee (OC) of the GNCTR competition.
- 2.2. To establish a common constitution between the two degree projects as well as the volunteering members of the club.
- 2.3. To encourage innovative design and friendly competition.
- 2.4. To promote and facilitate educational and social events and initiatives.
- 2.5. To acquire and distribute funding to accomplish the goals set forth in this document.
- 2.6. To publicly promote science, technology, engineering, and math (STEM) studies.

3. Membership and Organization

- 3.1. There are three types of members in the LU-GNCTR team.
 - 3.1.1. Degree Project Members – Civil and mechanical engineering students pursuing GNCTR as their degree project.
 - 3.1.1.1. Other disciplines may be considered in accordance with the Faculty Supervisors and at the discretion of the Team Captains
 - 3.1.2. General Members – Students at Lakehead who are interested in getting involved in the competition.
 - 3.1.3. Captains – An elected representative from the mechanical degree project shall be the mechanical captain, and an elected representative from the civil degree project shall be the civil captain. Their role is to guide the team in completing the project and oversee team operations.
- 3.2. The Executive of LU-GNCTR consists of the Captains and Leads.
 - 3.2.1. Positions for the Leads should be revised yearly at the discretion of the Captains.
 - 3.2.2. The Captains shall hold uncontested vetoing power for any elections that may occur and the manner of how executives are chosen shall be at their discretion.
- 3.3. The LU-GNCTR Team shall have a Faculty Advisor within the Mechanical and Mechatronics Engineering Department — currently Dr. K. Liu (known as “Mechanical Supervisor”).
- 3.4. The LU-GNCTR Team shall have a Faculty Advisor within the Civil Engineering Department — currently Dr. A. Elshaer (known as “Civil Supervisor”).
- 3.5. The primary Supervisor of the GNCTR Club is Dr. A. Elshaer.



LU-GNCTR Club Constitution

4. Amendments to the Constitution

- 4.1. The constitution may be amended by a resolution of an Executive at an Executive meeting.
- 4.2. A copy of the approved constitution shall be submitted to the Faculty Advisor, posted on the executive server, and kept in the GNCTR Office (if provided).
- 4.3. The constitution shall be re-evaluated annually with the renewal of the LUSU club and the election of new Captains.
- 4.4. Changes to the constitution should be reviewed by the club supervisors.

5. Divisions

- 5.1. The LU-GNCTR Club will consist of the following divisions:
 - 5.1.1. Mechanical
 - 5.1.2. Civil
 - 5.1.3. Fabrication
 - 5.1.4. Spirit
- 5.2. Mechanical Division
 - 5.2.1. The mechanical division shall consist of 4-6 degree project students who are responsible for designing the mechanical and dynamic components of the toboggan. Each member will focus on one of the following:
 - 5.2.1.1. Braking System.
 - 5.2.1.2. Steering System.
 - 5.2.1.3. Ski Mount and Suspension System.
 - 5.2.1.4. Superstructure – Aerodynamics and Dynamic Analysis.
- 5.3. Civil Division
 - 5.3.1. The civil division shall consist of 4-6 degree project students who are responsible for designing the concrete and structural (static) components of the toboggan. Each member will focus on one of the following:
 - 5.3.1.1. Concrete Mix.
 - 5.3.1.2. Concrete Geometric Profile.
 - 5.3.1.3. Concrete Rebar/Reinforcement.
 - 5.3.1.4. Superstructure – Structural Integrity and Static Analysis.
- 5.4. Fabrication Division
 - 5.4.1. The fabrication division will be responsible for the execution of the toboggan designs, as well as building the shipping crate for the toboggan. The division will include a fabrication lead, project members, and general members who are interested in gaining manufacturing experience.
 - 5.4.1.1. Sufficient attendance and participation of project members during fabrication is mandatory, at the discretion of the Captains.
- 5.5. Spirit Division
 - 5.5.1. The spirit division will be responsible for implementing the team theme, building team spirit, running team bonding activities, planning and running team events, and working on the technical exhibition. The spirit division will also be running the social media account and completing various spirit challenges from the GNCTR Organizing Committee.



LU-GNCTR Club Constitution

6. Roles

- 6.1. The LU-GNCTR Team Executives shall consist of:
 - 6.1.1. Team Captains
 - 6.1.2. Spirit Captain(s)
 - 6.1.3. Mechanical Lead(s)
 - 6.1.4. Concrete Lead(s)
 - 6.1.5. Superstructure Leads
 - 6.1.5.1. Structural Lead(s)
 - 6.1.5.2. Aerodynamics Lead(s)
 - 6.1.6. Fabrication Lead(s)
 - 6.1.7. Design Lead(s)
- 6.2. The Team Captains shall consist of 1 mechanical and 1 civil degree project member. The duties of these Co-Captains shall include registration, organization, task delegation, conflict resolution, project management, and finance of the team.
- 6.3. The Spirit Captain(s) will consist of 1-2 students of any discipline or program, preferably with experience at a GNCTR competition. The duties of the Spirit Captain(s) shall include team bonding activities, social media management, theme implementation/decoration, and planning for the events at the competition.
- 6.4. The Mechanical Division Lead(s) will consist of 1-2 mechanical engineering degree project members who shall be responsible for division organization and budgeting, proofreading work, checking and providing guidance on calculations, and ensuring all project milestones are made in a timely manner.
- 6.5. The Concrete Division Lead(s) will consist of 1-2 civil engineering degree project members who shall be responsible for division organization and budgeting, proofreading work, checking and providing guidance on calculations, and ensuring all project milestones are made in a timely manner.
- 6.6. The Superstructure Division Leads will be separated into two categories based on the subdivisions of Superstructure: Aerodynamics Lead(s) and Structural Lead(s). The Structural Lead(s) are seen as the "main" Lead(s) of the division and are in charge of all the administrative division roles whereas Aerodynamics Lead(s) focus on coordinating between Mechanical and Structural.
 - 6.6.1. The Structural Lead(s) will consist of 1-2 civil degree project students who are responsible for building the superstructure frame to the aerodynamic profile with considerations for structural integrity, weight, and strength, as well as designing the egress, flooring, and material selection. Structural Lead(s) will be responsible for safety report 1, division project management and budgeting, and coordinating with Aerodynamics.
 - 6.6.2. The Aerodynamics Lead(s) will consist of 1-2 mechanical degree project students who are responsible for designing the shape of the toboggan and the bottom of the toboggan to coordinate with the other mechanical components as well as add redundant supports to enhance crash protection in the roll cage. Aerodynamics Lead(s) will be primarily responsible for safety report 2 and coordinating between Structural and Mechanical on all designing and deliverables.



LU-GNCTR Club Constitution

- 6.7. The Fabrication Division Lead(s) will consist of 1 engineering student, preferably with experience in construction and fabrication, who shall be responsible for working with all the design divisions to build a fabrication plan, filling out Job Hazard Analysis (JHA) and Field Level Hazard Assessment (FLHA) forms properly, submitting forms on time, and coordinating with fabrication partners to achieve project milestones. It is essential to strengthen these partnerships.
- 6.8. Design Leads will consist of 2 engineering students, one from the civil project and one from the mechanical project, which will be responsible for the coordinator general members.
 - 6.8.1. Monthly skill-building workshops will be held by the design leads, and bi-weekly meetings will be held for presentation of the current designs to be followed by a safety and design review by the coordinators.
 - 6.8.2. Their main responsibility will be to include the coordinators in the design, collect valuable design/safety feedback, and provide future project members with the skills required to continue the project successfully.
 - 6.8.3. It is the responsibility of the design leads to ensure every general member attending the competition understands the toboggan design thoroughly such that if they are selected for the random technical questioning at the competition, they will sufficiently be able to answer.
- 6.9. General members may take on any of the following roles:
 - 6.9.1. Fabrication Volunteer – ideal for students who want hands-on manufacturing experience.
 - 6.9.2. Spirit Volunteer – ideal for students who want to socialize and get event planning and social media experience.
 - 6.9.3. Coordinator – ideal for students who want to develop engineering skills in design and safety review, or take on the project in the future for their degree project.
 - 6.9.4. Help with running fundraisers and acquiring sponsorship.
 - 6.9.5. The commitment level of general members is at their discretion, however they are required to attend all mandatory meetings and at least 70% of their division's meetings to remain in good standing of the team.
 - 6.9.6. Joining the team does not guarantee your attendance on the trip. Only a handful of volunteers will be selected based on hours, attendance, participation, and contributions.
 - 6.9.7. Anyone is able to join the team as a general member so long as they meet the following requirements:
 - 6.9.7.1. Undergraduate student at Lakehead University
 - 6.9.7.1.1. A maximum of 2 graduate students are allowed to join at the discretion of the Captains and the Organizing Committee
 - 6.9.7.2. Enrolled full time
 - 6.9.7.3. 60% of the team must be in applied sciences or engineering
 - 6.9.8. A member intake form must be submitted by the last day of September in the current academic year in order to officially join the team.



7. Election Procedures and Rules

- 7.1. Captain elections shall be held every March following the competition. Nominations will occur for a 2 week period and will be verified by supervisors, followed by a 1 week “campaigning” period where candidates will be announced and have an opportunity to introduce themselves, followed by a 1 week election. New captains will be officially announced in the conclusive meeting. April will be a transitional period with a focus on exams, and the new team will officially start in May. To qualify for the Captain nomination, a student must be:
 - 7.1.1. Any 3rd year mechanical student, ideally with GNCTR experience, who is taking the degree project next year and would like to take GNCTR as their degree project is eligible to run as the Mechanical Captain.
 - 7.1.2. Any 3rd year civil student, ideally with GNCTR experience, who is taking the degree project next year and would like to take GNCTR as their degree project is eligible to run as the Civil Captain.
 - 7.1.3. Supervisors reserve the right to disqualify a candidate from running for Captain at their discretion without due cause.
- 7.2. Spirit Captain elections will be held after the competition. Nominations will occur throughout March, and during the transitional period the new Captains will finish the spirit elections.
 - 7.2.1. Anyone who will be a full time undergraduate student at Lakehead University next year is eligible to run as a Spirit Captain. Ideally, one or both spirit Captains have attended GNCTR before.
 - 7.2.2. The newly elected Captains and Supervisors reserve the right to disqualify or select a candidate from the running at their sole discretion.
- 7.3. Themes will be nominated and/or debated at the discretion of the Captains
 - 7.3.1. A theme vote will occur using a ranking system, and the top 3 results will be announced.
 - 7.3.2. The theme will not be confirmed until pre-registration.
 - 7.3.3. Themes are approved on a first come first serve basis.
 - 7.3.4. The Organizing Committee reserves the right to reject a theme that is too similar to another team’s theme, deemed inappropriate, or was done by another team at a recent competition.

8. Meeting Procedures

- 8.1. A schedule shall be posted with information on meeting dates/times/locations throughout the semester prior to the start.
 - 8.1.1. This schedule shall be prepared by the Captains in August.
- 8.2. Mandatory meetings must be scheduled at least 2 weeks in advance, ideally on the year-long schedule.
 - 8.2.1. Failure to attend mandatory meetings without pre-approved reasoning may result in ineligibility for the competition.
- 8.3. Divisions will have meetings at the discretion of the Lead.
- 8.4. All team members must attend at least 70% of their main division’s meetings in order to remain a member of the team and be considered for the competition trip.



LU-GNCTR Club Constitution

9. Conflict Resolution Procedures

- 9.1. The first point of contact for any conflicts that arise is the Team Captains. You may contact either or both Captains.
- 9.2. The Captains may confer with each other or the Team Supervisors on what to do.
 - 9.2.1. Anything discussed is confidential and will not affect the eligibility of you or another party to attend the competition, with the exception that extreme circumstances are present.
 - 9.2.2. In the case something you confided is shared with another Captain or Supervisor, you will be informed.
 - 9.2.3. If the determined course of action involves another party, nothing will happen without your informed consent.
 - 9.2.4. If you have a complaint about one of the team or spirit Captains, resolution will be between the other Captain and the Supervisors. Section 9.2.3 applies unless deemed otherwise by the Supervisors.
- 9.3. Conflicts will be tracked and filed privately.
 - 9.3.1. May include any conflicts or conduct breaches outlined in Section 11.
 - 9.3.2. This is for record keeping purposes and to ensure there are no unresolved conflicts prior to the competition.
 - 9.3.3. Only the Supervisors and that year's Captains will have access to these files.
 - 9.3.3.1. Physical handwritten forms will be filled out and held exclusively by the supervisors.
 - 9.3.3.2. Supervisors reserve the right to hold onto files for 5 years.
 - 9.3.3.3. Digital copies of any complaints or reports will be discarded before new Captains take possession of the private drive, and names may be redacted from physical copies in certain cases.

10. Financial Policy

- 10.1. Any purchases made must be approved and tracked on a cash flow sheet.
 - 10.1.1. Purchases less than or equal to \$100 can be approved by Team Captains, with 2 days notice minimum.
 - 10.1.2. Purchases more than \$100 must be approved by Supervisors, with 1 weeks notice minimum.
- 10.2. Receipts must be kept and submitted after the purchase in order to receive a refund.
 - 10.2.1. Write your first and last name at the top of the receipt.
 - 10.2.2. It is standard practice to get a separate receipt for team expenses versus personal expenses.
 - 10.2.3. The purchase will be highlighted with a yellow highlighter and tracked on the cash flow sheet before it is filed.
 - 10.2.4. Receipts will be kept in a box for record keeping, and are club property once you are reimbursed.
- 10.3. Sponsorship will be handled primarily by degree project members.
- 10.4. Monthly fundraisers will be held throughout the year.



LU-GNCTR Club Constitution

11. Conduct

- 11.1. You must be polite and helpful to other GNCTR competitors at all times. High competitor spirit is a must.
- 11.2. This club is a fun and safe environment, we want you to be able to joke around however it is important to be aware of your environment.
 - 11.2.1. If you don't know someone, be sensitive about what you're joking or talking about.
 - 11.2.2. There is no place for inappropriate jokes at the airport, train station, public GNCTR events, fundraisers, or any sponsor appreciation events.
- 11.3. We understand it can be hard to identify inappropriate behaviour sometimes. As a result, you will be given up to 3 warnings that will be documented by a Supervisor, Lead, or Captain.
 - 11.3.1. Leads and Captains are not excluded from this rule.
 - 11.3.2. Exceeding 3 warnings will result in a mandatory Code of Conduct seminar to clear your warnings.
 - 11.3.3. Repeated or serious offenses may result in being ineligible for the competition and/or removed from the team.
 - 11.3.4. Supervisors reserve the right to remove someone from the team at any point of the project.
- 11.4. Inappropriate behaviour includes but is not limited to:
 - 11.4.1. Inappropriate jokes that make one or more team members uncomfortable.
 - 11.4.2. Inappropriate jokes in any of the situations listed in 11.2.2 or similar.
 - 11.4.3. Inappropriate remarks about the team or any team members.
 - 11.4.4. Inappropriate remarks about other teams, other team members, or the work done by other teams.
 - 11.4.5. Disrespectful remarks about indigenous peoples, race, religions, politics, LGBTQIA2S+, or marginalized groups of people or events honouring them.
 - 11.4.6. Spreading rumours and gossiping about anyone on the team or participating in the competition.
 - 11.4.7. Any offenses against the Lakehead University Student Code of Conduct.
 - 11.4.8. Any offenses against the LUSU Code of Conduct.
 - 11.4.9. Any offenses against the GNCTR Rulebook.
 - 11.4.10. Any offenses against additional rules set by the Organizing Committee, Supervisors, and Captains during the course of the competition.
- 11.5. Inappropriate conduct should be reported to the Captains with the assurance of confidentiality. If you're unsure of whether something is inappropriate or not, it's better to report it and leave it to us to determine.
- 11.6. Warnings will be issued privately and confidentially.
- 11.7. The order each governing constitution/code supersedes is as follows:
 - 11.7.1. Lakehead University Student Code of Conduct
 - 11.7.2. LUSU Code of Conduct
 - 11.7.3. GNCTR Current Rulebook (Latest Version) and Organizing Committee
 - 11.7.4. GNCTR Club Constitution



LU-GNCTR Club Constitution

12. Terms of Office

- 12.1. The official period is May 20[XX]-April 20[XX+1] annually.
- 12.2. The team's first competition was GNCTR 2025, however the team was officially established in 2024.
- 12.3. The constitution should be reviewed and updated annually, and amendments should be approved by the club supervisors.
- 12.4. Lead positions are assigned by Captains.
- 12.5. All executives must be enrolled in the degree project to maintain their role.
- 12.6. Captains reserve the right to select their degree project team, but should be open to considering any qualifying person who wants to join.
- 12.7. Supervisors reserve the right to remove any project member from the team prior to pre-registration.
- 12.8. Project members and executive roles are finalized as of pre-registration for the GNCTR competition.
- 12.9. All members must adhere to any other regulations or guidelines set forth by the current team including sponsorship practices, marketing guidelines, social media guidelines, etc.

13. Contact Information of Current GNCTR Executives (GNCTR 2026)

- 13.1. General Team (gnctr@lakeheadu.ca)
 - 13.1.1. This email is monitored by the team captains exclusively, any conflict or conduct reporting can be made to this account.
- 13.2. Supervisors
 - 13.2.1. *Dr. A. Elshaer (aelsaer@lakeheadu.ca)
 - 13.2.2. Dr. K. Liu (kliu@lakeheadu.ca)
- 13.3. Captains
 - 13.3.1. *Liliann Vo (lcvo@lakeheadu.ca | 519-317-0145)
 - 13.3.2. *Jakub Cebula (jwcebula@lakeheadu.ca | 780-318-4085)
 - 13.3.3. *Hung Lam (hlam@lakeheadu.ca | 807-252-0439)
- 13.4. Mechanical Degree Project
 - 13.4.1. *Liliann Vo (lcvo@lakeheadu.ca | 519-317-0145)
 - 13.4.2. *Alexey Burlakov (aburlako@lakeheadu.ca)
 - 13.4.3. *Tyson Reeve (tjreeve@lakeheadu.ca)
 - 13.4.4. Iyinoluwa Esther Ajayi (ieajayi@lakeheadu.ca)
 - 13.4.5. Edwin Gordenko-Sadevich (egordenk@lakeheadu.ca)
- 13.5. Civil Degree Project
 - 13.5.1. *Jakub Cebula (jwcebula@lakeheadu.ca | 780-318-4085)
 - 13.5.2. *Ahmet Uraz (auraz1@lakeheadu.ca | 647-720-2128)
 - 13.5.3. *Tyson Chambers (tchambe3@lakeheadu.ca | 204-721-3663)
 - 13.5.4. Wen Shi Zeng (wzeng@lakeheadu.ca | 403-918-6167)
 - 13.5.5. *Tajman Mann (tmann1@lakeheadu.ca)
 - 13.5.6. Lance Miron (ldmiron@lakeheadu.ca)

An asterisk (*) indicates they have been to a GNCTR competition before.