

ENGINEERING AND COMMERCE CASE

COMPETITION 2024-2025

Rules & Regulations





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1. Overview

The following rules have been approved by the Academics team, the President, and the Board of Directors of the Engineering and Commerce Case Competition (ENGCOMM). It is expected that all participants and delegations representatives from each competing institution familiarize themselves with and abide by these rules prior to the beginning of the competition.

2. Definitions

- ◆ **Organizing Committee:** Executive members of the ENGCOMM organization.
- ◆ **Participant:** Enrolled in an Undergraduate program from a participating institution.
- ◆ **Delegation:** A standard delegation consists of four students and their coach(es), all from the same institution. Under special circumstances, a single delegation may represent two different institutions, subject to prior approval by the ENGCOMM Board and the Vice President of Academics.

3. Eligibility Criteria

ENGCOMM's eligibility regulation requires all applicants, except coaches, to meet the following criteria:

1. Program Enrollment:

- Applicants must be registered as an undergraduate student in an accredited degree program. While it is advisable for participants to major in engineering, business, or computer science, students from all academic disciplines are welcome to apply.

2. Course Enrollment:

- Applicants must be current undergraduate students enrolled in at least one course at their home institution during the application period and must remain enrolled through the competition. While enrollment in engineering, business, and/or computer science classes is recommended, it is not mandatory.

3. Institutional Representation:

- Participants must represent only the institution where they are currently enrolled and must not represent any other college or university.

4. Degree Progression Restrictions:

- At the time of registration with ENGCOMM, applicants must not have commenced any coursework contributing to a master's degree. Participants who begin their master's degree studies post-registration, including those starting as early as January, are eligible to compete.

4. Delegation Structure

ENGCOMM delegation structure regulations require all competing institutions to comply with all of the following criteria:

- ◆ **Each Team** must consist of up to **four (4) competing students**.
- ◆ ENGCOMM **recommends** a balanced delegation comprising two **(2) students from engineering/computer science and two (2) from business studies** to foster interdisciplinary collaboration and diverse perspectives. However, we welcome teams with different academic backgrounds, and **no team will be penalized or disfavored based on their field of study**.
- ◆ Delegations will use their designated team name during networking events, case preparation, and presentation stages.
- ◆ Delegations will be identified by the name of their institution during the closing gala and in social media marketing.

5. Competition Format

5.1. The Divisions

At ENGCOMM, participating delegations will be assigned to divisions through a random draw to ensure fairness and diversity. The number of divisions will be

determined based on the total number of registered delegations, with the aim to have equal numbers in each division. Once established, these divisions will remain fixed throughout the competition until the final round. The divisional structure promotes an equitable and competitive environment, culminating in a final round where the top teams — each a winner from their respective division — will compete for the grand prize.

5.2. The Cases

The main competition consists of an industry case, to be worked out with the highest quality of problem-solving abilities. The case preparation will be followed by a timed presentation, which will be judged by a respected judging panel and graded according to the case-specific grading schemes written and reviewed by ENGCOMM's Academics department.

5.3. Case Structure

5.3.1. Case Presentation

Each delegation will begin their case preparation at staggered start times, coordinated to align with their subsequent presentation slots. Throughout the preparation and presentation phases, only registered participants of the delegation are permitted in the room.

Participants have access to specified tools (listed on page 8 & 9) necessary to devise solutions, conduct analyses, create designs, and prepare their presentations. This framework applies to all cases, with teams allotted a specific timeframe to resolve the case and craft a 15-minute presentation for the judges.

5.3.2. Submission Protocol

Fifteen minutes before preparation concludes, teams must upload their PowerPoint slides and supplementary materials (designs, forecasts, charts, etc.)

to the assigned Google Drive folder. The file name should include the team name and case number, with supplementary files appropriately labeled. In the event of incorrectly labeled or multiple files, the Organizing Committee will choose the file deemed correct; delegates cannot request alternate files during their presentation. Presentation files must not exceed 50MB; larger files will result in disqualification of the PowerPoint material. Additionally, presentations must adhere to a 4:3 aspect ratio for the livestream compatibility.

5.3.3. Preparation and Presentation Conduct

Prior to beginning the preparation period, all delegation members must be in the preparation room during the course of the preparation and presentation periods. ENGCOMM invigilators will join the delegations' presentation rooms at randomly selected times to ensure the respect of academic rules.

Delegates are required to remain in the preparation room for the duration, with ENGCOMM invigilators making random checks. Scheduled 5-minute breaks are permitted, with one delegate at a time allowed to leave for necessities, upon notifying an invigilator. Breaks are part of the preparation time and are not compensable.

Regarding presentations, the material usage guidelines remain consistent with the preparation phase. To ensure a fair and focused environment for all, recording of any kind by those outside of the ENGCOMM Organizing Committee is not permitted. After their presentations, teams should reassemble in the designated waiting area for the announcement of results.

5.3.4. Case Materials List

5.3.4.1. Permitted Resources

For the preparation and presentation of the cases, each competing student is permitted the following resources:

- ◆ Case documents
- ◆ Internet access
- ◆ Portable computer **or** tablet equipped with commonly used productivity software and 3D design CAD software.
- ◆ Mouse
- ◆ Engineering, business, and/or computer science textbooks
- ◆ Calculator
- ◆ Cue cards during the presentation
- ◆ Laser Pointers (will be provided by ENGCOMM)

Competing students will be limited to the resources mentioned above, restricting access to any form of external communication method or tool such as cellphones, emails, and instant messaging.

5.3.4.2. 3D Design CAD Software

There are no limitations on the software to be used for any 3D CAD design. Delegations are permitted to make use of pre-fabricated parts from websites such as GrabCAD or any other platform, provided that they properly reference and cite the source of these parts. Participants disobeying this rule, such as by using unmentioned 3D design software or failing to provide appropriate citations, will be disqualified.

5.3.4.3. AI Tool Usage

In alignment with our commitment to fostering innovation and utilizing cutting-edge technology in problem-solving, participants are encouraged to use advanced AI resources. This includes, but is not limited to, large language models like ChatGPT, image-generating models such as DALL-E 3, and other contemporary AI tools.

The adept utilization of AI technology is not only a complement to the competitors' presentations but also an opportunity to enhance their overall score. **Effective AI integration will be reflected in a bonus grading criterion**, with further details provided in subsequent sections.

Delegations opting to use AI tools must thoroughly document their usage. This includes detailing the specific AI products used and their application in the case solution. Such documentation is mandatory and must be presented as a slide in the appendix of the team's presentation. This slide is crucial as it may be referenced during the Q&A period. It contributes significantly to the 'AI Tool Utilization Proficiency' bonus criteria.

It is important to note that **if the case provider decides to restrict AI usage during the case-solving period, all AI products will be prohibited.** Delegations will be promptly notified of such restrictions. Non-compliance with these restrictions, whether detected during or post-competition, will lead to legal liabilities and could result in disqualification from the entire competition.

6. Presentations

Delegations will segue directly from the case preparation into their presentations. Staggered start times within each division ensure no overlap.

Post-preparation, teams will have a brief five (5) minute interlude to transition to the presentation area. Any tardiness in commencing the presentation will result in a corresponding deduction from the fifteen (15) minute presentation allotment, with no penalty to the team's overall score. There will be no exceptions for delays.

Presentation Structure:

- ◆ **Five (5) minutes** allocated for setting up the presentation
- ◆ **Fifteen (15) minutes** dedicated to the actual presentation
- ◆ **Ten (10) minutes** for the team to engage in a Q&A session with the judges.
- ◆ **Five (5) minutes** for the judges to record scores
- ◆ **Ten (10) minutes** reserved for judges to deliberate in private, excluded in the final round.
- ◆ **Ten (10) minutes** for judges to provide constructive feedback, excluded in the final round.

7. Judging

Each division will have a single judging panel assigned, composed of three (3) to four (4) judges, whose duty it is to critically evaluate the presentations. During the final round, the judging panel will expand to consist of four (4) to five (5) judges.

Each judging panel is intentionally interdisciplinary, consisting of professionals across various fields to ensure a well-rounded evaluation. Panels usually comprise a judge with a business background, another with engineering expertise, and an industry expert or a representative from the sponsoring organizations. The panel works collaboratively to guide the question and feedback sessions, maintaining a focus on constructive and relevant discourse.

Judges will utilize comprehensive grading rubrics for scoring presentations, which are meticulously crafted and approved by ENGCOMM's President, Board of Directors, and the Vice President of Academics. This protocol ensures that all presentations are assessed with a consistent and transparent methodology, aligned with the competition's rigorous standards.

Following the conclusion of presentations, judges will assemble for a critical deliberation session. This period serves as an opportunity for judges to discuss and refine their assessments based on the collective insights gathered during the presentations. While initial scoring provides a preliminary framework, judges retain the discretion to revise their scores up to the point of final submission. This ensures that judges have the flexibility to account for nuanced perspectives and overarching insights that may have emerged during the collective review process. The dialogue during deliberations is designed not only to finalize scores but also to craft detailed and constructive feedback that will enrich the learning experience for the competitors.

The aggregate of each judge's scores will determine a team's final score. The rulings of the judging panels are conclusive and represent our commitment to a fair and impartial adjudication while offering substantial feedback to all participants.

8. Scoring System

8.1. Grading Scheme

Judges will individually score each team out of 100%; these scores will be based on case-specific grading schemes which are handed out to the delegations during case solving, along with the case documents. The grading Scheme contains the following scoring criteria for each judge to complete:

- ♦ **Problem Identification – 10%**

This component assesses the team's ability to thoroughly understand and clearly define the core issue(s) presented in the case. A strong problem identification should provide a comprehensive overview of the challenges, highlighting the key business and engineering concerns, potential constraints, and underlying risks.

♦ **Business Solution – 20%**

The business solution evaluates the team's ability to develop a comprehensive and strategic business plan that effectively addresses the problem identified in the case. The business solution must not only solve the immediate issue but also consider long-term implications, profitability, scalability, and market competitiveness. The business solution component ultimately tests the team's ability to merge innovative thinking with pragmatic business acumen, ensuring that their engineering and technical solutions can thrive in a competitive, real-world business environment.

♦ **Engineering Solution – 20%**

The engineering solution presented should demonstrate a strong understanding of the technical challenges involved and should propose innovative yet practical methods to solve these issues. It should be supported by calculations, simulations, design concepts, and technical analyses. The solution should also consider cost-efficiency, scalability, and adherence to safety and regulatory requirements. The creativity of this engineering solution should also seamlessly integrate with the overall business strategy.

♦ **Innovation & Creativity – 15%**

This criterion evaluates the team's ability to think outside the box and introduce novel ideas or approaches that differentiate their solution from conventional methods. The team should demonstrate original thinking in

both the business and engineering aspects, proposing unique solutions that push boundaries while remaining feasible and effective. Innovation and creativity should not only enhance the solution's practicality but also add value to the client, showing how fresh perspectives can lead to significant improvements in processes, products, or strategies.

♦ **Ethics, Sustainability & Governance – 15%**

This component assesses the team's consideration of ethical standards, sustainable practices, and governance principles in their proposed solution. Teams should address how their solution aligns with ethical principles such as fairness, transparency, and social responsibility. The governance aspect evaluates the team's attention to organizational oversight, regulatory compliance, and the societal impacts of their proposed strategy. Additionally, the sustainability aspect requires the team to consider environmental and long-term social impacts.

♦ **Presentation Format & Visuals – 5%**

The presentation should have a coherent flow of ideas from the identification of the problem to the solution. Visuals should be clear, professional, and engaging in order to improve understanding of the content. The slides should be well-designed, incorporating good use of charts, images, and diagrams to help explain complex ideas.

♦ **Post-Presentation Q&A – 15%**

Teams will be judged on their ability to answer questions clearly and concisely while demonstrating a deep knowledge of their proposed solutions. They should be able to justify their decisions, provide an explanation, and demonstrate flexibility in resolving any problems that were overlooked. The quality of the team's responses, depth of their understanding of the case

solution, and their effective teamwork and communication between each other during the Q&A are important factors to consider.

◆ ***Bonus* AI Tool Utilization Proficiency - 5%**

This bonus component recognizes the team's effective use of AI tools throughout their analysis and solution development. Teams that leverage AI to **optimize, enhance, or innovate their solutions** are rewarded for demonstrating technical proficiency and forward-thinking. If teams do not wish to use AI, they may still earn the bonus provided they give a compelling reason. Note that images generated using AI are welcome, but will not count towards this bonus.

◆ **Total Score – 100%** (without AI Tool Utilization Bonus)

The scoring breakdown emphasizes the core competencies required for comprehensive case analysis, while the AI Tool Utilization Bonus offers up to an additional 5% to the team's score, reflecting the effective integration and innovative use of AI tools in developing their case solutions. Judges will assess the AI bonus based on the sophistication, relevance, and impact of the AI tools applied within the case resolution process.

9. The Final Round

Within each division, the team amassing the highest total score will advance to the final round, where the same competition rules apply.

The final round offers finalists a unique challenge: to present an enhanced version of their case without altering the core substance of their submitted documents. Teams will be permitted to refine their delivery and presentation style, integrating valuable feedback and insights acquired from judges in the preliminary rounds. However, they must adhere strictly

to the original content of their submitted materials. This rule underscores the competition's focus on adaptability and the skillful application of critique, allowing teams to showcase their responsiveness and strategic thinking while maintaining the integrity of their initial solutions. It's a balancing act that adds a compelling twist to the competition, testing the delegates' ability to improve and evolve within set constraints.

Presentation Structure:

- ◆ **Two (2) minutes** allocated for setting up the presentation
- ◆ **Fifteen (15) minutes** dedicated to the actual presentation
- ◆ **Ten (10) minutes** for the team to engage in a Q&A session with the judges.
- ◆ **Ten (10) minutes** reserved for judges to deliberate in private, excluded in the final round.
- ◆ **Ten (10) minutes** for judges to provide constructive feedback, excluded in the final round.

This round will be evaluated by an elite panel of judges, bringing more seasoned perspectives to the adjudication process. It should be noted that only the scores from each delegation's final presentation will influence the determination of the final rankings.

The sequence in which the finalists present will be established through a random draw, conducted under the supervision of ENGCOMM's Vice-President of Academics. In the spirit of camaraderie and continuous learning, delegations not proceeding to the final round are encouraged to attend the final presentations.

10. Awards

10.1. Distribution Ceremony

The celebration of excellence and ingenuity will be highlighted during the closing ceremony, where awards will be distributed to the triumphant delegations and participants following the culmination of the final round. Accompanying each award is a certificate of achievement to commemorate the success.

10.2. Award Eligibility Criteria

All teams are eligible for most awards, but only the top four teams that qualify for the final round are eligible for the Top Three Final Rankings, Best Delegation Chemistry, and Best Public Speaker awards. This structure acknowledges diverse skills and achievements across the competition.

10.3. Individual & Delegation Awards

The esteemed panel of judges, participating at all stages of the competition, will have the authority to confer a series of individual and team awards. Their decisions will be guided by the performance metrics outlined in the grading rubrics:

◆ Top Three Final Ranking

- These prestigious accolades are awarded to the three delegations that achieve the highest aggregate scores after the intense scrutiny of the final round. These awards are a testament to exceptional problem-solving acumen, with the first, second, and third place honorees receiving certificates that acknowledge their strategic, technical, and analytical prowess.

◆ Best Engineering Solutions

- This distinction is reserved for the delegation that presents an engineering solution characterized by its clarity, technical rigor, and adaptability. The awarded solution should demonstrate superior design choices and an ability to communicate complex engineering concepts to both technical and lay audiences. Recognition is given for

innovative thinking that enhances functionality and applicability in real-world scenarios.

◆ **Best Business Solutions**

- Granted to the delegation whose business solution stands out through comprehensive analysis, sound market predictions, and solid data support. The winning solution reflects a well-rounded and financially viable approach, cleverly navigating market dynamics while showcasing exceptional business acumen and strategic planning.

◆ **Most Sustainable Solutions**

- This honor acknowledges the delegation that puts forth a solution embodying ethical considerations, public safety, and environmental stewardship. It recognizes a commitment to social responsibility and the deployment of practices that promise long-term sustainability, going beyond mere compliance to set new standards in ethical innovation.

◆ **Best Delegation Chemistry**

- Celebrating the delegation that exemplifies seamless collaboration and communication, this award goes beyond the solution to commend the unity and collective competence of the team. It recognizes the delegation whose members complement one another to create a dynamic and effective team synergy.

◆ **Best Public Speaker**

- This individual accolade is awarded to a participant who stands out for their exceptional oratory skills, showcasing the ability to articulate, defend, and elucidate their team's solution with confidence and clarity. It is a nod to the participant's persuasive power and engaging communication style.

◆ **Most Economically Feasible Solutions**

- This distinction recognizes the delegation that presents a solution combining innovation with economic realism. The awarded solution should not only be technically and strategically sound but also demonstrate cost-effectiveness, financial viability, and a high potential for successful market implementation. It honors solutions that are grounded in economic practicality while still offering innovative answers to the case challenges.

11. Penalties Overview

11.1. Plagiarism

At ENGCOMM, our values reflect fairness and honesty. Plagiarism is an act of **academic misconduct** which consists of stealing, copying, and using the idea of others without their permission. The following rules of academic integrity **must** be respected in order to participate.

Communicating with other delegations' participants during case solving, until the end of the presentation period, is **prohibited**. Expanding on the permitted resources is considered plagiarism.

Making any sort of copy or formulating any text or solution that resembles either a previously submitted solution from past years at ENGCOMM or any document subject to identification of internet reproduction will directly result in the disqualification of the delegation from the competition and may impact the decision to allow the delegation's institution from participating in further case competitions at ENGCOMM.

11.2. Other Penalties

To ensure a level playing field for all participants, adherence to the rules and guidelines outlined in this document is crucial. Failure to observe these rules will

result in penalties ranging from point deductions to disqualification, depending on the severity of the infraction. Below are outlined potential violations and their corresponding sanctions. Instances of misconduct not specifically mentioned will be subject to review and action by ENGCOMM's VP of Academic Affairs.

- ♦ **Submissions:** Delegations must ensure that their presentation documents and slides are submitted to the Organizing Committee within the specified timeframe. Failure to meet this deadline will result in the loss of the privilege to distribute any form of their presentation to the judges. This measure is strictly enforced to maintain the competition's schedule and fairness.
- ♦ **Confidentiality of Materials:** All case-related materials, including but not limited to slides, documents, and data, are the exclusive property of ENGCOMM and the case sponsors. Any retention of these materials post-preparation period is strictly forbidden and will lead to immediate disqualification from the competition.
- ♦ **Social Media Conduct:** Engagement in social media related to case content or competition progress during the event is strictly prohibited and will lead to the delegation's disqualification.
- ♦ **Slide Modification:** Once submitted to the Organizing Committee, no further alterations to the presentation slides are permitted. Non-compliance will result in the delegation's disqualification.
- ♦ **Telecommunication Device Usage:** The use of telecommunication devices during the case preparation period is strictly forbidden. Violation of this rule will result in the delegation's disqualification.
- ♦ **Punctuality:** Delegations must begin their presentations at their designated start time. Delays will not be accommodated with additional presentation time.
- ♦ **Time Management:** A timekeeper will end presentations at the 15 minute mark.

These rules have been established to maintain the integrity and fairness of the competition. It is the responsibility of every participant to abide by them. Any delegation or participant found in breach of these guidelines will face consequences as described, ensuring that the competition remains equitable for all involved.

12. Disqualification Procedure

ENGCOMM's Board of Directors, in collaboration with the Department of Academics, holds the authority to impose penalties on a delegation's score or initiate disqualification proceedings in the event of a rule breach. Any offenses warranting such action, identified before, during, or after the competition week, will be addressed with due process. A delegation disqualified before the final round will be removed from the competition and their divisional standings will be adjusted accordingly. If a disqualification occurs after the commencement of the final round, the delegation will receive a ranking reflective of this outcome, specifically marked as a disqualification.

13. Use of Content

The ENGCCOMM Organizing Committee possesses exclusive rights to record all competition-related presentations and events, including but not limited to case preparations, presentations, ceremonies, and social gatherings. Participants consent to being photographed and recorded as part of their involvement in ENGCCOMM events.

All materials produced during the competition, such as case documents, presentation slides, and related media, remain the intellectual property of ENGCCOMM and the case sponsors. Unauthorized dissemination, sharing, or commercial use of these materials is strictly prohibited without explicit permission from both ENGCCOMM and the respective case sponsors. Following the competition, ENGCCOMM and the case sponsors retain the unrestricted right to utilize the recordings, photographs, cases, presentations, and derived solutions for purposes aligned with their interests.