

DELEGATE PACKAGE

# ONTARIO ENGINEERING COMPETITION



# QUEEN'S UNIVERSITY

JANUARY 26TH-28TH, 2024

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# LAND

# ACKNOWLEDGEMENT

To begin, let us acknowledge that Queen's University is situated on traditional Anishinaabe (Ah-nish-in-ah-bay) and Haudenosaunee (Ho-den-o-show-nee) territory. We are grateful to be able to live, learn and play on these lands.

# CONGRATULATIONS!

Congratulations on your outstanding achievements and innovations! We are thrilled to share that you have qualified for the 2024 Ontario Engineering Competition, proudly hosted by Queen's University. The Organizing Committee eagerly anticipates welcoming you to our historic campus and the vibrant city of Kingston for this prestigious event.

As you embark on a weekend filled with competition and industry networking opportunities, our commitment is to make your stay both comfortable and memorable. We encourage you to **carefully review** the information in this package. It contains essential details that will not only prepare you for OEC 2024 but also ensure a seamless and successful event. We look forward to an inspiring and exciting competition. See you in Kingston!

# WELCOME FROM THE CO-CHAIRS

On behalf of the entire executive team, we would like to extend our congratulations for making it to the 45th Annual Ontario Engineering Competition (OEC), hosted at Queen's University from January 26th-28th, 2024. This annual province-wide event brings together the highest ranked students from 16 different post secondary institutions across Ontario.

This competition will allow you to take what you have learned in the classroom and apply it to industry-relevant competition categories. Furthermore, the competition will give you the opportunity to network with some of the most prevalent engineering firms in Canada.

Our team has been working diligently towards making OEC 2024 a success, thinking of new and creative ways to improve your competition experience. This year, our theme, "Bridging Innovations with Tradition," serves as a powerful reminder of the dynamic interplay between cutting-edge advancements and the timeless principles that form the foundation of engineering.

We look forward to meeting you all at OEC 2024! We are confident that your participation will contribute to the success of this event and inspire a new wave of engineering excellence. This package provides a general overview of what this year's competition will look like. If you have any questions, please feel free to reach out to either of us!



**Renner Siebens**



**Hayley Galsworthy**

# WELCOME FROM THE DEAN

I extend my warmest welcome to everyone participating in the 45th annual Ontario Engineering Competition. Smith Engineering is excited to host this at Queen's University. I know that the Co-Chairs, Hayley Galsworthy and Renner Siebens, have been working hard with their team to bring you an exciting, challenging and fun competition weekend. I want to thank all of these student leaders for their efforts as well as the support of Engineering Deans Ontario, the Ontario Society of Professional Engineers, and all of the corporate sponsors. This three-day event aims to bring 300+ of the brightest minds in the province from 16 post secondary institutions for a weekend of innovative design while fostering an environment where students can both develop meaningful relationships while also networking professionally. This is a great opportunity for you to hone the skills that you are developing as engineering students. I am so impressed to see the variety in the nature of the competitions that students are participating in from programming, design, debate, and communications. We all recognize that professional skills are as important as technical skills in becoming the engineering graduates that we need to help solve the complex challenges facing society. I look forward to seeing you here on campus, and I wish all the participants my very best for OEC 2024!

Yours sincerely,



Kevin J. Deluzio, PhD, PEng, FCAE, FEIC  
Professor and Dean  
kevin.deluzio@queensu.ca



# ABOUT OEC 2024

The Ontario Engineering Competition (OEC) 2024 promises to be a riveting 3-day event showcasing the acumen of over 300 of Ontario's most gifted engineering students from 16 post-secondary institutions. This prestigious competition, now in its 45th year, creates a platform for students of various engineering disciplines and academic stages to address complex and stimulating engineering challenges. The 2024 edition is excitedly hosted by Queen's University from January 26-28, 2024.

OEC has expanded to encompass 9 distinct categories, providing a diverse array of challenges. These categories test students' inventive abilities, technical knowledge, and problem-solving capabilities, culminating in the development of groundbreaking solutions for a panel of judges. Engagement from industry leaders is highly encouraged throughout the event, including at gala dinners, networking opportunities, and during insightful presentations.

To qualify for OEC 2024, teams must secure top positions in their home universities' qualifying rounds. The champions and runners-up of this iteration will earn their spots at the Canadian Engineering Competition (CEC), slated for February 2024 at the University of Calgary. This progression marks a significant step for those aspiring to leave an impact on the engineering landscape of Canada, and the world.



# ABOUT HATCH

HATCH

## + Forge your future

Our diverse teams build the extraordinary every day, pushing progress in ways that are most meaningful.

At Hatch, we're not just solving the problems of today—we're answering the challenges of tomorrow.

Let's build positive change, together.

Visit us at [hatch.com](https://hatch.com)



# GOLD SPONSOR



## ONTARIO SOCIETY OF PROFESSIONAL ENGINEERS

The Ontario Society of Professional Engineers (OSPE) is Ontario's engineering advocate, representing the entire engineering community. We advocate with governments, provide member services, and offer opportunities for professional development, networking, and community building.

OSPE envisions a diverse and inclusive profession where engineers collaborate with government, industry, and academia for innovative solutions to Ontario's challenges. Our mission is to advocate for societal and engineering issues, creating opportunities for engineers and graduates to connect and contribute to their careers.

We highlight the crucial role of the engineering profession in Ontario's economic growth, environmental protection, and improved quality of life.



# SILVER SPONSORS



# OTHER PARTNERSHIP

Red Bull Can You Make It? challenges teams of three on the adventure of a lifetime. Teams from various countries across the globe will have seven days to travel across Europe using only Red Bull as currency. They will stop at various Checkpoints and complete Adventure Challenges while vlogging their journey to share it with the world. It's not about the first team to the destination - it's the experiences along the way that matter. In this journey full of adventure, charm and strategy, one question rises above all: Can You Make It?



# ABOUT KINGSTON

Located where the St. Lawrence River meets Lake Ontario, Kingston is a city rich in history and modern charm. Known as the "Limestone City" for its beautiful 19th-century limestone architecture, Kingston is not only a UNESCO World Heritage Destination but also a vibrant hub of culture and education. Home to Queen's University, this picturesque city offers a unique blend of old-world charm and contemporary conveniences.

As you explore the historic downtown, you'll discover a lively arts scene, eclectic dining experiences, and plenty of winter activities. Kingston's welcoming atmosphere and scenic beauty make it the perfect backdrop for innovation and collaboration during the Ontario Engineering Competition.

You can find many restaurants, cafes, and bars in downtown Kingston by taking a stroll down Princess Street. In fact, Kingston has the highest number of quality restaurants per capita of any Canadian city. Continue to Market Square in front of Kingston's iconic city hall for a skating rink in the winter, and markets in the summer.



# ABOUT KINGSTON

Kingston is centrally located between Toronto and Ottawa in eastern Ontario and is closely connected to the nearby cities such as Belleville and Brockville. You can get to Kingston by train, bus, or car by taking Highway 401. Once in Kingston, the city is easily navigated by foot, car, or using Kingston Transit.



Kingston boasts many attractions worth visiting. Popular tourist spots include Fort Henry National Historic Site, Canada's Penitentiary Museum, and Queen's University. There are also many scenic views along the waterfront and beautiful parks to explore around the city.

We hope you enjoy your stay in this gem of Eastern Ontario!

# STAYING SAFE AT QUEENS

We want you to stay safe throughout your time in Kingston. If at any point you are concerned for your safety or need to confide to a safe authority, please know that the following resources are available to you.

## **Sexual Violence Prevention and Response** [\(link to website\)](#)

### — Queen's Sexual Violence Prevention and Response Services

The Sexual Violence Prevention and Response Service (SVPRS) is part of the Human Rights and Equity Office. SVPRS is the central point of contact on campus for students impacted by sexual violence and for prevention initiatives. Please contact Barb Lotan (bjl7@queensu.ca) the SVPR Coordinator for available services.

[Learn More](#)

### — Sexual Assault Centre Kingston

The Sexual Assault Centre Kingston (SAC) is a not-for-profit organization that provides free confidential support for all survivors aged twelve and above regardless of recent and/or historic sexual violence.

[Learn More](#)

## **Telephone Aid Line Kingston (TALK)** [\(link to website\)](#)

Telephone Aid Line Kingston (TALK, (613)-544-1771) is a confidential, anonymous, non-judgmental, and volunteer-based listening service.

# THEME

## BRIDGING TRADITION WITH INNOVATION

Innovation meets tradition in the dynamic world of engineering. Every breakthrough is a result of a relentless cycle of designing, testing, and refining. However, our solutions often come with unintended consequences for the environment, society, and our cultural heritage. Facing these challenges, engineers are called to blend cutting-edge ideas with time-honored traditions.

This theme encourages engineers to re-examine and reinvent existing designs, considering their broader impacts. The goal is not just to find a single perfect solution, but to continuously improve, balancing innovative technology with sustainable and socially responsible practices. It's about building a future where progress and tradition coexist, driving us towards smarter, more sensitive engineering.



# FRIDAY SCHEDULE

SCHEDULES ARE TENTATIVE AND SUBJECT TO CHANGE. REFER TO YOUR COMPETITION PACKAGE FOR EXACT SCHEDULING.

06:30 am  
07:00 am  
07:30 am  
08:00 am  
08:30 am  
09:00 am  
09:30 am  
10:00 am  
10:30 am  
11:00 am  
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06:30 pm  
07:00 pm  
07:30 pm  
08:00 pm  
08:30 pm  
09:00 pm  
09:30 pm  
10:00 pm  
10:30 pm

Registration & Hotel Check In  
(Delta or Holiday Inn)

Appetizers + Networking (BioSci)

Late Registration (BioSci)

Opening Ceremonies (BioSci)

# SATURDAY SCHEDULE

**SCHEDULES ARE TENTATIVE AND SUBJECT TO CHANGE. REFER TO YOUR COMPETITION PACKAGE FOR EXACT SCHEDULING.**

07:00 am

07:30 am

Breakfast (BMH Atrium)

08:00 am

Comp. Briefing

08:30 am

09:00 am

Design Phase

09:30 am

10:00 am

10:30 am

Break

11:00 am

11:30 am

12:00 pm

Design Phase

12:30 pm

01:00 pm

01:30 pm

Lunch (BMH Atrium/Workspace)

02:00 pm

02:30 pm

03:00 pm

Design Phase

EngSoc Professional  
Development Event (Clark Hall)

03:30 pm

04:00 pm

04:30 pm

05:00 pm

05:30 pm

06:00 pm

06:30 pm

Transport and Banquet Arrival (BioSci and Hotels)

07:00 pm

07:30 pm

08:00 pm

Evening Banquet (Zorbas Banquet Facility)

08:30 pm

09:00 pm

09:30 pm

10:00 pm

Social Event (Zorbas Banquet Facility)

10:30 pm

11:00 pm

# SUNDAY SCHEDULE

SCHEDULES ARE TENTATIVE AND SUBJECT TO CHANGE. REFER TO YOUR COMPETITION PACKAGE FOR EXACT SCHEDULING.

7:00 am	
07:30 am	1st Round Breakfast (BMH Atrium)
08:00 am	
08:30 am	
09:00 am	
09:30 am	Presentations
10:00 am	
10:30 am	
11:00 am	
11:30 am	Baggage Hold Last Call (BMH 111)
12:00 pm	
12:30 pm	
01:00 pm	
01:30 pm	Closing Ceremony (Mitchell Hall 2nd Floor - Gym 3)
02:00 pm	
02:30 pm	
03:00 pm	
03:30 pm	
04:00 pm	
04:30 pm	
05:00 pm	
05:30 pm	Baggage Pickup Last Call (BMH 111)
06:00 pm	
06:30 pm	
07:00 pm	
07:30 pm	
08:00 pm	
08:30 pm	Departure
09:00 pm	
09:30 pm	
10:00 pm	
10:30 pm	



# INCIDENT RESPONSE

If any small emergencies or complaints occur during the competition, please know to make an incident report to the Incident Response Committee as soon as possible. If it is a serious emergency, please call 911 immediately.

The Incident Response System shall be a form created by the Incident Response Committee and made accessible to all delegates at an ESSCO Conference during the Conference and up to 3 days afterwards. The form shall include the following fields:

1. Name of Reporting Individual
2. School of Reporting Individual
3. Name(s) of the Individual(s) or Organization Involved in the Incident (or description(s))
4. Incident Date and Time
5. Incident Details
6. Incident Witness(es), if appropriate
7. Contact Information (Optional)
8. Whether or not the Reporter is comfortable being contacted by the IRC

More information can be found on the incident response form linked below:

[Incident Response Form Link](#)

# SENIOR DESIGN

Senior Design challenges competitors to create solutions to complex real-world problems. Teams must work within time constraints to design, create, and test a functional prototype. The team's solution requires skills from a variety of engineering disciplines. Competitors finish by presenting their solutions to industry professionals from across the province

## Saturday:

08:00 am	Briefing (Mitchell Hall 225)
08:30 am	Design Phase (Mitchell Hall 215/225/235)
09:00 am	
09:30 am	
10:00 am	
10:30 am	Break (BMH Atrium/Workstations)
11:00 am	Design Phase (Mitchell Hall 215/225/235)
11:30 am	
12:00 pm	
12:30 pm	
01:00 pm	Lunch (BMH Atrium/Workstations)
01:30 pm	
02:00 pm	Design Phase (Mitchell Hall 215/225/235)
02:30 pm	
03:00 pm	
03:30 pm	
04:00 pm	
04:30 pm	

## Sunday:

*If you are waiting for or are finished presentations, go check out the career fair!*

08:00 am	Presentations (Mitchell Hall 215/225/235)	Career Fair (Rose Event Commons in Mitchell Hall)
08:30 am		
09:00 am		
09:30 am		
10:00 am		
10:30 am		
11:00 am		
11:30 am		
12:00 pm		
12:30 pm		
01:00 pm		
01:30 pm		
02:00 pm		
02:30 pm		
03:00 pm		
03:30 pm		
04:00 pm		
04:30 pm		



**Carter Moore**  
Senior Design Lead



**Jamie Glerum**  
Senior Design Lead



**Lauren Luyks**  
Senior Design Lead

Competition Leads

*This competition is presented by:*



# JUNIOR DESIGN

Junior design challenges first and second year students to solve a technical problem. Competitors must work within time and budget constraints to design, create, and test a physical prototype for their proposed solution. Then competitors will present their solutions to their peers and industry professionals.

## Saturday:

08:00 am	Briefing (Dupuis Aud)
08:30 am	
09:00 am	Design Phase (BMH Study Rooms)
09:30 am	
10:00 am	
10:30 am	
11:00 am	Break (BMH Atrium/Workstations)
11:30 am	Design Phase (BMH Study Rooms)
12:00 pm	
12:30 pm	
01:00 pm	
01:30 pm	Lunch (BMH Atrium/Workstations)
02:00 pm	Design Phase (BMH Study Rooms)
02:30 pm	
03:00 pm	
03:30 pm	
04:00 pm	Testing (BioSci)
04:30 pm	
05:00 pm	
05:30 pm	

## Sunday:

*If you are waiting for or are finished presentations, go check out the career fair!*

08:00 am	Presentations (Dupuis 215/217)	Career Fair (Rose Event Commons in Mitchell Hall)
08:30 am		
09:00 am		
09:30 am		
10:00 am		
10:30 am		
11:00 am		
11:30 am		
12:00 pm		
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02:30 pm		
03:00 pm		
03:30 pm		
04:00 pm		
04:30 pm		

## Competition Leads



**Greyson Martyn**  
Junior Design Lead



**James Lees**  
Junior Design Lead

*This competition is presented by:*



# INNOVATIVE DESIGN

In the Innovative Design competition, competitors bring an independent project that they develop outside the competition, including but not limited to capstone projects. Competitors choose their own topic, prepare research, and develop a design that is innovative and addresses a void in society. Each team presents a professional presentation to a panel of judges, demonstrating the technical, social, environmental, and economic impact of their design. The competitors will be judged on the originality and creativity of their idea, the quality of their presentation, and the tenability of their design process.

## Saturday:

08:00 am	
08:30 am	
09:00 am	Briefing (BioSci 1120)
09:30 am	
10:00 am	
10:30 am	
11:00 am	
11:30 am	Oral Presentations (BioSci 1120)
12:00 pm	
12:30 pm	
01:00 pm	
01:30 pm	
02:00 pm	Lunch (BMH Atrium/Workstations)
02:30 pm	
03:00 pm	
03:30 pm	Engineering Society PD Workshop (Clark Hall)
04:00 pm	
04:30 pm	

## Sunday:

07:30 am	Public Display Set-up (BMH Atrium)
08:00 am	
08:30 am	
09:00 am	Public Display Exhibition (BMH Atrium)
09:30 am	
10:00 am	
10:30 am	Career Fair (Rose Event Commons in Michell Hall)
11:00 am	
11:30 am	
12:00 pm	
12:30 pm	
01:00 pm	
01:30 pm	
02:00 pm	
02:30 pm	
03:00 pm	
03:30 pm	
04:00 pm	
04:30 pm	

Competition Lead



Ethan Varkul  
Innovation Lead

# COMMUNICATIONS

Engineers often find themselves needing to explain technical processes or issues to clients, coworkers, or other professionals that do not have a background in the subject matter. As such, engineers must develop skills to effectively communicate in a matter that is easily understood. In the Communications competition, competitors are tasked with presenting complex engineering topics in an accessible way to the public. Competitors must explain an applicable process or issue of their choice, and form a coherent argument that clearly identifies social, economical, technological, and environmental impacts of the chosen topic. Judges assess accuracy, creativity, organization of their argument, and the quality and delivery of the presentation.

## Saturday:

08:00 am	Briefing (Dupuis 215)
08:30 am	
09:00 am	
09:30 am	Presentations (Dupuis Aud)
10:00 am	
10:30 am	Break (BMH Atrium/Workstations)
11:00 am	
11:30 am	
12:00 pm	Presentations (Dupuis Aud)
12:30 pm	
01:00 pm	
01:30 pm	
02:00 pm	Lunch (BMH Atrium/Workstations)
02:30 pm	
03:00 pm	
03:30 pm	Engineering Society PD Workshop (Clark Hall)
04:00 pm	
04:30 pm	

## Sunday:

08:00 am	
08:30 am	
09:00 am	
09:30 am	Career Fair (Rose Event Commons in Mitchell Hall)
10:00 am	
10:30 am	
11:00 am	
11:30 am	
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03:30 pm	
04:00 pm	
04:30 pm	

Competition Leads



Julia Dyck  
Communications  
Lead

*This competition is presented by:*



ONTARIO  
SOCIETY OF  
PROFESSIONAL  
ENGINEERS

# DEBATE

Within a designated timeframe, participants are tasked with formulating a well-reasoned and structured case on a given topic. The format of this contest mimics that of classic parliamentary debate, with debate resolutions touching on topics relevant to engineering and scientific disciplines, as well as issues that resonate with or are significant to engineers and those studying engineering. Contestants possess a comprehensive understanding of engineering principles and their societal implications, coupled with the aptitude to justify their positions swiftly and succinctly. Teams will be evaluated on the strength and clarity of their arguments, the effectiveness of their counterarguments, and their overall conduct and professionalism throughout the debate.

## Saturday:

08:00 am	Briefing (Kingston Hall 200)
08:30 am	Debate Prep (Kingston Hall)
09:00 am	Debate I (Kingston Hall)
09:30 am	Snacks (BMH Atrium)
10:00 am	Debate Prep (Kingston Hall)
10:30 am	Debate II (Kingston Hall)
11:00 am	Debate Prep (Kingston Hall)
11:30 am	Debate III (Kingston Hall)
12:00 pm	Judging (Kingston Hall)
12:30 pm	Lunch (BMH Atrium)
01:00 pm	Debate Prep (Kingston Hall)
01:30 pm	Debate IV (Kingston Hall)
02:00 pm	Judging (Kingston Hall)
02:30 pm	Debate V (Kingston Hall)
03:00 pm	Debate Prep (Kingston Hall)
03:30 pm	Debate VI (Kingston Hall)
04:00 pm	Debate Prep (Kingston Hall)
04:30 pm	Debate VII (Kingston Hall)

## Sunday:

08:00 am	Debate Prep (Kingston Hall)	Career Fair (Rose Event Commons in Mitchell Hall)
08:30 am	Debate V (Kingston Hall)	
09:00 am	Debate Prep (Kingston Hall)	
09:30 am	Debate VI (Kingston Hall)	
10:00 am	Debate Prep (Kingston Hall)	
10:30 am	Debate VII (Kingston Hall)	
11:00 am	Debate Prep (Kingston Hall)	
11:30 am	Debate Prep (Kingston Hall)	
12:00 pm	Debate Prep (Kingston Hall)	
12:30 pm	Debate Prep (Kingston Hall)	
01:00 pm	Debate Prep (Kingston Hall)	
01:30 pm	Debate Prep (Kingston Hall)	
02:00 pm	Debate Prep (Kingston Hall)	
02:30 pm	Debate Prep (Kingston Hall)	
03:00 pm	Debate Prep (Kingston Hall)	
03:30 pm	Debate Prep (Kingston Hall)	
04:00 pm	Debate Prep (Kingston Hall)	
04:30 pm	Debate Prep (Kingston Hall)	

*If you are waiting for or are finished your debates, go check out the career fair!*

*This competition is presented by:*



# PEPSICO

Competition Lead



Skylar Knibbs  
Debate Lead

# RE-ENGINEERING

Participants must engage in the process of re-engineering by modifying a current technology or design, with the goal of introducing additional features or augmenting its initial capabilities. As teams work on adapting an established product, they must navigate through a fresh series of limitations, all the while considering the economic implications. The proposed solutions will be assessed on their pragmatism, inventiveness, viability, and potential for commercial success.

## Saturday:

08:00 am	Briefing (Ellis 321)
08:30 am	
09:00 am	Design Phase (Ellis Hall)
09:30 am	
10:00 am	
10:30 am	
11:00 am	Break (BMH Atrium/Workstations)
11:30 am	Design Phase (Ellis Hall)
12:00 pm	
12:30 pm	
01:00 pm	
01:30 pm	
02:00 pm	Lunch (BMH Atrium/Workstations)
02:30 pm	Design Phase (Ellis Hall)
03:00 pm	
03:30 pm	
04:00 pm	
04:30 pm	

## Sunday:

*If you are waiting for or are finished presentations, go check out the career fair!*

08:00 am	Presentations (Ellis 321)	Career Fair (Rose Event Commons in Mitchell Hall)
08:30 am		
09:00 am		
09:30 am		
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11:00 am		
11:30 am		
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03:00 pm		
03:30 pm		
04:00 pm		
04:30 pm		

Competition Leads



**Aidan Kelly**  
Re-Engineering Lead



**Clara Iida**  
Re-Engineering Lead

*This competition is presented by:*



# CONSULTING

In the consulting competition, competitors are presented with a large-scale engineering problem and tasked with designing a logical and detailed solution. Competitors should demonstrate consideration of the social, environmental, technological, and economic impact of their proposed solution. The final solution is presented to a judging panel, acting as the ‘client’. Each team will be judged based on an original design, an analysis and understanding of the client’s needs, and a demonstrated effort to optimize the proposed solution.

## Saturday:

08:00 am	Briefing (Kingston 201)
08:30 am	Design Phase (Kingston Hall)
09:00 am	
09:30 am	
10:00 am	
10:30 am	Break (BMH Atrium/Workstations)
11:00 am	Design Phase (Kingston Hall)
11:30 am	
12:00 pm	
12:30 pm	
01:00 pm	
01:30 pm	
02:00 pm	Lunch (BMH Atrium/Workstations)
02:30 pm	Design Phase (Kingston Hall)
03:00 pm	
03:30 pm	
04:00 pm	
04:30 pm	

## Sunday:

*If you are waiting for or are finished presentations, go check out the career fair!*

08:00 am	Presentations (Kingston 201)	Career Fair (Rose Event Commons in Mitchell Hall)
08:30 am		
09:00 am		
09:30 am		
10:00 am		
10:30 am		
11:00 am		
11:30 am		
12:00 pm		
12:30 pm		
01:00 pm	Competition Leads	 <b>Teema Mackay</b> Consulting Lead
01:30 pm		 <b>Ahmed Elsaeed</b> Consulting Lead
02:00 pm		
02:30 pm		
03:00 pm		
03:30 pm		
04:00 pm		
04:30 pm		

*This competition is presented by:*



Competition Leads



**Teema Mackay**  
Consulting Lead



**Ahmed Elsaeed**  
Consulting Lead



# PROGRAMMING

The programming competition challenges students to produce a piece of industry-level software which solves a real-world problem. The teams will use their software development skills, their technical writing abilities, and their project management skills to design the solution, which will be presented to a judging panel.

## Saturday:

08:00 am	Briefing (Ellis 324)
08:30 am	Design Phase (Ellis Hall)
09:00 am	
09:30 am	
10:00 am	
10:30 am	Break (BMH Atrium/Workstations)
11:00 am	Design Phase (Ellis Hall)
11:30 am	
12:00 pm	
12:30 pm	
01:00 pm	Lunch (BMH Atrium/Workstations)
01:30 pm	
02:00 pm	Design Phase (Ellis Hall)
02:30 pm	
03:00 pm	
03:30 pm	
04:00 pm	
04:30 pm	

## Sunday:

*If you are waiting for or are finished presentations, go check out the career fair!*

08:00 am	Presentations (Ellis 324)	Career Fair (Rose Event Commons in Mitchell Hall)
08:30 am		
09:00 am		
09:30 am		
10:00 am		
10:30 am		
11:00 am		
11:30 am		
12:00 pm		
12:30 pm		
01:00 pm		
01:30 pm		
02:00 pm		
02:30 pm		
03:00 pm		
03:30 pm		
04:00 pm		
04:30 pm		

## Competition Leads



**Sere Otubu**  
Programming Lead



**Mihir Gandhi**  
Programming Lead

# BIO-ENGINEERING

The bio-engineering competition challenges competitors to design a detailed solution to a real-life biological engineering problem. Competitors must demonstrate resourcefulness while acting in good faith with the spirit of the competition. Their solution should be feasible, efficient, and fulfill the competition requirements. While the topic should challenge the competitors' technical knowledge and skills, it should also require competitors to evaluate the economic, environmental, political, and social implications of their proposed solutions. The winning solution will be judged based on how well they are able to fulfill the defined criteria and that has the most real-world applicability and forethought.

## Saturday:

08:00 am	Briefing (Kingston Hall 104)
08:30 am	
09:00 am	Design Phase (Kingston Hall)
09:30 am	
10:00 am	
10:30 am	
11:00 am	Break (BMH Atrium/Workstations)
11:30 am	Design Phase (Kingston Hall)
12:00 pm	
12:30 pm	
01:00 pm	
01:30 pm	
02:00 pm	Lunch (BMH Atrium/Workstations)
02:30 pm	Design Phase (Kingston Hall)
03:00 pm	
03:30 pm	
04:00 pm	
04:30 pm	

## Sunday:

*If you are waiting for or are finished presentations, go check out the career fair!*

08:00 am	Presentations (Kingston Hall 104)	Career Fair (Rose Event Commons in Mitchell Hall)
08:30 am		
09:00 am		
09:30 am		
10:00 am		
10:30 am		
11:00 am		
11:30 am		
12:00 pm		
12:30 pm		
01:00 pm		
01:30 pm		
02:00 pm		
02:30 pm		
03:00 pm		
03:30 pm		
04:00 pm		
04:30 pm		

## Competition Leads



**Noel Pettit**  
Bio-Engineering Lead



**Nimaat Salami**  
Bio-Engineering Lead

# CHECK IN

## Check In Instructions

Registration occurs at **3:00 PM on Friday** at both the Holiday Inn and Delta Hotel. Please ensure you stick to this time so that you can be registered and checked-in before the Opening Ceremony. When you arrive, the OEC team will have a table for registration, **go to this table first**. Here you will receive your name tag and delegate welcome bag. Then, check in with the hotel, and be sure to mention you are with OEC.

Room assignments will already be made upon your arrival in accordance with your preferences in the registration form. The **first person in your room will have to provide a credit card to the hotel** for any damages for the room to be applied to. There is parking available at each hotel for \$30/night. Competitors are responsible for this cost. See more parking information on page 27.

# PACKING



## What to Bring

Please be prepared for the weekend to reduce stress and focus on the competition. In addition to appropriate clothing and personal items, please refer to your individual competition's package regarding what you need to bring versus what is supplied.

# PACKING



- Laptop, charger, display adapter (if applicable for Mac users)
- Pens/pencils
- Notebooks
- USB drive
- Portable white board/dry-erase markers (limited supply provided at the competition)
- Resume/CV
- Reusable Water bottle (Queen's is a single-use waterbottle free campus)
- Patches and swag for trading
- Appropriate clothing (See dress code below)

# PARKING

Students who have a car are welcome to drive to and from campus. Parking on campus is free during the weekend, and after 5 PM on Friday. Parking is available at the lots shown here:



# DRESS CODE

Throughout the competition, there will be numerous opportunities to network with industry professionals, corporate representatives, as well as other engineering students. Consequently, all competitors are expected to behave and dress in a professional way which represents their respective school.

## **Business Casual**

- Collared shirt/blouse
- Dress pants/khakis
- Business or walking shoes

## **Semi-Formal**

- Collared button shirt and tie
- Suit jacket
- Dress pants
- Skirt or dress
- Dress pants

## **Ceremonies**

**Friday Opening Ceremony:** Business casual

**Saturday Evening Banquet:** Business casual

**Sunday Award Ceremony:** Semi-Formal (you will have time to change after your presentations before the ceremony)

## **Competitions**

**Junior/Senior Design:** Comfortable clothing and close-toed shoes

**Communications, Consulting, Programming, Re-Engineering, Bioengineering, Debate:** Comfortable Clothing

## **Presentation Events**

You are expected to dress in business casual for your presentations!

# COMMUNICATION



During the weekend, the main communication will be via Discord. Prior to arriving, please join the Discord server using the link below. Discord is available through the web, iOS, Android, Windows, and Mac. It is your responsibility to join the Discord server before the event to receive essential communication for the competition. If you are unsure how to set up a Discord account, refer to this [post](#).



## [Link to Discord](#)

Upon joining, please go to the rules channel as well as the roles channel to get your custom roles.

# TRANSPORTATION



**These services are available during your stay, and may help on arrival:**

Amey's Taxi - (613) 546-1111

- Wheelchair accessible upon request

Kingston Transit - [schedule](#)

- Your name tag will act as your bus pass for the weekend
- Transfer point located in downtown Kingston
- Please note that Kingston Transit does **NOT** accept PRESTO cards

Walking

- Each hotel is a 10-20 minute walk from each of the competition buildings
- “Walkhome” - Queen’s service where someone will come walk you to where you need to go
  - 8 PM - 3 AM every weekend, call (613)-533-WALK (9255) or visit the [Walkhome website](#)

# FOOD AND DINING

	Friday	Saturday	Sunday
Breakfast	/	BMH Atrium	BMH Atrium/ Mitchell Hall
Lunch	/	BMH Atrium	Mitchell Hall - Gym 3
Dinner	BioSci	Zorbas	/

Snacks and refreshments will be provided throughout the entire weekend.

## NETWORKING

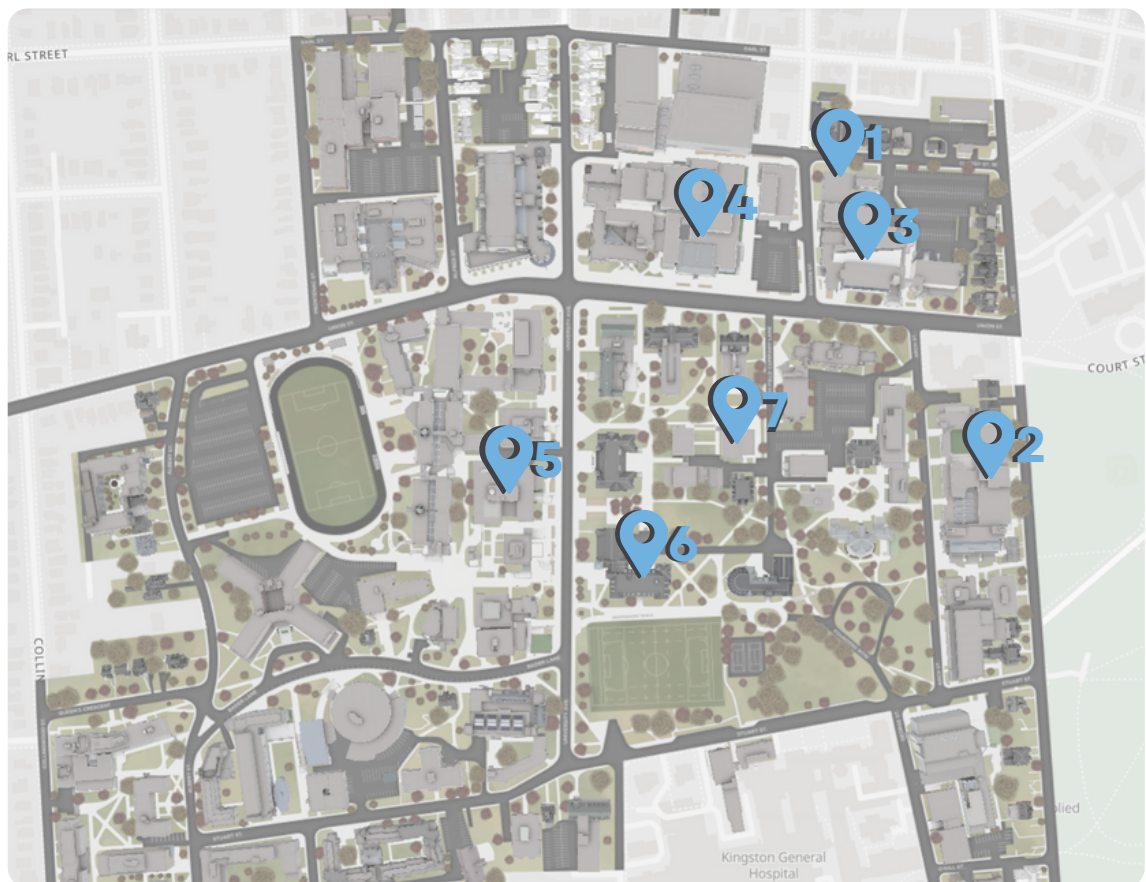


There are many opportunities during OEC to meet different industry professionals. Starting right from the Friday Opening Ceremony, you will meet some of our sponsors, other students, and planning committees. On **Saturday from 2:30 PM - 4:30 PM**, when not competing, feel free to visit the Engineering Society **Professional Development workshop at Clark Hall.**

On **Sunday**, from **8:30 AM - 11:00 AM** please visit the **Career Fair**, featuring some of our sponsors such as HATCH, PepsiCo, OSPE, BBA, and Bell!

# VENUES & LOCATIONS

- 1 [Dupuis Hall - 19 Division St, Kingston](#)
- 2 [Biosciences Complex - 116 Barrie St, Kingston](#)
- 3 [Beamish-Munro Hall \(BMH\) - 45 Union St, Kingston](#)
- 4 [Mitchell Hall - 69 Union St, Kinston](#)
- 5 [Ellis Hall - 58 University Ave, Kingston](#)
- 6 [Kingston Hall - 103 Stuart St, Kingston](#)
- 7 [Clark Hall, 30 5 Company Ln, Kingston](#)



\* Click on the name of each building to see the floorplan



# COMPETITIONS



## JUNIOR DESIGN

First and second-year students design creative solutions to real-world engineering problems, presenting practical solutions within time and resource constraints.



**Greyson Martyn**  
Junior Design Lead



**James Lees**  
Junior Design Lead



**Skylar Knibbs**  
Debate Lead

## DEBATE

Students develop and present arguments for or against an impromptu resolution, engaging in multiple rounds of logic and rhetoric-based debate.



## COMMUNICATIONS

Competitors explain the social, economic, technological, and environmental impacts of complex engineering topics in understandable terms.



**Julia Dyck**  
Communications  
Lead



**Clara Iida**  
Re-Engineering Lead



**Aidan Kelly**  
Re-Engineering Lead

## RE-ENGINEERING

Engineering students redesign existing solutions to improve performance, utilizing diverse skillsets.



## SENIOR DESIGN

Participants use multidisciplinary knowledge to design technical solutions to advanced engineering problems, presenting functional solutions under resource constraints.



**Carter Moore**  
Senior Design Lead



**Jamie Glerum**  
Senior Design Lead



**Lauren Luyks**  
Senior Design Lead



**Ethan Varkul**  
Innovation Lead

## INNOVATIVE DESIGN

Students develop and present arguments for or against an impromptu resolution, engaging in multiple rounds of logic and rhetoric-based debate.



## PROGRAMMING

Teams code software solutions for complex computational challenges, focusing on execution time, correctness, and overall performance.



**Mihir Gandhi**  
Programming Lead



**Sere Otubu**  
Programming Lead



**Ahmed Elsaheed**  
Consulting Lead



**Teema Mackay**  
Consulting Lead

## CONSULTING

Competitors develop and present detailed solutions to multidimensional engineering challenges, demonstrating understanding of various impacts.



## BIO-ENGINEERING

Students are tasked with using core engineering principles to develop solutions to bio-engineering problems based on provided narratives with complications.



**Nimaat Salami**  
Bio-Engineering Lead



**Noel Pettit**  
Bio-Engineering Lead

# ONTARIO ENGINEERING COMPETITION EXECUTIVE TEAM 2024



## GRAPHICS



**Kayla MacKenzie**  
VP Graphic Design



**Sophie Goodman**  
VP Graphic Design



**Sabrina Button**  
VP Technical



**Keven Li**  
Webmaster



**Mikayla Perrin**  
VP Competitions



**Charlotte Murat**  
VP Competitions

## TECHNICAL

## COMPETITIONS

## LOGISTICS



**Lobsang Wangkhang**  
VP Logistics



**Ali Bekheet**  
VP Logistics



**Kaito Hara-Lee**  
Logistics  
Coordinator



**Cora Neave**  
Logistics  
Coordinator



**Valeriya Ilinch**  
Logistics  
Coordinator



**Bronwyn Faulkner**  
Logistics  
Coordinator

## SPONSORSHIP

## COMMUNICATIONS



**Stephanie Gilmour**  
VP Sponsorship



**Maya Fijalkowski**  
Sponsorship  
Coordinator



**Camille Miller**  
Sponsorship  
Coordinator



**Oliver Morrow**  
VP Communications



**Cameron Isfeld**  
Communications  
Coordinator



**Heer Chhugani**  
Communications  
Coordinator

## MARKETING

## FINANCE



**Maahum Khan**  
Marketing  
Coordinator



**Alice Stapleton**  
Marketing  
Coordinator



**Jaiden Relouw**  
Marketing  
Coordinator



**Andrea Dovale-Puig**  
Marketing  
Coordinator



**Emilie Robidas-Stephan**  
VP Finance

# CONTACT US!

For any further questions, please  
contact us at the email address

**[oec.communications@engsoc.queensu.ca](mailto:oec.communications@engsoc.queensu.ca)**

or visit our website

**<https://oec-cio.ca>**



**@oec.cio**



**@oec2024**

# SPONSORS

THANK YOU TO ALL OF OUR SPONSORS!

# HATCH



ONTARIO  
SOCIETY OF  
PROFESSIONAL  
ENGINEERS



ONTARIO **POWER**  
GENERATION



**PEPSICO**



SMITH  
ENGINEERING  
Queen's University



**Alberici**



# THANK YOU!

We are so excited to welcome you to Queen's and host OEC 2024! We hope the competition is an opportunity for you to learn, play, and grow. We are truly grateful for your interest and participation in OEC, and we hope you gain new skills, knowledge, and interests throughout the event that you can apply to your studies, and career.

