MUEEC

Melbourne University
Electrical Engineering Club

Prospectus 2020

Contents

Introduction

Who are we?

The **Melbourne University Electrical Engineering Club** (*MUEEC*) was initially founded by a group of enthusiastic engineers hoping to bridge the divide between academics and practical experience by fostering professional skills development. Ever since, MUEEC has continued to expand based on this underlying theme of facilitating and developing the educational, social, and professional opportunities available to students.

Today, MUEEC is one of the *largest* engineering student representative bodies at the Melbourne School of Engineering (MSE).

Throughtout the year, we host many events ranging from hackathons and social events to technical research-based workshops through our Autonomous Robotics Research Program (ARRP). With the support of the University, MUEEC is able to bring opportunities for practical experience, networking, and extracurricular engagement to hundreds of students at the University of Melbourne to enrich their university experience and become highly capable individuals ready to enter the workforce.

In addition, as a part of our 2020 mission, we aim to develop a stronger relationship with the younger generation of students in high-schools across the country to encourage and inspire an interest in engineering and STEM as a whole.

We thank you for your time in considering our proposal and we look forward to working with you.

Our mission

Our mission is to provide an inclusive and reliable community for members to excel and succeed in their respective engineering or STEM fields and to inspire the next generation of engineers.

MUEEC aims to be an inclusive, diverse, and resourceful student community for all current and future engineering and STEM students at the University of Melbourne.

Why support us?

At MUEEC, we believe in the mantra of "*leading by example*", whereby our aspirations stem from our leaders.

Supporting MUEEC provides you with a unique opportunity to engage and connect with not only talented and motivated engineering students from the University of Melbourne, but also from other STEM fields beyond the University. We seek to not only provide students with a platform to connect with industry experts, but also encourage industry to collaborate with our students.

Our 2020 Engagement Goals

- To improve the mental and social well-being of students through various social events;

- To foster practical and soft skills to ease students' transitions into the workplace;

- To encourage the involvement of more female students in our events;

- To enhance engagement of international students; and

- To inspire and spark interest in engineering & STEM among the younger generation, in particular secondary students.

Looking back at 2019...

2019 was filled with both our longstanding events and programs as well as new initiatives and collaborations.

The 2019 goal was to encourage more student collaboration and engagement. With this in mind, the committee pitched and spearheaded 2 large-scaled events to motivate extra-curricular activities and improve the social well-being amongst our peers; the **Spaghetti Bridge Building Competition** & the **Melbourne University Gaming Festival**. These events were a collaborative effort with other student clubs at the University.

The **Autonomous Robotics Research Program** (**ARRP**) continued its growth introducing up to 20 new projects for students, along with more fortnightly technical workshops. As a part of an effort to encourage student engagement, ARRP in 2019 offered open-lab sessions everyday to allow students to work on their projects more often.

Finally, the 2019 **SuperHack** proved again to be one of the highlights of the year with up to 100 young women from high schools across Victoria participating. MUEEC continued its commitment to outreach and engagement of young women in engineering and STEM.

For its efforts in 2019, MUEEC was nominated as a finalist for *Student Club of the Year* in the annual Melbourne School of Engineering Community Excellence Awards, a testament to our impact in improving the well-being and experience of the student body at the University of Melbourne.

– 2020 Events –

2020 Events

We have quite a busy 2020 line-up filled with events that range from hackathons, to networking evenings, to technical workshops for our students.
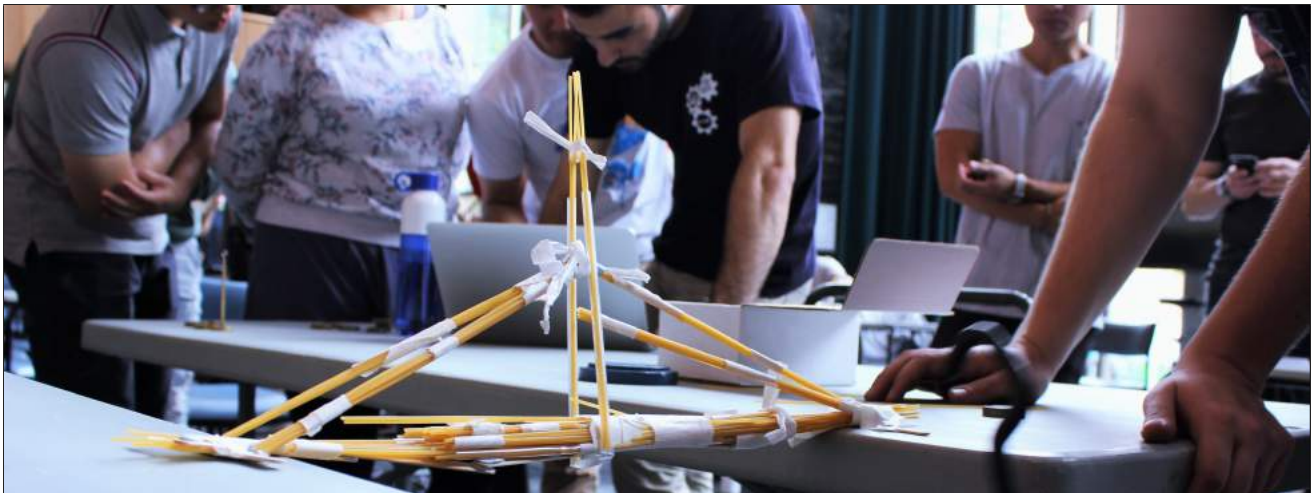
Spaghetti Bridge Building Competition

Semester 1, March 2020

A welcome event for all undergraduate and graduate students interested in engineering, this event aims to provide new students with an insight into the collaborative nature of University engineering projects through a fun team-building challenge.

The challenge will require students to work in teams of 4-5 to build a bridge that can support a predetermined weight using raw spaghetti and other provided materials.

The event will be run in collaboration with other student clubs at the University.

Meet the Grads (Career Expo)

Semester 1, March 2020

Our annual **Meet the Grads** expo aims to provide all current students from all engineering courses an opportunity to network and speak with Melbourne University alumni presently working as engineers in industry. The expo provides students with insights into their future career and, most importantly, build connections in possible future career paths.

The event is a fully-catered 1-day expo/stall based event held at the University of Melbourne, Parkville campus. Invited alumni from each company will have their own stall and banners. Students from various engineering courses (electrical, mechanical, mechatronics, etc.) will have the opportunity to explore and network with each alumnus representative.

As a sponsor, you may be eligible to have a speaker present at the event to talk about their experiences and company.

WattHack 2020

Semester 1, April 2020

The **WattHack** is a 2-day hackathon that aims to provide current students with a practical and more hands-on application of their coursework and provide them with an opportunity to utilize some specialised equipment that are available at the Melbourne School of Engineering. Industry mentors will also be invited to deliver speeches and provide mentorship to students.

As a part of MUEEC's 2020 student engagement goal, the event aims to have at least 35% of the participants be female students. We aim to achieve this through collaboration with other student engineering clubs and inviting female industry speakers to the event.

Open Day Drone Competition

Semester 2, August 2020

This event aims to help current engineering students develop an experience in the construction and programming of drones.

Students are to cooperate and compete in small teams to build and program a drone that will be showcased at the 2020 University of Melbourne Open-Day. This will provide students with an opportunity to demonstrate demonstrate and exhibit their skills as young engineers to future students. It is an event that will both demonstrate the excellent teaching and co-curricular opportunities at the University to the public at the 2020 Open-Day while providing current students a valuable learning opportunity.

MUG Fest – Melbourne University Gaming Festival

Semester 2, August 2020

A social event aimed to provide students and staff a chance to relax in the middle of intense workload towards the end of year. MUG Fest is a collaborative event between MUEEC and other engineering/gaming clubs at the University. With gaming competitions, snacks and drinks, and other exciting features provided to both students and lecturers, it's a unique opportunity for students and lecturers to bond outside the lecture halls.

The event is a half-day event taking place from noon to midnight held at the Engineering block of the University of Melbourne. During this period, both students and lecturers may drop-by the event whenever they choose. Various gaming equipment, snacks, and drinks will be provided. Several competitions between lecturers and students will be held.

The event will be run in collaboration with other student clubs at the University.

Industry Night

Semester 2, August 2020

A presentation based event to provide more networking opportunities between students and industry. This event invites guests from the engineering industry to present on a topic of their selection and share details on opportunities such as their graduate programs.

The event is held in the evening at the University of Melbourne. Throughout the evening, all industry representatives will have an opportunity to present to our students. The evening is then followed by a casual-standing dinner providing students an opportunity to network and engage in Q & A with all industry representatives.

SuperHack 2020

Semester 2, December 2020

SuperHack is an annual high-school engineering hackathon for young women in years 10 and 11. The event aims to encourage STEM based careers to young women to promote gender diversity in the field. We aim to do this through a fun and practical engineering hackathon, where students are provided an opportunity to engineer a solution to a design challenge.

Participants will be mentored by current engineering and STEM students from the University and industry mentors throughout the event to complete the challenge. They will also have the opportunity to attend keynote speeches delivered by our industry sponsors aimed to provide an insight into the engineering and STEM industry.

The event is made free to all female high-school students from both metropolitan and regional schools across Victoria.

Website: www.MelbSuperHack.com

Melbourne School of Engineering Soft Skill Workshop

This event will be run in collaboration with the Department of Electrical and Electronic Engineering at the University of Melbourne.

The aim of this event is to provide students with industry insights on common soft skills that are most sought after by companies in the engineering industry. The event also aims to demystify the interview and recruitment process of these companies and prepare students through a mock interview session after workshops.

The workshop will be run as a series of 3-hour workshops during the University's mid-semester break. Mock interviews and Q & A will follow the workshops, during which food and drinks will be served.

– **Autonomous Robotics Research Program** –

Autonomous Robotics Research Program – ARRP

What is ARRP?

The *Autonomous Robotics Research Program* (*ARRP*) was founded in 2016 as a platform to provide both undergraduate and graduate students from any discipline an opportunity to learn through a collaborative research or technical project. The program offers a wide range of projects that range from purely research projects to research projects with an enterprise mindset that run for either 6-months (1 semester) or 12-months (2 semesters).

Similar to University capstone projects but supported with training and materials from MUEEC, ARRP provides an opportunity for students to apply their university learning to practical problems. A launch event and presentation night is also run for the program at the beginning and end of each semester to monitor the progress of each project. Industry guests are invited to presentation nights to enjoy a night with high-achieving student teams and have an opportunity to view their interesting projects.

Website: www.arrp.com.au
Facebook: facebook.com/MU.ARRP/

Motivation & Aim

ARRP operates on the belief that everyone has an equal opportunity to partake in research at a professional level. The fundamental aim of this program is to enhance student experience at both technical and research levels by offering and supporting student-led projects ranging from aerospace & drones to machine learning & robotics.

2020 Workshops & Projects

In 2020, after an initial recruitment and sign up phase, teams will be formed to work on different projects. During the semester, students will have access to daily lab sessions with mentor support to work on their projects, along with fortnightly workshop sessions that covers both technical and soft-skills.

The projects offered range from beginner projects which require little to no prior experience, to more advanced projects which utilize advanced technical knowledge gained through University study.

Some of our 2020 projects include:

- Card Safe
- Automated D&B Doorbell
- DIY Hoverboard
- DIY Remote Bot
- Double Inverted Pendulum
- PCB Gameboy
- LED Cube
- Lego Brick Sorter
- Machine Learning for Visual Navigation
- MIDI Controller
- Music Box
- Robot Arm
- Autonomous Rover
- Self-leveling Platform
- Arduino Thermostat
- VTOL Plane

Some of our 2020 workshops include:

- Arduino 101 & 201
- Autodesk's Fusion 360 CAD Workshop
- MatLab Workshop
- Control Systems ARRP Workshop
- Verilog Beginner Workshop
- PCB Design and Altium Designer Presentation
- FPGA programming
- Raspberry Pi Workshop
- LaTeX Workshop
- Introduction to Motors

– 2020 Sponsorship Tiers –

2020 Sponsorship Tiers

We would like to extend an invitation to our industry leaders to support us as a sponsor in inspiring the *next generation of engineers and STEM leaders*.

MUEEC prides itself on its professionalism in fulfilling our sponsorship commitments. We want to ensure you, as supporters, receive value for money during your engagement with our peers. We aim to match the interests of students with those of our sponsors.

As such, this year, we offer 4 tiers of sponsorships:

Platinum Sponsor – $5,000

As a *Platinum Sponsor*, you will be entitled to:

– Exclusive rights as 1 of 5 Platinum Sponsors of MUEEC for 2020;

– Company introduced as Platinum Sponsor on the front page of MUEEC's website, and all appropriate event promotional materials;

– Invitation to be involved in all MUEEC events, such as MUEEC's SuperHack and the career expo;

– The opportunity to present as a guest speaker, industry mentor or competition adjudicator for our events (*number of attendees varies based on event*);

– Sharing of up to 5 company related posts (such as seminars, job-postings, etc.) on MUEEC's social media channels and the MUEEC fortnightly newsletters throughout the year;

– Opportunity to be involved in any ARRP projects (beginner, intermediate or advanced projects);

– MUEEC will offer to organize one tailored student-related event for the company at the University of Melbourne. Free of charge for up to $500. All general logistics will be organised by MUEEC to make it as convenient as possible for the company; and

– Company logo printed on all appropriate MUEEC advertisement materials, such as t-shirts, website, banners, posters and event packs.

Gold Sponsor – $3,000

As a *Gold Sponsor*, you will be entitled to:

– Exclusive rights as 1 of 7 Gold Sponsors of MUEEC for 2020;

– Company introduced Gold Sponsor on the front page of MUEEC's website, and all appropriate event promotional materials;

– Invitation to be involved in all MUEEC events, such as MUEEC's SuperHack and the career expo;

– The opportunity to present as only industry mentors and representatives at all MUEEC events (*number of attendees varies based on event*);

– Sharing of up to 2 company related posts (such as seminars, job-postings, etc.) on MUEEC's social media channels and the MUEEC fortnightly newsletters throughout the year;

– Opportunity to be involved in only the ARRP beginner and intermediate projects; and

– Company logo printed on all appropriate MUEEC advertisement materials, such as t-shirts, website, banners, posters and event packs.

Silver Sponsor – $1,000

As a *Silver Sponsor,* you will be entitled to:

– Exclusive rights as 1 of 7 Silver Sponsors of MUEEC for 2020;

– Company introduced as Silver Sponsor on the front page of MUEEC's website, and all appropriate event promotional materials;

– Invitation for up to 2 representatives to attend selected MUEEC events;

– Sharing of only 1 company related post (such as seminars, job-postings, etc.) on MUEEC's social media channels and the MUEEC fortnightly newsletters; and

– Company logo printed on all appropriate MUEEC advertisement materials, such as t-shirts, website, banners, posters and event packs.

Bronze Sponsor – In-kind supports only

As a *Bronze Sponsor*, you will be entitled to:

– Company introduced as Bronze Sponsor on the front page of MUEEC's website, and all appropriate event promotional materials; and

– Company logo printed on all appropriate MUEEC advertisement materials, such as t-shirts, website, banners, posters and event packs.

The 2020 Committee

Executives

President	Jeff Kiat
Vice President	Thomas Wu
Treasurer	Nathan Wong
Secretary	Alexandros Williams
Education Officer	Harrison Liu

Committee

Director of ARRP	Thomas Harper
Industry Manager	Juan Carlo Ala
Industry Officer	Dhruv Sharma
Events Manager	Wu Hong Lim
Digital Media Manager	Jonathan Wong
IT Officer	Cody Anderson

Contact Us

www.MUEEC.com

facebook.com/mueecpage

instagram.com/mueec

– 2020 Code of Conduct –

2020 Code of Conduct

1. Purpose

A primary goal of MUEEC is to be inclusive to the largest number of contributors, with the most varied and diverse backgrounds possible. As such, we are committed to providing a friendly, safe, and welcoming environment for all, regardless of gender, sexual orientation, ability, ethnicity, socioeconomic status, and religion (or lack thereof).

This code of conduct outlines our expectations for all those who participate in our community, both in their physical and online interactions, as well as the consequences for unacceptable behavior.

We invite all those who participate in MUEEC affiliated events to help us create a safe and positive experience for everyone.

2. Values

MUEEC demonstrates its commitment to these values:

- **Respect**

    - MUEEC seeks to treat everyone with courtesy and be considerate towards others in all circumstances. MUEEC promotes the well-being and safety of all those who participate in MUEEC affiliated events at all times.

- **Inclusiveness and accessibility**

    - MUEEC aims to treat people fairly, and to work to create an environment that promotes mutual respect and accessibility. This involves being culturally inclusive, actively working to be aware of the individual needs of its community participants, and ensuring events are accessible.

- **Equality and Diversity**

    - MUEEC seeks to develop a diverse community of individuals and groups with interests in engineering and other STEM fields. MUEEC aims to support and maintain equality of members irrespective of their social, political, cultural and religious views. MUEEC encourages gender and cultural diversity in its community while ensuring equality and non-violation of individual rights.

- **Responsibility**

    - MUEEC seeks to be consistent in fulfilling any tasks and roles required of the club in a timely manner and to a satisfactory standard. This includes the respectful treatment of power relationships, and not misusing funds or other privileges provided by the University of Melbourne Student Union (UMSU), Clubs and Societies, MSE, and all our sponsors.

- **Transparency and accountability**

    - MUEEC aims to act with integrity when dealing with all club matters and promotes a trusting relationship between all parties by communicating openly and being inclusive of all MUEEC members with decision making.

- **Innovation and Drive**

    - MUEEC seeks to facilitate continual improvement with regard to its mission, and aims to promote engineering and STEM fields to the largest community outside its member base whenever possible.

3. Expected Behavior

The following behaviors are expected and requested of all community members:

- Participate in an authentic and active way.

- Exercise consideration and respect in your speech and actions, while treating others with respect and dignity without showing any preference or deference in detriment to others.

- Behave respectfully, courteously and ethically towards others.

- Respect the opinions and beliefs of others.

- Attempt collaboration before conflict.

- Refrain from demeaning, discriminatory, or harassing behavior and speech.

- Be mindful of your surroundings and of your fellow participants. Alert the MUEEC committee if you notice a dangerous situation, someone in distress, or violations of this Code of Conduct, even if they seem inconsequential.

- Remember that community event venues may be shared with members of the public; please be respectful to all patrons of these locations.

- Comply with University policies and processes, and any reasonable directions by the University of Melbourne.

4. Unacceptable Behavior

The following behaviors are considered harassment and are unacceptable within our community:

- Violence, threats of violence or violent language directed against another person.

- Sexist, racist, homophobic, transphobic, ableist or otherwise discriminatory jokes and language.

- Posting or displaying sexually explicit or violent material.

- Posting or threatening to post other people's personally identifying information ("doxing").

- Personal insults, particularly those related to gender, sexual orientation, race, religion, or disability.

- Inappropriate photography or recording.

- Inappropriate physical contact. You should have someone's consent before touching them.

- Unwelcome sexual attention. This includes, sexualized comments or jokes; inappropriate touching, groping, and unwelcomed sexual advances.

- Deliberate intimidation, stalking, or following (online or in person).

- Advocating for, or encouraging, any of the above behavior.

- Sustained disruption of community events, including talks and presentations.

5. Consequence of Unacceptable Behavior

Unacceptable behavior from any community member, including sponsors and those with decision-making authority, will not be tolerated.

Anyone asked to stop unacceptable behavior is expected to comply immediately.

If a community member engages in unacceptable behavior, MUEEC may take any action they deem appropriate depending on the severity of the breach. This can involve up to and including a temporary ban or permanent expulsion from the community without warning (and without refund in the case of a paid event).

MUEEC has a zero-tolerance policy for bullying, harassment, sexual harassment, stalking, victimization, vilification, child abuse, or any form of unlawful dealing with a minor. At the discretion of the MUEEC committee, unacceptable behavior may be reported directly to the University of Melbourne and in more severe cases, to the relevant authorities.

6. Reporting Guidelines

If you are subject to or witness unacceptable behavior, or have any other concerns, please notify a community organizer as soon as possible (president@mueec.com).

Additionally, the MUEEC committee are available to help community members engage with local law enforcement or to otherwise help those experiencing unacceptable behavior feel safe. In the context of in-person events, organizers will also provide escorts as desired by the person experiencing distress.

7. Scope

We expect all community participants (contributors, paid or otherwise; sponsors; staff; committee; general members; and other guests) to abide by this Code of Conduct in all community venues–online and in-person–as well as in all one-on-one communications pertaining to MUEEC business.

This code of conduct and its related procedures also applies to unacceptable behavior occurring outside the scope of community activities when such behavior has the potential to adversely affect the safety and well-being of community members.

8. Contact Info

For any queries, please contact **president@mueec.com** or **vicepresident@mueec.com**.

9. License and Attribution

This Code of Conduct was adapted from citizencodeofconduct.org, which is distributed under a Creative Commons Attribution-ShareAlike license.