



Engineering Design Team (EDT) Handbook 2024-25

Summary

This handbook summarizes information vital to the functioning of EDTs, and outlines expectations for best practices within an EDT and in relation to the SOE and other supporting groups.

Workspaces & Resources

Summary

This section details information regarding the potential workspaces available to EDTs and the expected approach to be taken to access these spaces. Training and access to the shop areas, are part of the ongoing support of the SOE to our Affiliated EDTs. Please carefully review the details below to ensure that your team understands the various processes required to access the shop spaces and to maintain the timeline of your project work. SOE storage spaces are also discussed within this section.

Please note: EDT shop access is subject to availability and current capacity, which fluctuates throughout the year, with academic and research-based requests being the top priority.

SOE Storage Spaces

Use of storage spaces on campus is part of the SOE's ongoing support to the affiliated EDTs and is a resource which is being managed ongoingly. Various spaces are available for storage including the EDT design space workspace in EME 0211, and storage spaces such as the sea can and cage space. The allocation of these spaces is dynamically managed, if you have concerns regarding the management of these spaces, please contact [Grant](#).

Shop & Lab Spaces & Access

Space-Specific Requirements & Notes

- **Woodshop (EME 0221)**
 - Salto access is permitted once approved by the SOE Research Coordinator/Technician Team.
 - An additional woodshop-specific orientation and training are required for safe use and access to this space.
- **Machine Shop (EME 0220)**
 - Access is only permitted once approved by the SOE Research Coordinator, with a technician present (Monday-Fridays 8-4). The scheduled time which



students can use this space is dependent on lab scheduling and research demands.

- Access to the machine shop in EME is not Salto accessible for students as any work completed in the machine shop must be conducted while one of the technicians is present. Machine shop access requires a thorough safety orientation, and specific training for each machine, dependent on the student's previous experience through course work.
- **High Head Lab (EME 0256)**
 - Salto access permitted once approved by the SOE Research Coordinator/Technician Team.
 - A high head orientation session is required prior to use of this space, and additional training may be required dependent on the intended work to be performed.

Shop Access Step-by-Step

- 1) EDTs should plan any shop requests/access with a significant lead time of 3 weeks.
- 2) Review the relevant processes found here: [SOE Lab Access](#).
- 3) EDT Leadership communicates rationale for SOE shop access to their Faculty Advisor, and **request their signature** on: [Requesting Lab Access Form](#)
- 4) Download the completed course list, for all students physically accessing the space: <https://wpl.ubc.ca/>
 - a. **Note: the form must be signed by your team's Faculty Advisor before submission.**
- 5) Submit the completed Requesting Lab Access Form, by emailing it to: [Praveen Rajan](#) – SOE Lab/Technician Coordinator

Salto Access Requirements & Training

The access for all buildings and rooms on campus are controlled using a system called Salto Inspired Access. This system uses an RFID card, which should be updated daily at Salto hotspots at building entrances to maintain access to approved spaces. For **new users** there are multiple steps which require completion to complete the access request process. All information regarding this process can also be found at the following link: [SOE Lab Access](#).

The [Requesting Lab Access Form](#), outlines all requirements that must be met before access can be granted. The base requirements are listed below, and for greater detail and **additional conditional requirements** see the brief explanation of each requirement further below:

Base Requirements:

- Lab Orientation
- UBC Chemical Safety
- Hazardous Waste Management
- Compressed Gas Safety
- Review of UBC Policies
- New worker safety training
- Preventing and Responding to Sexual Misconduct
- Preventing & Addressing Workplace Bullying & Harassment
- Workplace Violence Prevention



- Privacy & Information Security 1
- Privacy & Information Security 2

- € Lab Orientation: This is required for **each space** that access is being requested for. For example, to request access to the woodshop and the high head lab, separate safety training would need to be conducted for each workspace.

- € Group Specific Training: This may be relevant depending on the anticipated project and the needs for the project. This will be indicated at the discretion of SOE's lab technician team.

- € UBC Chemical Safety Course: This course covers chemical safety practices and WHMIS and is required for all lab access. There are **three** components to the [chemical safety course](#). First, the online canvas modules must be completed. Next, there is attendance at a webinar, which is then followed by an in-person chemical spill clean-up practical session. Depending on the requested access and the current webinar offerings, **all components of this course may not require completion prior to access being granted**. This is contingent on the individual's intent to finish the required components of the course, and the intended work to be completed.

- € Hazardous Waste Management & Compressed Gas Safety Fundamentals: These courses cover best practices surrounding [hazardous waste](#) and [compressed gas safety](#). Completion of both these canvas courses is a requirement for the lab access form, and can be completed entirely self-guided, there are no additional components outside of canvas.

- € Lab Specific Courses: These may be required depending on the planned work to be conducted. If it is unclear whether any of the additional lab specific courses are required, reach out to the lab technician team for clarity.

- € Review of UBC policies: There is a minimum of two policies that must be thoroughly reviewed prior to lab access: [Working alone or in isolation](#) and [University Health and Safety \(Policy SC1\)](#). There is no actionable item or deliverable associated with these policies.

- € Required General Courses: There are five additional Canvas courses which require completion as listed below. The courses are self-guided and self-registering using the links provided.
 - [New worker safety training](#)
 - [Preventing and Addressing Workplace Bullying and Harassment](#)
 - [Preventing and Responding to Sexual Misconduct](#)
 - [Workplace Violence Prevention Training](#)
 - [Privacy & Information Security - Fundamentals Part 1](#)
 - [Privacy & Information Security - Fundamentals Part 2](#)

- € Personal Protective Equipment (PPE): The PPE required is dependent on the space requested for access; all lab spaces will require a minimum of CSA approved safety glasses. If it is unclear what additional PPE is required for the requested space, reach out to the lab technician team for clarity.



Design Space Access

This document discusses the use of the shared EDT design space in EME 0211. As this is a shared space the expectation is that all teams work to keep the space neat and tidy, and to share the space in a way that fairly accommodates the needs of each EDT. Team leaders of EDTs may be granted Salto key access to this space for regular EME operating hours given the **completion of the base Salto tasks as listed above**. Therefore, if the team leader already holds a Salto access card, the access requirements **may** already be met.

24hr Access Guidelines & Restrictions

For teams which require 24hr access to this space for prototyping this can be enabled via Salto key for the main team leaders. It should be noted that **only 2-3 leads of each EDT** may be granted this access; **this is due to accountability and safety concerns beyond the control of the SOE**.

It should also be noted that any EDTs using the space will also have to strictly follow the existing Work Alone policies.

Working Alone Restrictions

When using this space, it is pertinent that the appropriate guidelines are followed regarding Salto card access and the non-transferable nature of Salto cards. As stated in the Salto card guidelines, these cards **are not transferable** and are not to be used by anyone except for the card holder. Therefore, if you intend to use the space outside of the EME operating hours then the individual with the 24hr access must be present for the entire duration of time which other (non-cardholding) team members are present within the space. Please direct any concerns or requests to [Grant](#).

EDT Competitions & Travel

Summary

This section details the best approach for EDTs in booking and coordinating the group travel required for attendance at design competitions. This also discusses the expectations of EDTs in relation to pre-departure preparations and required meetings prior to attendance at a competition.

Trip Planning Timelines

This section describes the recommended processes to be used to plan EDT travel for competitions. The intention is for these timelines to be followed whilst other processes required for your team to compete are happening. For example, your team may work on design of your prototype throughout the preliminary stage, and work on active prototyping and construction throughout the active planning and organizing stage.

The information included in this section provides a high-level overview of the timeline – for the fully detailed processes and steps please reference the EDT Trip Planning resource.



Preliminary Steps



Competition Selection & Registration

- Select the competition(s) that your team plans to attend
- May be consistent year-to-year, and some teams may have flexibility
- Establish this early on as it dictates the rest of your timelines

Budgeting & Sponsor Outreach

- Crucial, as it can constrain the number of team members you bring to competition
- Potential impacts on the complexity of your design components
- Begin sponsorship outreach as soon as possible, and follow best practices

Communication with Grant & FA

- Critical to ensure that your team is in communication with Grant and your FA
- The communications should be ongoing, and start early on
- Connect you with the correct supports, i.e. travel agent, shipping courriers, SVPRO office

Active Planning and Organization



Booking Travel & Accomodations

- If your group is travelling together to and from your destination, the use of a group travel booking may be the most efficient way to organize your travel
- Hotel rooms are strongly encouraged over an AirBnb for student group travel

Organizing Prototype Transport

- Prototype transport via a shipping crate can be coordinated through the SOE, which is a suitable alternative when the prototype can't be transported with your team. Please contact Grant, and the SOE technician team to coordinate this.
- If your team is driving the prototype to competition, reach out to the technician team early to ensure availability of the SOE truck and to book it for your required timeslot

Planning Pre-departure Meeting

- Teams should begin to organize their predeparture meeting a min of 6 weeks prior to the travel date, ideally starting 2 month prior
- Crucial for setting the tone and reminding the team that they are representative of the SOE and UBC when they are travelling to and attending competition
- Set the date for this meeting no closer than 2 weeks prior to the travel date. All team members who are travelling are required to be in attendance



Pre-Competition Prep



Selection of Competing Team Members

- Ensure that the approach taken to select your team members is equitable, has logically-backed reasoning, and considers the contributions of your team members.
- Once this list is finalized this information should be shared with Grant and your FA.

Shipping Prototype/Prep for Transport

- If your prototype is being shipped by a shipping company ensure that you are keeping in communication with the technician team, and central receiving as required.
- Your team may need assistance from the technician team to move the crate over to the loading dock at central receiving. The ticket system should be used to keep record of your communications.

Pre-departure Meeting

- Includes the review of the SOE code of conduct, any code(s) of conduct put in place by the competition, and SVPRO.
- If you will be missing classes due to the competition, ensure that your team members have contacted their professors as needed.
- The team's FA can support in contacting professors and ensuring that academic concessions are received.

Group Travel Bookings

For group travel bookings to competitions or conferences please contact [Grant Topor](#) with information regarding the intended travel dates and destination to be connected with the appropriate individuals.

Predeparture Expectations

Prior to departure it is expected for all EDTs to complete two components – it is recommended to split the content into two meetings time permitting to ensure maximum engagement from travelling members.

- Sexual Violence Prevention and Response Office (SVPRO)
 - All teams must complete SVPRO training as a part of predeparture preparations – teams should start planning this well in advance to ensure there is adequate timing to coordinate with the SVPRO office's scheduling.
 - This is required to ensure all travelling members feel adequately prepared to respond to any situations they may encounter whilst away from campus on an academic-related activity.
 - Expect the SVPRO session to require a minimum time of 1 hour and 30 minutes. To schedule this please reach out to Grant to be connected with the appropriate individuals over at the SVPRO office.



- Code of Conduct Review
 - As part of predeparture the SOE code of conduct, as well as any competition-specific code(s) of conduct should be thoroughly reviewed by all travelling students. This can be done through a combination of materials given to students for review on their own time, and through a presentation and discussion in a meeting.
 - As well, students are expected to sign a code of conduct agreement prior to departure, serving as written confirmation that students are aware of the expected behaviors and standards to be upheld as a representative of UBC and the SOE.

SoE Truck & Van Usage

The SOE truck may be booked/rented in support of EDT mandates for a period of two weeks. **For any use longer than 2 weeks, SOE approval is required**, please email alec.smith@ubc.ca and/or grant.topor@ubc.ca to request the extended rental.

Rules

Use of the SOE vehicles are a benefit and privilege of affiliated EDTs, and therefore there are rules and expectations which must be followed. These are detailed below:

- Driving is restricted to main roads and highways. No off-road or service-road use is permitted.
- All drivers must hold a valid Canadian driver's license.
- The vehicle is to be picked up and during working hours between Monday-Friday, 8:30 AM – 4:00 PM.
- Overnight/International use should be discussed with Grant and/or Praveen.
- The vehicle use is for UBCO SOE business only, i.e. no personal use is permitted.
- Prior to returning the keys the driver must ensure the interior & exterior is clean, and that the user logbook is completed.
- Upon returning the vehicle the driver must report any vehicle issues, problems or accidents.

Booking & Rates

All vehicle reservations are on a first come, first serve basis, and can be booked through the following link:

[BOOKING LINK](#)

For longer distances where the vehicle must be refueled by the driver, the mileage rate is \$0.26/km

Financial Processes

Summary

This section details all finance processes relating to the management of an EDT SOE account. Also included is information regarding the various funding opportunities for EDTs.



Account Balance Tracking

All teams who hold an account with the SOE will receive monthly ledger statements from the finance liaison, detailing the income and expenses for the month. Should you require an account balance update outside of these monthly statements for a reason pertinent to design choices, travel constraints etc., this can be obtained through contacting [Jake Guo](#) for the request.

Account Deposits

Direct Deposit

The first distinction that must be made when using direct deposit to put funds into your account is whether it is an **EDT sponsorship** or an **EDT donation**. See the distinction between these two below:

- **EDT Sponsorship:**
 - This is when a company wishes to enter into a **sponsorship funding agreement** with your team or is donating on behalf of a company. For example, a company may agree to sponsor an EDT with \$1000.00 in funding in exchange for a branded company logo on a prototype.
 - Use this link: <https://donate.give.ubc.ca/page/80953/donate/1?locale=en-US>
 - Instructions to use this link:
 - Open the given link
 - Under the section that says “Cause” enter the code “**replace with your EDT’s code**”
 - Select the amount you would like to sponsor
 - Click “Next”, then input your company information
 - Click “Next” then input your credit card info and other details
 - Once that is complete select “Give Now” and you are done!

- **EDT Donation:**
 - This is when an individual wishes to make a philanthropic **donation** (parent, friend, neighbour, etc.) to support your mandate and initiatives. For example, Jane Doe a UBCO Alumna would like to donate \$1000.00 in support of a new subcomponent redesign.
 - Use this link: <https://donate.give.ubc.ca/page/68046/donate/1>
 - Instructions to use this link:
 - Open the given link
 - Under the section that says “Direct my Gift to” select “Other”
 - Directly below the previous step enter the code “**replace with your EDT’s code**”
 - Under “Donation Type” select “One Time”
 - Select the amount you would like to sponsor
 - Click “Next” then input your details
 - After that under the section “Your Relationship with UBC” select “Student/Parent/Friend”
 - A drop-down will appear, please select “Other”
 - Click “Next” then input your credit card info and other details
 - Once that is complete select “Give Now” and you are done!



EDT Sponsorship/Donation Codes:

- G3912 (GNCTR)
- G3494 (Motorsports)
- G3480 (Innovate, Design, Sustain)
- G3913 (Aerospace Club)

Cash Deposits

It is acknowledged that some teams may use cash for some of their funding opportunities, membership fees, or simply for convenience. However, it is recommended to avoid cash use whenever possible as a cash payment is difficult to track and accurately keep a record of.

If a team needs to make a cash deposit, please contact [Grant Topor](#) for further information and to arrange the deposit.

ERF Submission & Direct Invoicing

ERF Processing

Going forward the SOE has shifted to a Qualtrics format for reimbursement submission for EDTs. This form can be used both to submit a reimbursement directed to the team's SOE account, or to a team's approved PAF funding. The [reimbursement request form](#) follows a similar format as the previous model used for PAF, and requires the following:

- Organized receipts and documentation of the expenses incurred in PDF format
- Direct deposit of the payee setup in workday

Should any points of confusion arise while the reimbursement is being processed, finance will reach out for clarification. Expect for reimbursement processing to take a maximum of 30 days from when the form was submitted, assuming that the form was correctly filled out with all the required information.

Direct Invoicing

As some teams may have larger expenses i.e. travel costs, materials or other larger sum payments, or may have regular vendors which are frequently in use, teams may set up direct invoicing provided they supply all the required information. The following steps are required to set up a directly invoiced payment:

- The direct invoice from the company for the expense
- Written rationale describing what is being purchased and why
- A signature from the faculty advisor signing off on the rationale
- Contact information for the vendor

Once the above information has been collected and prepared this information can be sent to [Anna Jamkowy](#) for processing.



PAF Funding Processing

If your EDT has applied to PAF funding and been approved these are the steps to be taken to be reimbursed for the expense(s).

- Fill out the reimbursement Qualtrics survey, as described above in the ERF processing portion of this document. Ensure to indicate on the submission that it is being directed to PAF, as well as any other required PAF-specific information i.e. application name and number.
- Ensure to submit all reimbursement documentation within the deadline stated on the application approval email.

Internal Funding Opportunities

Within the SOE and UBC there are multiple opportunities for internal funding that teams may choose to apply to throughout the year to fund portions of their activities. It is to be noted that teams are expected to do external sponsorship outreach to ensure that their financial constraints are met. The reliance of teams should not fall solely on internal funding avenues. These internal funding opportunities are as listed below:

- Students Union (SUO) Funding
 - This funding opportunity is open twice per academic year, once in term 1, and once in term 2.
 - Must be ratified with the SUO to qualify and must maintain student association status through attendance and orientation.
 - Requires submission of End of Term Report.
 - Additional information can be found in the [student association handbook](#).
- Engineering Society Funding
 - This funding opportunity is run through the Engineering Society and is open 1-2 times per academic year.
 - Must be ratified as an affiliate club.
 - Further information regarding this funding is usually released throughout the year using Instagram, email and their website.
- Professional Activities Funding (PAF)
 - This funding opportunity looks to support travel and events related to professional development, and extracurricular projects.
 - Projects & Activities funding is open once per term, whereas applications for travel funding operates on monthly funding cycles.
 - Additional information can be on the [Professional Development and Experiential Learning website](#).

Sponsorship Best Practices

As teams may have varied financial needs external sponsorship is highly encouraged. This is also a way to build industry relations and engagement. With that in mind there are expectations for sponsorship outreach which must be considered by all teams conducting outreach for external avenues:

- Professionalism is expected in all communication with industry members. This looks like: prompt responses to emails or other forms of contact, well-structured emails, and clear and polite communication.



- Good record keeping is key to outreach. All companies being contacted should be documented in a way that is common to all team members involved in outreach. This is crucial in preventing the same company from receiving multiple requests.
 - Additionally, the list of potential sponsors which have been contacted should be shared with Grant or another member of the SOE to ensure that no conflicts of interest are occurring between various sponsors and UBC.
- Ensure that all sponsorship packages or promotional material are accurate, well laid out and respectful towards potential sponsors.
- Regular updates and end-of-competition follow up are key portions of communication in relation to maintaining sponsor relations. It is strongly encouraged for teams to share regular updates with sponsors, and for teams to provide a sort of “end of year” summary with their sponsors, either at the end of the academic year or at the end of their competition season.

Team Leadership & Succession

Summary

This section details practices to be used to ensure fair team selection and succession and successful team recruitment in terms of long-term retention. Also discussed is recommended approaches to maintain records of team histories, previous design choices, and strong handover practices to best set up future team leaders for success.

Team Selection Process & Succession

Team Selection Process

When selecting the leaders of your team it is crucial that a fair and equitable approach is used, which encourages newer members of the team to apply and evaluates all applicants in a fair manner. Additionally, strong documentation of these applications and decisions can be crucial in supporting the final decisions made by your team.

Team Succession

Succession planning is key to ensuring the longevity of your team. It helps you to pass down important information, reflect on the progress made, and prepare for the future. An intentional approach to this component of team management will create a strong team for future years. The main components of succession are feedback, reflection and strong documentation surrounding crossover between teams/team leads. Further information and resources for this can be found [here](#).

Team Recruitment

Strong approaches to team recruitment are vital to the growth and continued maintenance of any team and is something each team should consider. Whether members are included on a general basis, or if there is screening processes involved with how your team selects its members, it's important to consider how information is being distributed regarding the opportunities. Further recommendations and resources for this process can be found [here](#).



Good Handoff Practices

As your team transitions from year to year, and the composition of your team's leadership changes, there are a few considerations that are crucial to good record keeping. All positions should facilitate handoff meetings between new and old leads as a part of your team's changeover process. This ensures that information continues to be passed down and expanded on over time, improving your team in the process. Additionally, information should be condensed to a written form to ensure that hardcopy versions of the handoff information exist.

Another component to consider as you organize handoff is the approach to record keeping that your team is using – how is the information being stored and organized? Is the file system easy to navigate through and is the information clearly distinguished from year to year? These are all things to consider when facilitating crossover.

SOE Affiliation & Team Admin

Summary

This section details information regarding the yearly SOE Affiliation process that all EDTs must complete, as well as recommendations regarding membership and sponsorship records. All documentation required for SOE affiliation is separate from this handbook. Also included is recommendations regarding membership and sponsorship records.

SOE Affiliation

Each academic year affiliated EDTs will be required to complete the affiliation process which requests a variety of information. This process includes documentation of the following components:

- Finance and Budget
- Membership Records and Information
- Inventory and Storage of Team Materials
- Project Overview Forms

Additionally, teams will be required to fill out the affiliation package document which contains various questions relating to the structure and operating of the given team. These pieces of documentation will be submitted through a Qualtrics submission.

Member Roster & Sponsor Records

Member Roster

Rosters of team members are required for various purposes throughout the academic year, i.e. reaffiliation with the SUO, Engineering Society and EDT affiliation. Due to this it is recommended that teams continually maintain their records throughout the year. A template for this can be found as a part of the EDT affiliation package.

Sponsor Records

As discussed previously in the sponsorship best practices portion of this document, maintaining clear sponsorship records is key to building and maintaining industry relations. New sponsorship lists and tracking sheets should be made for each academic year and should be electronically stored in a logical manner. This aids in facilitating outreach as historic sponsors are clearly listed, and newly contacted sponsors can be well documented