Engineering Design Team (EDT) Handbook 2024-25

Summary

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

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 leads 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.

Record Keeping & 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, bettering 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.

Workspaces & Resources

Summary

This section details information regarding the potential workspaces available to EDTS and the expected approach to be taken 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 included 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 trainings are required for safe use and access to this space.
- **Machine Shop (EME 0220)**
    - Access 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 trainings may be required dependent of the intended work to be performed.

Shop Access Step-by-Step

1) EDT planning of 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/
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 & Addressing Workplace Bullying & Harassment
- Working 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
    - 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 leads 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 lead 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 leads. 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-transferrable nature of Salto cards. As stated in the Salto card guidelines, these cards **are not transferrable** and are not to be used by anyone except for the card holder. Therefore, if you are intending 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.

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 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.

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 setup 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 with larger budgets 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.
- Tuum Est Student Initiative Funding
  - This funding is available for all of UBC Okanagan's campus, and looks to support student initiatives, conferences and competitions.
  - Funding cycles operate monthly.
  - Additional information can be found on the Tuum Est webpage.

Sponsorship Best Practices

As teams may have varying 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 prevention of the same company 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 is 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.

Group Travel & Predeparture Requirements

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 predeparture preparations and required meetings prior to attendance at a competition.

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 to 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 a written confirmation that students are aware of the expected behaviours and standards to be upheld as a representative of UBC and the SOE.

Member Information & Record Keeping

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.

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.