# Small TLEF Innovation Project

## New & Returning Applications

***All proposals must be submitted by 3:00 pm November 14, 2024***

- *Before continuing, please read all TLEF criteria and application instructions at: **http://tlef.ubc.ca***
- *Applications should be written in language that is understandable to a non-specialist.*
- *The online application system is plain text. You will not be able to add tables, graphs, or charts in your proposal.*

### Project Title (200 characters max.)

*Do not use all-caps.*

Scaffolding professional skill development across the undergraduate curriculum

### Principal Applicant

*For administrative purposes, there must be one Principal Applicant who should be a full-time UBCV faculty or staff member. A UBC student may also apply as a Principal Applicant provided there is at least one co-applicant who is a full-time UBCV faculty member who will act as a co-principal signatory.*

Principal Applicant's name:

Jonathan Verrett

Principal Applicant's title(s) (e.g. Assistant Professor, Lecturer, Professor of Teaching, etc.):

Associate Professor of Teaching

Principal Applicant's primary (UBC) email address:

jonathan.verrett@ubc.ca

Principal Applicant's role:

☒ Faculty
☐ Staff
☐ Student
☐ Other

Principal Applicant's Faculty, College, or administrative unit:

☒ Faculty of Applied Science
☐ Faculty of Arts
☐ Faculty of Dentistry
☐ Faculty of Education
☐ First Nations House of Learning
☐ Faculty of Forestry
☐ Faculty of Graduate Studies
☐ Faculty of Land & Food Systems
☐ Allard School of Law
☐ Faculty of Medicine
☐ Faculty of Pharmaceutical Sciences
☐ Sauder School of Business
☐ Faculty of Science
☐ UBC Health
☐ UBC Library
☐ Vantage College
☐ VP Academic
☐ VP Students
☐ Other

*(Please specify)*

Principal Applicant's Department, School, or unit:

Chemical & Biological Engineering

## Co-Applicants & Project Team Members (500 words max.)

*Please list all other co-applicants' names as well as their corresponding titles, relevant affiliations, and UBC email address, separated by commas (e.g. Jane Doe, Associate Professor, History, Faculty of Arts, jane.doe@ubc.ca). Only list people who have agreed to participate as co-applicants or project team members. If your proposal is successful, this list will be published on the UBC website (emails will be removed)*.

Listed in alphabetical order by last name. Engineering program acronyms are Chemical Engineering (CHML), Chemical & Biological Engineering (CHBE), and Environmental Engineering (ENVL). Note the original students on the application have graduated, but I have left them here for completeness. If they should be removed, please lte me know.

STUDENTS

Catherine Brochard-Lalande, Undergraduate student club co-president (CHML/CHBE), 2023/2024, Department of Chemical and Biological Engineering, Faculty of Applied Science, chbecouncilpresident@gmail.com

Lisa Hochhausen, Undergraduate student club co-president (CHML/CHBE), 2023/2024, Department of Chemical and Biological Engineering, Faculty of Applied Science, chbecouncilpresident@gmail.com

FACULTY

Zeina Baalbaki, Lecturer (ENVL), Department of Chemical and Biological Engineering and Department of Civil Engineering, Faculty of Applied Science, zeina.baalbaki@ubc.ca

Alireza Bagherzadeh, Assistant Professor of Teaching (CHML/CHBE), Department of Chemical and Biological Engineering, Faculty of Applied Science, alireza.bagherzadeh@ubc.ca

Pranav Chintalapati, Assistant Professor of Teaching (CHML/CHBE/ENVL), Department of Chemical and Biological Engineering, Faculty of Applied Science, pranav.c@ubc.ca

Gabriel Potvin, Associate Professor of Teaching (CHML/CHBE), Department of Chemical and Biological Engineering, Faculty of Applied Science, gabriel.potvin@ubc.ca

STAFF

Marlene Chow, Director of Academic Programs (CHML/CHBE/ENVL), Department of Chemical and Biological Engineering, Faculty of Applied Science, marlene.chow@ubc.ca

## Department Head Approval

*The Department Head/Unit Head, Director, or equivalent of the Principal Applicant, has been consulted on the project's nature, is aware of potential resource commitments, and has agreed to support it. If there are resource commitments from the departments of any co-applicants, their Department Heads should also be aware of and in support of the project.*

☒ Yes

*Name of Department Head(s) you consulted with on this application:* Charles Haynes

## Project Summary (150 words max.)

*Describe your project in a way that is accessible to a non-specialist. Please specify what you hope to change or see from this project. If your proposal is successful, this summary will be published on the UBC website*.

Engineers must be well versed in a range of professional skills including communication, teamwork, ethics, equity and project management. These professional skills are reflected in the Engineers Canada Graduate Attributes which all engineering programs must develop and assess to be accredited. This project seeks to create a cohesive framework

for developing these professional skills in engineering programs focusing on the Chemical Engineering, Chemical and Biological Engineering and Environmental Engineering undergraduate programs. The envisioned framework will align and enhance existing professional skill development elements across multiple courses, while also incorporating new elements, to create continuity in skill development throughout the programs. At UBC, students enter specialized engineering programs following a general first year. This project will therefore engage students, faculty and staff involved in the 2nd, 3rd, and 4th year curriculum.

The project resources developed will be published openly so they can be adapted to other UBC programs or other institutions.

## Students Reached by the Project

*Please fill in the following table with all known courses and sections that will be reached by your project and in which academic year (e.g. HIST 101, 002, 2025/2026, Sep).*

| Course Code | Section | Academic Year | Term (Sep/Jan/May) |
|---|---|---|---|
| CHBE 201 | 101 | 2023/2024 onwards | Sep |
| CHBE 220 | 101 | 2023/2024 onwards | Sep |
| CHBE 221 | 201 | 2023/2024 onwards | Jan |
| CHBE 263 | 101 | 2023/2024 onwards | Sep |
| CHBE 264 | 201 | 2023/2024 onwards | Jan |
| CHBE 362 | 101 | 2025/2026 onwards | Sep |
| CHBE 364 | 101 | 2025/2026 onwards | Sep |
| CHBE 365 | 201 | 2025/2026 onwards | Jan |
| CHBE 366 | 201 | 2025/2026 onwards | Jan |
| CHBE 376 | 201 | 2025/2026 onwards | Jan |
| CHBE 453 | 001 | 2023/2024 onwards | Sep/Jan (2 terms) |
| CHBE 454 | 001 | 2023/2024 onwards | Sep/Jan (2 terms) |
| CHBE 464 | 001 | 2023/2024 onwards | Sep/Jan (2 terms) |
| ENVE 200 | 101 | 2023/2024 onwards | Sep |
| ENVE 202 | 201 | 2023/2024 onwards | Jan |
| ENVE 401 | 001 | 2025/2026 onwards | Sep/Jan (2 terms) |

*If your project does not pertain to a specific course, or if there are more contexts in which your project will have impact, briefly describe the overall student reach in all academic year(s).*

*How many students overall do you estimate will be reached by this project annually? (Please provide a number)*

## Project Objectives (500 words max.)

*Clearly state the project's rationale, overall objectives, and expected impacts/changes, particularly how it meets TLEF criteria.*

This project seeks to improve and align student professional skills development, notably communications, teamwork, ethics, equity, life-long learning, and project management. All of these skills are part of Engineers Canada's graduate attributes and must be developed and assessed in engineering programs for program accreditation. This project will focus on three programs, Chemical Engineering (CHML), Chemical & Biological Engineering (CHBE) and Environmental Engineering (ENVL).

The project will focus on developing professional skills in laboratory- and design-focused courses in each program. We

are targeting these courses as they have high teamwork content in which students must develop and apply many of these professional skills. Currently professional skills are being developed in each program in an ad-hoc fashion in selected courses. This TLEF grant will bring together stakeholders including faculty, students and staff involved in each of these courses and develop a framework for professional skills development and assessment across the curriculum. Engineering programs have a general first year and some professional skills are already introduced and developed within the first-year design courses, which are taken by all engineering students at UBC (course codes: APSC 100/101, VANT 150/151, BMEG 101). Our project focuses on building on these skills to further develop them in a coordinated fashion in years 2, 3 and 4 of the CHML, CHBE and ENVL programs.

Our project objective is to develop resources for students and faculty for professional skills development and assessment. This may include asynchronous content (eg. videos, text and images hosted on Canvas) and instructional plans/activities/assessments to be done in class (eg. work plans) or asynchronously (eg. reflection activities).

The project meets TLEF criteria as it:

- Aims to benefit a significant number of students directly shown by the number and breadth of courses impacted
- Is aligned with the University strategic plan, notably Strategy 11: Educational Renewal and Strategy 13: Practical Learning.
- Is aligned with the Applied Science (APSC) Faculty Strategic plan, notably Strategy 9: Inclusive Respectful Leaders and Strategy 1: Leading Edge Teaching
- Is aligned with the Chemical and Biological Engineering Departmental strategic plan by supporting curriculum renewal and modernization efforts in the department and supporting the newly established Environmental Engineering program
- Includes students, faculty and staff in project development and implementation, shown by co-applicants and consultations that have already taken place and are described in this application.

The project also aligns with TLEF focus areas:

- Student wellbeing outside the classroom – we anticipate the professional skills we are targeting for training are life-long and can be used in a wide variety of circumstances
- Experiential Learning – focusing on professional skill development in the experiential learning contexts including laboratory and design courses
- Diversity and Inclusion – Enhancing instructional resources and training around inclusion and equity in teamwork
- Open educational resources – aiming to adapt the work of others if possible and looking to share products of this work in an accessible fashion
- Students as Partners – we will be working closely with undergraduate students to develop these resources

## Project Focus Areas

*Please select all the areas that apply to your project.*

☒ Resource development (e.g. learning materials, media)
☐ Infrastructure development (e.g. learning technology tools, learning spaces)
☒ Pedagogies for student learning and/or engagement (e.g. active learning)
☒ Innovative assessments (e.g. student peer-assessment)
☒ Teaching roles and training (e.g. teaching practice development, TA roles, learning communities)
☒ Curriculum (e.g. program development/implementation)
☒ Student experience outside the classroom (e.g. wellbeing, social inclusion)
☒ Experiential and work-integrated learning (e.g. co-op, community service learning)
☐ Indigenous-focused curricula and ways of knowing
☒ Diversity and inclusion in teaching and learning contexts
☒ Open educational resources
☐ GenAI in teaching and learning
☐ Other

*(Please specify)*

## Summary of Work Accomplished to Date* (1000 words max.)

*With reference to what you originally intended for the project, what has already been completed and what is the project on track to accomplish by the end of the funding year (i.e. March 31)? Please include in your update the total amount of TLEF funding that has been spent to date by the project at the time of this application.*
***(This section to be completed for returning projects seeking second- or third-year funding only.)***

A high level summary of work accomplished to date is provided below. The Timelines and Milestones Section has been updated to include these developments as well as a plan forward.

The project progressed faster than initially expected in the first summer of development (2023/2024). The project was originally envisioning creating resources for 2nd year only. It was instead able to create resources for 2nd year as well as 4th year courses and these have been implemented in the relevant courses. The project was also put on hold for one year of development (2024/2025) as the principal investigator was on parental leave and the other applicants did not have the capacity to continue moving the project forward. Given that the project accomplished more than envisioned in the first summer, the project now envisions creating resources for 3rd year in the final summer of (2025/2026) as well as revising resources for 2nd and 4th year. This is also fortuitous as student salaries have gone up significantly. The project initially expected to hire 3 more summer students overall, however, this would no longer be possible with the current salaries and it is more appropriate to hire 2 summer students overall. This should be sufficient for completing the project work based on the current progress.

Budget Update

The TLEF funding that has been spent to date is the originally budgeted amount of $19,635, which was spent entirely on student salaries as originally budgeted.

## Project Work Plan, Timeline & Milestones (1000 words max.)

*Provide a clear work plan for achieving the project's stated objectives. Please include major milestones to indicate when you will initiate project development, when you will implement the project with students, and when you will evaluate whether your project's intended impact has been achieved.*

The project will occur over roughly three years from May 2023 to April 2026. The project was able to create resources in the first year faster than originally planned, thus the project is now envisioned for two years of funding in total (2023/2024 and 2025/2026). Note the project was put on hold for a year while the principal applicant was on parental leave in the 2024/2025 funding year. The timeline below has been adjusted from the original application to reflect this.

**Work to date (pre-project)**

- Applicants have consulted with students, faculty and staff
- Baseline evaluations are in place using the outcomes-based evaluation for program accreditation (see Evaluation section for further details)
- A preliminary environmental scan has been performed of existing TLEF projects. A search for "teamwork" in project descriptions was performed. Notable projects found to review include: "Professional Development for International Teaching Assistants and Graduate Researchers" and "Design and Implementation of "LEAP" a Leadership Experience Applied to Pharmacy Course Series for Entry-to-Practice (E2P) Doctor of Pharmacy (PharmD) Students". These previous projects may provide useful resources that can be adapted, reducing the need for creating new resources and allowing us to focus instead on ensuring curricular alignment and sound adoption. A more detailed environment scan will be done when commencing the project.

**February – April 2023**

- Bring together project stakeholders to initiate the project. Notably this will include discussing focus areas for development of 2nd year professional skills resources.

- Hire two summer undergraduate co-op students through a posting on the UBC Engineering co-op job board.

**May – August 2023**

- Onboard co-op students to the project and begin working with project applicants to perform a deeper environmental scan. This will assess professional skills development programs in other units at UBC and at other institutions.
- Create a professional skills development and assessment framework in consultation with faculty, staff and students. This will target 2nd, 3rd and 4th year courses in each program. This will provide a roadmap for stakeholders in developing the targeted skills – communication, teamwork, ethics, equity, life-long learning, and project management.
- Create a plan for development of the 2nd year professional development resources.
- Seek out consultations and feedback from Educational Designers, Open Educational Resources (OER), Universal Design for Learning (UDL) and Library Resources as appropriate to address any oversights or gaps in resource development plans (consultants listed in budget).
- Adapt/create resources for 2nd year professional development and assessment, and prepare to deploy these in 2nd year courses in each program.
- Adapt/create resources for 4th year professional development and prepare to deploy these in 4th year courses in each program.

**Milestones:**

- Professional skill development and assessment framework created.
- 2nd year and 4th year professional development resources created and ready for implementation.

**Sept 2023 – April 2024**

- Implement 2nd year and 4th year professional development resources and seek out feedback from students through departmental feedback sessions as well as the graduate attributes survey.

**May –August 2024**

- Project on hold as PI was on parental leave and other project members did not have capacity to take on further development.

**Sept 2024 – April 2025**

- Continue to implement 2nd year and 4th year professional development resources and seek out feedback from students through departmental feedback sessions as well as the graduate attributes survey.
- Hire two summer undergraduate co-op students through a posting on the UBC Engineering co-op job board.
- Submit a publication to be presented at the Canadian Engineering Education Association (CEEA) Conference with project applicants and co-op students.

**May –August 2025**

- Onboard co-op student and provide relevant project background to date.
- Consult with all stakeholders to assess the effectiveness of the initial implementation of the professional development resources in 2nd and 4th year. The professional skills development framework will be adjusted as appropriate based on feedback.
- Create a plan for updating 2nd and 4th year resources if required based on feedback.
- Pass on further refinement of 2nd year and 4th year resources to course instructors, these resources will now be owned by those instructors as part of their courses.
- Create a plan for development of the 3rd year professional development resources and assessments.
- Seek out consultations and feedback from consultants (specified previously) to address any oversights or gaps in resource development.
- Present at CEEA conference in order to showcase work to date, reception of this from stakeholders and to receive feedback from conference attendees.

**Milestones:**

- 3rd year professional development resources and assessments are created and ready for implementation.
- 2nd and 4th year professional development resources and assessments are updated based on feedback.

**Sept 2024 – April 2025**

- Implement 3rd year professional development resources and seek out feedback from students through departmental feedback sessions as well as graduate attributes survey.
- Pass on further refinement of 3rd year resources to course instructors, these resources will now be owned by those instructors as part of their courses.
- Write final project report.

**May 2025**

- Expected end date of project, final report submitted.

## Project Outputs, Products or Deliverables (500 words max.)

*List or describe the project's intended tangible outputs, products, or deliverables. What will the project do or create from its work plan?*

The project envisions delivering the following outputs:

- A framework for professional skills development and assessment in the 2nd, 3rd and 4th year CHML, CHBE and ENVE programs: These frameworks may be unique for each program but will likely have common elements. The professional skills we will focus on will include communication, teamwork, ethics, equity, life-long learning and project management. Many of these skills overlap when working in a team setting, thus we want to develop a framework for improving student competencies in these skills in a holistic manner and appropriate setting. Targeting skills individually and without a proper context may make it challenging for students to apply what they are learning. This is why we are planning to focus on implementing this skill training in laboratory and design courses, where students work in teams, need to communicate frequently with a variety of people (teammates, instructor, design stakeholders) and can apply these skills immediately.
- Modules to develop professional skills: We envision these modules to likely consist of asynchronous portions that students complete on their own. This will likely be followed by class activities where students are working with one another to further develop a skill we are focusing on. There will likely be a wrap-up activity at the end of each module to help students reflect or extend their experience to other contexts. The above outline provides a framework we may use for developing modules. However, each skill we focus on may require different educational activities to best support student development, so we will be flexible in our approach.

We plan for the online content (such as asynchronous portions or certain reflection activities) to be hosted in Canvas. We will likely build and host this online content in a single Canvas course open to all instructors. This will allow easy access to online content such that instructors can import the content into relevant courses. Canvas will also allow us to publish the modules to Canvas Commons for easy sharing of the materials created as OER.

We plan to disseminate this work through a scholarly publication, likely at the Canadian Engineering Education Association. This will help share the work to a broader audience for adoption. Ideally, we would engage our summer co-op students to present, if they are so inclined.

## Project Impact (500 words max.)

*Referring to the project's objectives and expected outputs, what are the direct and short-term as well as sustainable benefits to students or instructors that you expect to achieve? What changes or impacts do you hope to see from this project? Explain how these will contribute toward the enhancement of teaching and learning.*

The project will have a number of benefits to students and instructors that will be sustainable in the long term. Project outputs integrate directly into existing courses and seek to improve and align activities between courses for

enhanced student learning. A history of recent developments in each program may be helpful in understanding the relevance and impact of the proposed changes and why now is an ideal time for this project.

The CHML and CHBE programs have undergone significant curricular enhancements over the past five years. Notably more emphasis is placed on experiential learning courses (design and labs) by adding credits and allowing for additional support and training in these areas. These curricular changes were performed in consultation with program stakeholder including students, alumni, industry and faculty. ENVL is a newly established program (jointly run by CHBE and CIVL departments), graduating a first cohort this academic year (2022W). Given this, CHML, CHBE and ENVL have an opportunity to align professional skills development as there is a relatively large amount of new programming in each of these curriculums that focuses on experiential learning. This grant will allow this work to take place. It will provide funding needed to consult all stakeholders, create resources as required and ensure alignment.

We anticipate much of the professional skills framework and educational resource development will overlap between programs as students in each program take many of the same, or similar courses. For example, CHBE and CHML students have the same lab and design courses up to the second term of their 3rd year. ENVL takes a capstone course which is aligned and shares some lectures with CHML and CHBE capstones. This is the rationale for including all three programs in the scope of this project.

Overall, with better alignment between professional skills development across each program we expect to see graduates who are more effectively trained and confident in applying their professional skills at UBC and in the workplace. We also expect programs will be able to better articulate to accreditation bodies how they are meeting required engineering graduate attribute outcomes.

## Evaluation Plan (500 words max.)

*Describe how you will find out if the project resulted in the intended impact(s). What evaluation strategy will be used? What data will you collect to evaluate the project's impact(s), and how will you collect these data? Outline any key indicators that will be used to determine the project's success/performance.*

The courses and programs already have existing outcome measurement procedures required by engineering accreditation. Engineers Canada accredits all engineering programs within Canada and requires engineering programs (and graduates) to focus on 12 key graduate attributes (GAs). Notable GAs related to this project include GA 6: individual and team work, GA 7: communication skills, GA 8: professionalism, GA 10: ethics and equity, GA 11: project management, and GA 12: Life-long learning.

We will take advantage of the existing outcome measurement process in the programs adapting it if necessary to specifically focus on the revision to the professional skills development portions of the courses. Each program currently runs student feedback sessions twice per term. These sessions gather students from a given year level and ask them for feedback on their experience in each of the courses they are taking in order to improve course delivery. Feedback is recorded and there is also an opportunity for a back-and-forth discussion between instructors and the student cohort. We envision using these sessions to continue to gather qualitative feedback from students on the implementation of professional skills development content in relevant courses. This feedback will also be used to further refine materials in future years.

In addition to these feedback sessions the Department undertakes a GA survey each year. This asks students to rate their confidence in each GA and provide feedback on their development. This quantitative and qualitative data provides a baseline for student confidence in GAs prior to the implementation of this project and will provide data following its implementation as well. These surveys and feedback methods have been used for at least the past five years for CHML and CHBE and since inception of ENVL (3 years ago) and will continue to be used in some manner in the future as they are required for program accreditation.

## Student Involvement (250 words max.)

*Describe how students were consulted and involved in preparing and reviewing this proposal and how they will be involved in the project's implementation.*

Undergraduate students have been consulted and involved in preparing this proposal in a variety of ways. As mentioned in the Evaluation section of this project, our programs host feedback sessions with students each term to gather feedback on their courses. During these feedback sessions students have requested more resources for preparing them to work in teams in both laboratory and design courses. They have also requested more training around managing projects, particularly in team settings. These skills overlap with communication, ethics and equity, and life-long learning as these are also components of successfully working in teams.

About 65% of the students in CHML and CHBE will do co-op work terms during their degree. The Co-op office provides students with a reflection and feedback form after each work term. Reflecting on their work terms, students have cited a need for further development of the professional skills this project focuses on in order to better prepare them to work in a variety of settings, both technical and non-technical. This matches with employer feedback which says our students perform well technically but have varying competency in professional skills.

The Chemical and Biological Engineering Department student club co-presidents have also been consulted and are co-applicants on this application as a show of their support.

Undergraduate students will be involved in the implementation of the project. We will also continue our regular consultation with students on their courses each term.

## Meaningful Engagement with Equity, Diversity & Inclusion (250 words max.)

*How does your approach align with UBC's priorities for equity, diversity, and inclusion? What steps will you take to ensure that you consider accessibility needs for students in the development and implementation of this project?*

The project has and will continue to meaningfully engage with UBC's EDI priorities in several ways.

In developing the project, we have consulted with a variety of stakeholders including students, faculty and staff as shown by our co-applicant list. In terms of accessibility, we have consulted with AC Deger at UBC Accessibility, around ensuring resource accessibility through using a Universal Design for Learning (UDL) Framework in the project. To do this, we will develop a preliminary plan for ensuring our educational resources follow the recommendations of the UBC OER Accessibility toolkit (https://open.ubc.ca/oer-accessibility-toolkit/). Once we have developed a preliminary plan around ensuring educational resource accessibility, we will then consult with AC (shown in the budget) throughout the project to ensure there are no gaps in our plan.

The main goal of the project is to better and more effectively train students on professional skills. This includes training around equity as students will encounter challenging situations dealing with equity when working in teams within and outside UBC. Recognition and action on equity is becoming a more important professional skill. This is recognized by the Engineers Canada Graduate Attribute 10, one of the main focus areas of this project, which asks that graduates be able to "apply professional ethics, accountability and equity". Teams have been shown to be more productive and creative when team members feel psychologically safe. Psychological safety is developed when team members feel a sense of inclusion in their team. Inclusion also helps team cohesion and performance.

## Project Budget

*If this proposal is successful, do you expect that your project will seek second- and/or third-year funding from the TLEF?*

☐ No, only one year is anticipated

☒ Yes, two years are anticipated
☐ Yes, three years are anticipated

*Title of previously funded TLEF project (if different from title of this proposal):*

| |
|---|
| |

**Funding Requested from the TLEF**
*Indicate the funding being requested. Please also indicate any historical funding for the project in its first and/or second year, as well as any future anticipated funding, if applicable.*

| Example | Year | Funding Requested |
|---|---|---|
| Year 1 | *2023/2024* | *$19,635* |
| Year 2 | *2025/2026* | *$28,224* |
| Year 3 | | |
| Total Project Budget | | $0 |

**Total Project Budget**
*The total budget of a Small TLEF Innovation project cannot exceed $50,000.* $47,859

**Other Funding**
*Indicate any funding from other sources outside of TLEF being applied to this project:* $86,904

*If applicable, please list any other active TLEF-funded projects currently held by the Principal Applicant:*

| |
|---|
| |

**Small TLEF Innovation Project Budget Document**
*Please use and upload the Small TLEF Excel budget document template provided on the TLEF website:* https://tlef.ubc.ca/application/templates/

*Information on funding criteria and cost estimates for TLEF proposals as well as the budget template can be found on the TLEF website, under Application > Process.*

*In preparing your budget, please refer to the rates published on the TLEF website for costs of services and salaries relating to staff and students at UBC: https://tlef.ubc.ca/application/application-process/*