**Consultation Summary**

Consultations about the exceptional tuition increase (ETI) with students began in April 2021 and included meetings with the Engineering Students’ Society (ESS), focus groups with various student clubs, two town halls, and a survey of all engineering undergraduate students. In all, 996 of 4,613 students (21.6%) engaged through the survey responses, with additional students participating through in-person town halls and focus group meetings.

Six improvement areas were consistently reported as priorities at both town halls, in survey responses, and in meetings with student group representatives.

These included:

- **Course Delivery**, including quality of instruction, accessibility to academic support (i.e., student to TA/instruction ratios), and teaching modalities (i.e., online delivery).
- **Experiential Learning**, including opportunities for students to apply practical knowledge, engage in “hands-on” activities, pursue work-integrated learning, and interact with industry.
- **Course Content**, including industrial relevance of course and laboratory material and exposure of students to diverse community perspectives.
- **Scholarships and Bursaries**, including financial support for students within the lower socioeconomic strata as well as other underrepresented demographics.
- **Student Support**, including access to mental health, workload management, equity, and career planning support.
- **Ongoing Consultation**, including mechanisms to ensure effective and continuous feedback from the student body.

**Proposed Improvements**

Table 1. Revenue allocation versus first choice of survey respondents by improvement area.

<table>
<thead>
<tr>
<th>Improvement Area</th>
<th>First Choice (%)*</th>
<th>Budget Allocation (%)**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course Delivery</td>
<td>26.2</td>
<td>26.5</td>
</tr>
<tr>
<td>Course Content</td>
<td>19.5</td>
<td>31.1</td>
</tr>
<tr>
<td>Work-Integrated Learning</td>
<td>20.2</td>
<td>16.6</td>
</tr>
<tr>
<td>Financial Support</td>
<td>12.6</td>
<td>15.0</td>
</tr>
<tr>
<td>Student Services and Support</td>
<td>9.1†</td>
<td>5.8</td>
</tr>
<tr>
<td>New Priorities</td>
<td>-</td>
<td>5.0</td>
</tr>
</tbody>
</table>
*Percentage of respondents selecting indicated option as first choice (Figure 1). **Allocation percentage at steady-state (i.e., 2026-2027 and beyond). † Includes Service Delivery (6.2%) and Mentorship Programs (2.9%).

### 1. Course Delivery

Course delivery was selected as the first choice for improvement by 26.2% of respondents, and over 82.4% of respondents selected this option as one of their top five choices.

Currently, 26.5% of the proposed exceptional tuition increase (ETI) revenue is allocated to improving course delivery.

Specific initiatives that will be implemented under this improvement area as detailed as follows:

**1.1 Increasing Access to Teaching Assistants**

The need for additional teaching assistants to provide academic support to students out of the classroom was reported as a priority area in the survey responses and in most of the meetings we held with student representatives.

ETI revenue will be used to increase the number of TAs available by 25%.

**1.2 Enhancing First-Year Program**

Based on a review of the current program and pedagogical literature, a transition to a cohort-based delivery model has been proposed by an internal review committee. The new approach will be designed to improve problem-solving through experiential learning and collaborative opportunities to better prepare our students for employment.

In the proposed model, incoming students will be divided into cohorts of 40 students. Students within a cohort will have coordinated schedules, including instructional time and structured seminar/laboratory blocks. When students are not in formal lectures or structured activities, group learning discussions and academic support will be provided by teaching assistants (TAs), who will assist first-year students with “learning how to learn” through targeted, easily-accessible, one-on-one academic tutoring.

An exciting aspect of the program is the introduction of new opportunities for students to apply knowledge to community-based challenges through independent and collaborative group work. Projects will be designed to integrate materials from different courses delivered in the first-year program, including mathematics, physics, chemistry, programming, and writing.

The proposed ETI revenue will be used to support TAs that will provide academic support for each cohort, as well as a program director that will be responsible for coordinating new learning objectives and outcomes.
1.3 Developing an Augmented Reality Application to Improve Delivery

Visualization of complex mechanical motions of machines, small-scale phenomena such as chemical or electrical reactions, and large-scale systems such as building or bridges through augmented reality (AR) allows students to access educational experiences that would otherwise be costly, unsafe, impractical, or impossible in traditional settings—enabling new learning outcomes to be easily and inexpensively explored.

An IOS and Android application has been developed in beta within our faculty. However, additional funding is required to transition the application to production and to support the creation and development of AR content throughout the Faculty of Engineering. The broad reach of this development could potentially impact over 4,000 students in the Engineering at Alberta program.

Proposed ETI revenue will be used to transition the application to production and support the creation and development of AR content throughout the Faculty of Engineering.

2. Course Content

Course content was selected as the first choice for improvement by 19.5% of respondents, and more than 81.1% of respondents selected this option as one of their top five choices.

Currently, 31.1% of the proposed ETI revenue is allocated to improving course content.

Specific initiatives that will be implemented under this improvement area as detailed as follows:

2.1 Modernizing Laboratory Experience

To ensure that students are well-prepared to enter the workforce, they must become experienced with equipment and software currently used in industry. Laboratory expenses are typically focused on maintaining existing equipment, which is becoming increasingly obsolete. Purchase of new equipment and licenses require large, one-time investments exceeding current budgets.

Revenue from the proposed ETI will be used to fund investments in industrially-relevant equipment and software as well as associated operation costs, including reagents, supplies, and technicians.

2.2 Modernizing Laboratory Experience

Industry is constantly advancing. Ensuring that course content remains aligned with real-world practice has become challenging for instructors due to a lack of dedicated resources and support.
To address this gap, proposed ETI revenue will support a program modernization team dedicated to aligning program content with the emerging needs of industry.

This team will include:

1. Four Industrial Teaching Professors that will be responsible for developing lectures and course material based on current practices and emerging technologies. Industrial Teaching Professors will leverage their experience and connections in industry to enhance capstone design course content as well as improve existing or develop new courses and electives.

2. An Experiential Learning Coordinator that will be responsible for soliciting material for group projects from industry, assisting with packaging of new course material, coordinating interdisciplinary seminars, recruiting guest lecturers and speakers, organizing off-campus or virtual field trips, and establishing a library of in-class demonstrations.

3. Experiential Learning Assistants (specialized TA positions) who will assist with the development of new course material and an in-class demonstration library to enhance experiential learning. These TAs may also assist with coordinating interdisciplinary seminars, recruiting guest lecturers and speakers, organizing off-campus or virtual field trips, and the preparation of material for online learning to enhance the student experience.

2.3 Increasing Exposure to Diverse Community Perspectives

The Faculty of Engineering, together with the University of Alberta, “is committed to cultivating an institutional culture that values, supports, and promotes equity, human rights, respect, and accountability among faculty, staff, and students.” An important aspect of modernizing program content is increasing the exposure of undergraduate students to diverse community perspectives—particularly of underrepresented demographics within the Engineering at Alberta program.

Revenue generated from the proposed ETI will be used to support an Inclusivity Coordinator and equity, diversity, and inclusion training.

3. Experiential and Work-Integrated Learning

Experiential and work-integrated learning was selected as the first choice for improvement by 20.2% of respondents. More than 77.1% of respondents selected this option as one of their top five choices.

Currently, 16.6% of the proposed ETI revenue is allocated to increasing experiential and work-integrated learning opportunities. Specific initiatives that will be implemented under this improvement area as detailed as follows:
3.1 Establishing a Work and Research Internship Program

Revenue from the proposed ETI will be used to establish a work and research internship program.

The program will include:

1. Three Internship Coordinators dedicated to establishing summer employment and research opportunities as well as unconventional internships for traditional students (i.e. students not enrolled in the co-op program). Coordinators would also be responsible for assisting students with applications to various undergraduate internship programs, including the Mitacs Accelerate Program, NSERC Undergraduate Student Research Awards, and other opportunities provided by discipline-specific societies.

2. Like the Engineering at Alberta cooperative program, funds will also be set aside to promote the establishment of internship placements and opportunities.

3.2 Expanding the Engineering Connects Program

The Engineering Connects program is a work internship program that provides students the opportunity to build their technical skills and engineering knowledge while becoming empathetic, socially-minded, and ethical leaders in the engineering profession through community-based learning and research.

Proposed ETI revenue will be used to expand the program, allowing an additional 10 students per semester to contribute to socially-minded community-driven projects with meaningful impact.

3.3 Increasing Accessibility to the ELKO Engineering Garage

Proposed ETI revenue to fund the operation expenses of the ELKO Engineering Garage to ensure continued accessibility of all engineering students to the makerspace.

In doing so, the Faculty of Engineering will ensure access by students to substantive design experiences through long-term sustainability of the space.

4. Bursaries and Hybrid Awards

Bursaries and scholarships were selected as the first choice for improvement by 12.6% of respondents. More than 61.8% of respondents selected this option as one of their top five choices. Allocation of revenue
for bursaries and scholarships—particularly to support underrepresented demographics—was well-supported by the student groups.

Currently, **15.0% of the proposed ETI revenue is allocated to bursaries and hybrid awards established to support underrepresented and otherwise disadvantaged students.**

**5. Student Services and Support**

The Engineering at Alberta program serves to provide its students with the education and experiences required to excel as Professional Engineers. Developing a strong, confident, and well-prepared cohort of Professional Engineers is needed to sustain the innovation and competitiveness of our province’s industries.

Currently, **5.8% of the proposed ETI revenue is allocated to enhancing student services and support.**

**5.1 Increasing Access to Career Advisors**

Proposed ETI revenue will support two Career Advisors that will support students with career exploration, evaluation, and planning activities, enabling students to make informed academic and career decisions.

Advisors will assist students with finding and applying for employment opportunities best suited to their unique skill sets and with matching interested students with mentors. Importantly, Advisors will also support students with workload management and prioritization—skills needed to excel in both their undergraduate program and in the workplace.

**5.2 Investing in Student Well-Being**

An increased need for student support was a common area of improvement that emerged during the consultation process. Approximately 170 open-ended survey responses contained the words “mental health,” “workload,” “wellness,” “habits,” “pressure,” and “stress.” In the town halls, it was noted that many students are interested in accessing services and support designed to enhance inclusivity in the program and to support workload management.

Proposed ETI revenue will be allocated to expanding or developing new student support initiatives based on student priorities, which will be determined through the ongoing consultation process.

**6. Emerging Initiatives**

Students requested that the consultation process be continued beyond the submission of the proposal as a means of communicating their changing priorities to the Faculty of Engineering in the future.
Currently, 5.0% of the proposed ETI revenue is allocated to support emerging initiatives.

Recognizing that the priorities of students may change overtime, we are allocating a portion of proposed ETI revenue to address the emerging priorities of the student body. Improvement areas to which these funds will be allocated will be determined based on feedback from ongoing student consultations.