

Unit: College of Engineering

Section 1: Programmatic & Academic Vitality Narratives

- 1) Have you made any changes to your unit's strategic plan and/or budget process in the past year? If yes, what are 3-5 key elements of your unit's new/revised strategic plan and/or budget process? If no, please comment on the progress you've made in 3-5 key areas of your strategic plan.**

Along with the challenges of remote operations, the College of Engineering (CoE) prioritized four major initiatives:

- (1) Development of a new strategic plan
- (2) Diversity, equity, and inclusion transformation
- (3) Serving student growth and capacity (including construction of the Interdisciplinary Engineering Building)
- (4) Incentivizing increased efficiency and revenue generation to address budget challenges

Strategic Planning

The CoE is partway through a strategic planning effort that will culminate in summer 2021. The plan will articulate a transformative vision for the college aligned with the University's values and initiatives. The plan will also include an implementation framework with metrics as well as a financial and operational roadmap with an annual evaluation and accountability plan.

For each goal, a set of tactics will define our actions and shape its decisions. We plan to align work with priorities and to ensure that priorities are resourced appropriately.

Four overarching goals and three cross-cutting topics have emerged:

- Overarching Goals
 - An Engine for Public Good
 - A Research Agenda Recognized Worldwide
 - Increase and Diversify CoE's Partnerships
 - Strong and Sustainable Financial, Human and Physical Resources
- Cross-Cutting Topics
 - Diversity, Equity, and Inclusion
 - Innovative Engineering Education
 - Technology Translation and Entrepreneurship

Subcommittees have been formed to recommend strategies and initiatives to address these goals and topics. We look forward to sharing our strategic plan draft with campus leadership and to partnering with stakeholders to carry out the vision.

DEI Transformation

Leveraging the cluster hiring initiative, we are piloting a process that aims to ensure equitable and inclusive searches and diverse candidate pools. DEI also emerged as a cross-cutting topic in our strategic planning efforts. Additionally, we've partnered with Erolin Solutions to conduct a DEI-focused assessment. We will introduce an Associate Dean of Diversity, Equity and Inclusion in 2021, to further participation and engagement of diverse and underrepresented groups across the college. During this critical transition period, we have also hired temporary staff to ensure that DEI-related issues are addressed and incorporated into our strategic planning processes.

Serving student growth and capacity

Thanks to ongoing investments from the state, the college has nearly doubled degree output and increased access to underserved Washington students. The passage of HB 2158 in the last biennium will fund a 10% growth in engineering students over the next five years. However, our square footage has increased by only 18%, leading to a space shortage. The need to upgrade existing facilities and construct new ones is critical.

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We partnered with State Relations to request \$45 million toward construction of the new Interdisciplinary Engineering Building (IEB), supporting student growth.

In preparation for construction, the UW selected Hensel Phelps as general contractor, and architecture firm KieranTimberlake. Design work has begun with input from a college-wide planning committee to ensure the interests of all departments are represented. We are committed to building a facility that will provide effective and long-lasting support for world-class education and research across multiple disciplines.

Incentivizing increased efficiency and revenue generation

- Incentivize expansion of tuition-based Professional Master's Programs (PMP), fee-based degrees and certificate programs, and summer session offerings
- Increase post-baccalaureate degrees for career changers
- Support research funding models that encourage innovation and expand industry engagement
- Expand availability and access to data to support decision-making
- Further shared best practices and service models

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Section 7: Tuition Based Program Rate Recommendations - Narrative Section

- 1) Please explain why each proposed change is needed and how your unit/campus will use new incremental tuition revenue increases or absorb incremental tuition revenue losses.**

These increases are required to cover the increased costs to run programs – costs for faculty, staff, TAs, inflation for lab equipment and supplies, and planned improvements to instructional lab space and equipment.

- 2) Explain whether and how each proposed change will affect peer comparisons and/or whether a market analysis was conducted.**

Each program has done a peer comparison to assess the potential effect of tuition increases on program cost relative to other similar programs. All programs have both public and private peers. The cost for each is well in the range for public peers and substantially below that for private institutions.

- 3) Tuition and fee increases have a disproportionate impact on low-income students. Please comment on how each fee change will affect student debt loads, and specifically how the program will offset this impact.**

Tier III: The effect of a tuition increase on student debt is likely mitigated for many students, since 75 percent of the students in this category receive waiver funds (if not for the whole year, then for a quarter). Perhaps because of this, fewer than five percent of Tier III students appear to have taken federal, Grad PLUS, or institutional loans during the 2019-20 academic year.

The four programs with specific tuition categories are each intended to be one-year programs. As a result, tuition increases only affect costs for one year rather than being compounded over many years, creating less of an overall effect on student debt relative to increases in tuition for programs with longer duration. Given that these are one-year programs, the maximum effect on student debt is the amount of the tuition increase, which ranges from \$300 to \$840, depending on program and student residency.

A fairly low percentage of students in two of the four programs - Chemical Engineering and Industrial & Systems Engineering - take loans (fewer than 5% of these students take federal, Grad PLUS, or institutional loans). A somewhat higher percentage of students in Materials Science & Engineering students take loans, but the percentage is still relatively low (about 15%). As a result, the effect of a tuition increase on student debt will involve fewer students for these programs.

Chemical Engineering (CHEME): Discussions with the Chair's Advisory Council have not daylighted concerns about student debt. The program provides reader/grader opportunities, which can provide additional income for students.

Industrial and Systems Engineering (ISE): The department reports that the students in this program are working professionals, and many have their tuition paid by their employer. These factors are expected to reduce the effect of the tuition increases on student debt.

Materials Science and Engineering (MSE): The department does have a number of scholarships or fellowships that are offered to lower-income students that should help offset the effect of tuition increases on student debt.

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Applied Bioengineering (BIOE): After discussions with students, the department has suggested an increase of only 1% . Additionally, the department does provide opportunities for students to work as hourly graders, and students often get paid internships during the summer quarter of their final year.

- 4) Describe whether you expect the proposed tuition rate(s) to result in any substantial changes to enrollment (including a change in the resident/nonresident composition) or to the volume of waivers awarded.**

Given that the proposed changes will not change the relative price of the programs, we project no change in enrollment.

The bulk of waivers awarded to students in the Tier III tuition category are generally a function of student appointments, and the rate change is small enough that it is not expected to lead to a change in the number of appointments funded by grants. The students in the non-Tier III tuition categories do not typically receive waivers. Thus, no change in the volume of waivers awarded is expected.

- 5) For each proposed change, please explain what would happen if the change were not implemented (e.g. deficit, loss of staff positions, etc.). If a proposed change is part of a plan to eliminate a current deficit, please indicate that.**

The tuition increases requested are set to match increases in costs. If tuition rates are not allowed to keep pace with costs, the programs will need to reduce expenditures, including those for instructional staffing. Such reductions will lead to a reduction in program quality.

- 6) For each tuition category that you have proposed changing, please discuss your unit/campus's overall tuition rate strategy for the next 3-5 years. In your response, please explain whether and how your long-term strategy connects to "market" rates (e.g. where do you want to be, rate wise, compared to peers?)**

Each program has two goals that guide tuition-setting strategy:

- Remaining competitive to peers in cost and duration of programs, and
- Ensuring sufficient support to maintain or, preferably, improve the quality of programs to maximize the instructional, research, and professional development experiences for students.

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Section 8: Communication with Faculty & Student Stakeholders

- 1) Please select the date that FACULTY leadership within your unit/campus was consulted and provided the opportunity to provide input as part of this budget planning exercise. If, due to scheduling difficulty, you are unable to consult with faculty leadership before the February 1, 2021 submission deadline, please select the date you are scheduled to consult with FACULTY leadership and, immediately after that date, please provide an update to Jed Bradley.

Wednesday, January 13, 2021

- 2) Please list a point of contact for your FACULTY leadership (name and UW email address).

Professor Steve Shen, ishen@uw.edu

- 3) Please select the date that STUDENT leadership within your unit/campus was consulted and provided the opportunity to provide input as part of this budget planning exercise. If, due to scheduling difficulty, you are unable to consult with student leadership before the February 1, 2021 submission deadline, please select the date you are scheduled to consult with STUDENT leadership and, immediately after that date, please provide an update to Jed Bradley.

Friday, January 22, 2021

- 4) Please list a point of contact for your STUDENT leadership (name and UW email address).

Renjie Song, rs30@uw.edu

- 5) Enrolled students affected by tuition rate increases should be consulted on proposed increases before proposals are finalized. Please describe when and how students were consulted and summarize the feedback they provided regarding EACH of your tuition recommendations.

Units consulted students in their existing programs and tuition recommendations were also presented to CoESAC (College of Engineering Student Advisory Council). The instance in which students expressed concern was regarding the tuition rate for the Master's of Applied Bioengineering. Upon hearing those concerns, the department reduced its recommended increase from 2.3% to 1%.