The College of Engineering (COE) is committed to the goals outlined in the OSU Strategic Plan 3.0: 1) providing a transformative educational experience for all learners, 2) demonstrating leadership in research, scholarship and creativity while enhancing preeminence in the three signature areas of distinction, and 3) strengthening impact and reach throughout Oregon and beyond. The college's efforts to positively affect each of these goals are addressed below. In addition, the college is dedicated to the shared goal of advancing diversity and inclusion within our community, providing professional development opportunities and supporting work-life balance, stewardship of resources, and growing resources through philanthropy. Efforts within those areas are also discussed. An overview of the college's performance as reflected in key performance indicators is presented first.

1. Performance Indicators: *Provide a brief summary and assessment of the college's performance on key strategic metrics.*

   The OSU Office of Institutional Research provided the college-level metrics included at the end of this report that form the basis of this discussion. Generally, the trends in these metrics are positive. The first-year retention rate has increased to 87.5%, approaching the university goal of 90%. The 6-year graduation rate is at 65.9%, nearing the university goal of 70%. On the other hand, the junior transfer four-year graduation rate for the college (as with the university) continues to decrease. College leadership conjectures that this is related to financial challenges experienced by that cohort. A higher percentage of the transfer student population is Pell eligible, than is the population that enters as freshmen. In all likelihood, these students are more susceptible to financial stress. To better serve this population of students, the college is hiring a transfer student coordinator who can link the students to university resources and ensure that they are aware of all support available to them.

   The percentage of high achieving Oregon students entering as freshmen has increased to 47% (using the new definition) and incoming freshmen that are underrepresented minorities has continued to increase to 24.9%, a significant increase over just 5 years ago (17.6%). The number of international students was down noticeably last year (to 16% of the overall student population). This is consistent with the slowdown in international enrollment at OSU overall. The college has engaged with INTO to refresh the pathway program in an effort to strengthen our international student population.

   While the number of professorial faculty was flat in FY18, the numbers of students and student credit hours have increased. FY18 saw an additional 500 undergraduate students (representing a 7% increase) and an additional 2000 student credit hours delivered. Graduate enrollments are stable. Based on early projections, COE expects 5% growth in the student population in FY19. Faculty hiring during FY17 and FY18 will bring 12 tenured or tenure track faculty to the college, which will greatly help to serve the growing student population.

   The number of awarded college degrees has increased significantly. The certified numbers show an additional 110 bachelors degrees over the previous year (an 8% increase); based on internal COE data, another 100 degrees are expected to be certified for last year. The number of certified graduate degrees (both masters and doctorate) are flat.

   The research numbers for FY18 have not yet been published, but based on financial data available to the college regarding overhead generated, research expenditures are expected to increase over FY17. Of the 78 invention disclosures reported at the university level, 33 are from COE.

2. Teaching and Learning: *Discuss the college's accomplishments on the shared goal of providing a transformative educational experience for all learners.*

- Enhancing teaching and advising in ways that raise and equalize student success
  - COE implemented a college-wide advising policy and set of expectations, including requiring the use of MyDegrees Planner for all students and advisors, and defining which students must meet with an advisor due to at-risk status. A new position, Student Success Coordinator, was created to identify supplemental instruction and tutoring needs for different student populations and will lead the implementation of new and innovative student success programs.
  - The college established an Advisor Council, bringing all advisors across the college together to share best practices, discuss policies and student needs. The college established and administered the two stop-out scholarship funds, aimed at retaining senior students who experience an unexpected or unmet financial need that would put their graduation at risk.
  - In partnership with the OSU Career Center, a "satellite" office has been established in Johnson Hall with a full time Career Coordinator, focused on serving the specific needs of engineering students.
- Promoting responsible citizenship and global awareness among students
  - OSU's Humanitarian Engineering Program continues to develop new partnerships with social entrepreneurs, non-profits, and other academic institutions both inside and outside the U.S. The links to the MIT-led International Development Innovation Network (IDIN) have been strengthened with OSU faculty participation in an IDIN Design Summit in Thailand and Creative Capacity Building (CCB) design workshop in Uganda. In the last year, OSU students completed collaborative capstone design projects with three new international partners: Raitong Organics Farm, social enterprise in Thailand; EcoLife, social enterprise in Uganda; and Portland-based non-profit Green Empowerment. OSU faculty and graduate students partnered with Oregon start-up InStove and non-profit MAPLE Microdevelopment to, for the first time, field-test InStove's cookstove-based water pasteurization device for developing-world or emergency settings in Oregon and Uganda. In addition, OSU faculty co-taught an emergency water supply field engineering course in Christchurch, New Zealand, as part of our strategic partnership with the University of Canterbury's Global Humanitarian Engineering program.
  - Increasing interest among COE faculty has led to new Difference, Power, and Discrimination courses in development or offered within the college, including an activism and surveillance course in computer science.
- Advancing learning through course and program (re)design, program assessment, and faculty development (in degree programs as well as the Baccalaureate Core)
  - The college has embarked on an ambitious process of significantly overhauling the first-year experience of students, including the curriculum, as well as re-evaluating the professional school "gateway" structure of the degree programs. This is the first year of a 2-year process, where year 1 is devoted to study and planning, and year 2 will involve significant curriculum redesign. The goal of this work is to increase the amount of engineering content and contact in the first two years in order to build a more solid foundation for success and engagement, as well as to give students more time to master more advanced topics. Based on the experiences of peer institutions, these changes will lead to greater success for engineering students, measured both in terms of 1st year retention and 6-year graduation rates.
- Online and hybrid-delivery education

- The college continues to see growth in the online computer science post-bac program. To ensure consistency and quality in this and other programs as the college expands its online offerings, a comprehensive program review process was established, and a review of this program was completed. The outcomes of the process included key recommendations and investments identified for future growth and success.
- In partnership with E-Campus, the college has instituted required training for all new and existing online course developers and instructors to ensure that best practices for online instruction are implemented across the curriculum.

- The development of new pedagogical models
  - The college received approval from OSU's Graduate Council to proceed with development of a new pedagogical model at the graduate level; a portfolio-based final exam format that will substitute the current final oral examination for all Master of Engineering (MEng) degree programs. The goals of this new format are to provide an improved educational experience and to promote successful graduation and post-graduate career placement. A college-wide MEng Coordinator will be hired in FY19 to oversee all advising for MEng students, and to teach new MEng-specific orientation courses and the portfolio-development courses.
- Enhancing the integration and success of international students
  - Monthly meetings were established between the COE student services group and representatives from OSU international programs (including INTO) to identify and address student needs and problem areas. One outcome of this work has been to develop and offer a new intro class for undergraduate INTO pathway students to better prepare them and smooth their transition into their undergraduate major of choice, with lower DFWU rates and higher student reviews. In addition, the college engaged with INTO OSU to support relaunch of the Graduate Pathway Program.
- Growing programs at OSU-Cascades, Newport and Portland
  - The COE leadership team and faculty are working with OSU Cascades to develop new engineering offerings, including a software engineering focused computer science program which will start in FY19.
  - A new hybrid certificate program in cyber security was proposed and is now under development for the Portland and online market. In addition, a new class focused on career exploration (ENGR 399) was proposed and will be available to all online and Portland-area students in FY19.
- Recruiting diverse and high-achieving students (Corvallis, OSU-Cascades, Ecampus)
  - The college has hired a new Recruitment and Diversity Coordinator, redesigning a position that was recently vacated. In collaboration with university partners, this person will serve to coordinate COE outreach and recruiting activities, as well as support and bridge the achievement gap for underrepresented students.
  - The college's continued partnership with the Honors College continues to increase the number of high-achieving students seeking out Engineering degrees.
  - To recruit diverse and high-achieving graduate students, the college has initiated a number of incentives:
    - a new campus-wide policy that allows external organizations (such as ORISE, Department of Defense, Department of Energy) that provide full support for graduate students to only be responsible for in-state tuition rates;
    - a tuition support program for engineering students that receive full stipend from external organizations (5 supported students across COE for 3 years each);
    - 4-year offers to highly qualified PhD students;

        - a college-level insurance policy that would encourage schools to make 50% more offers than there are GA positions available; and
        - further engagement with the GEM organization and local employers such as Intel to recruit and support underrepresented graduate students.
- Other initiatives focused on teaching and learning
    - The college currently supports 3 REU sites: one in Robotics, one on Clean Water, and one in collaboration with the college of science around mathematical thinking. These programs help bring talented students from across the nation interested in exploring a potential career in research and serve as an extension of faculty-led undergraduate research. This year, private donations have made it possible to bring 4 international students to participate in these summer research programs.

3. Research and Creative Work: *Discuss the college's accomplishments on the shared goal of advancing high impact research and creative work while building preeminence in the three signature areas of distinction.*

- Attracting and retaining exceptional faculty;
    - The college recruited 9 new faculty last year, including five women. Three faculty hired in the FY17 recruitment cycle will also join the college in FY19, two of whom are women.
    - The college faculty received numerous prestigious awards including being elected as ASME Fellows (Brian Paul, Irem Tumer, Robert Stone), ACM Fellow (Margaret Burnett), Canadian Society of Civil Engineering Fellow (Burkan Isgor), ASCE Fellow (Shane Brown), being elected to the National Academy of Engineering (Jose Reyes), receiving the ASME Edwin F. Church Medal honoring increasing the value, importance and attractiveness of mechanical engineering education (Kendra Sharp), and receiving the ANS Landis Young Member Engineering Award (Wade Marcum).
    - The college faculty continues their success in receiving NSF CAREER awards, with 2 new CAREER and/or YIP awards this year, bringing the total awards in the college to over 50.
    - The college faculty continued to increase OSU's external visibility and reputation through organizing major events on campus, bringing hundreds of scholars to OSU, including a symposium on grid energy storage with Argonne National Labs, an NSF-sponsored workshop on systems engineering and design, and an international conference on system science with the International Society for the Systems Sciences (ISSS), and workshops on cement and concrete materials, magnetic nanodevices, and software engineering.
- Cultivating transdisciplinary research (on campus or through partnerships);
    - A $3.28 million commitment from Jon and Stephanie DeVaan has allowed COE to launch the Clean and Sustainable Water Technology Initiative. The effort will build on the university's strengths to become a national leader in designing, building, and testing systems-level approaches to the problem of access to clean water, provide funding for graduate fellowships and undergraduate research assistantships, as well as new hires in this transdisciplinary area.
    - The college partnered with 5 other colleges in delivering an all-day proposal writing seminar for faculty. The majority of the faculty development workshops are offered as a partnership opportunity to other colleges at OSU.
    - Faculty from COE & CEOAS jointly developed a proposal and were awarded to organize a workshop on seafloor Instrumentation and Observation with advanced sensors to provide early warnings for geohazards to further cultivate collaborations between the two colleges.
- Increasing the quality, capacity and impact of graduate programs;

- To make significant progress toward being a model for an inclusive community, the college has developed a strategic graduate-level recruitment plan, focused primarily on increasing the number of underrepresented minorities (URM), first-generation, and low-income students. The effort will include attending recruitment fairs at targeted national conferences (such as SACNAS, SWE, Cal Diversity Forum, NSBE, SHPE, AISES, etc.) in FY19, and implementing a Salesforce-based prospect tracking and engagement system.
- Similarly, the college recently joined the National GEM Consortium, a network of leading corporations, government laboratories, top universities, and top research institutions that enables qualified students from underrepresented communities to pursue graduate education. Together with the GEM organization, the college is hosting a GEM GRAD Lab in fall 2019 that will offer underrepresented students exposure to the benefits of research and technology careers, enabled by graduate education, in a highly interactive two-day event.

- Growing external research funding;
  - The college invested in research administration by hiring a Research Program Administrator to lead the research officers in the college, helping improve the quality of and increase the number of proposal submissions significantly, as well as improve the communication with OSRAA and the other colleges through similar functions.
  - The college developed a framework for initiating and supporting centers and institutes, as well as a set of guidelines for supporting interdisciplinary graduate programs that are affiliated with centers and institutes.
  - The college increased the funding received by faculty, in particular increasing the number of large collaborative proposals, and diversifying their portfolio by adding major awards from the Department of Defense (ONR, DARPA, DTRA), the National Institute for Health, Department of Energy, and the U.S. Department of Agriculture.
  - The college leadership invested significant time and effort to increase visibility and reputation with federal agencies, including targeted visits to the Office of Naval Research (ONR), inviting ONR program managers to OSU, and connecting faculty with ONR program officers to explore funding opportunities.
- Supporting faculty entrepreneurship;
  - Agility Robotics, a start-up formed by Robotics faculty Jonathan Hurst in COE, raised $8M for commercial bipedal robots to accelerate product, technology, and business development. While there are other well-funded companies working on bipeds, Agility is the first such company with the goal of developing a commercial bipedal robot for making deliveries.
  - COE faculty made up 6 out of 8 “Futurist” presenters at the Innovation Showcase events organized by OSU Accelerator, namely Jonathan Hurst, Heather Knight, Gregory Herman, Kate Schilke, Chih-Hung Chang, and Alan Wang. Four of these faculty are at the assistant professor rank, reflecting the growing interest in entrepreneurship among our incoming faculty.
  - The COE Biosensing contact lens received the 2018 TechConnect National Innovation Award, which selects the top early-stage innovations from around the world from the top 20 percent of annually submitted technologies into the TechConnect World Conference. Rankings are based on the potential positive impact the submitted technology will have on a specific industry sector. The contact lens, which incorporates an array of fully transparent biosensors, has been envisioned as a noninvasive way for people with diabetes to monitor their blood glucose levels through tear fluid.
  - COE spin-out company, E-Lambda, LLC, which developed a high-speed, secure, wireless communication system for underwater platforms, was awarded a Small Business Innovation Research contract by the Navy.

- OnBoard Dynamics, another COE spin-out company, signed a multimillion-dollar agreement with Canadian manufacturer Linamar, which will produce the mobile compressed natural gas refueling unit that OnBoard developed in Bend. OnBoard was founded to commercialize self-compressing engine technology developed by Oregon State University-Cascades and COE faculty in Corvallis.

- Cultivating partnerships with industry and other external stakeholders;
  - The faculty advanced industry relations with key sectors as research partners, including Autodesk, Daimler, PCC, Intel research, Boeing, and Blount. These partnerships have led to industry funded research and funded graduate students.
  - In addition to 5 existing industry consortia, the college was awarded planning grants for 3 new NSF I/UCRCs around strategic areas in software, healthcare, and energy.
  - The college has received research funding as a founding member of the state-wide Oregon Manufacturing Innovation Center (OMIC), a collaboration bringing together industry, universities and government to address near-term manufacturing challenges through applied research for industry.
  - The college continues to garner funding from the Oregon Metals Initiative. This state funding fosters collaboration with key industry partners in the state such as HP, PCC and Blount.
  - The college implemented a pilot workshop on how to build relationships with industry and start thinking about commercialization with the help of Brian Wall from OCCD.
  - Post-earthquake, COE faculty member Erica Fischer joined a team comprised of members from engineering firms Reid Middleton, WRK Engineers, and MRP Engineering and traveled to Mexico City to gather information on infrastructure resilience and performance. They focused on water infrastructure performance in Mexico City and the surrounding region, and how different soil conditions in the region influenced the performance of water pipelines. The group also worked with other structural engineers and students of the Civil Engineering Institute of Mexico and National Autonomous University of Mexico to coordinate assessments.
- Other initiatives focused on research and creative work
  - The college increased its support in the Rapid Advancement in Process Intensification Deployment (RAPID) Institute by appointing a half-time director reporting to the college. RAPID is one of 4 major academic nodes focused on process intensification, housed in ATAMI. This $70 million grant will help efficiency in the U.S. chemical industry. In support of the Modular Manufacturing research within RAPID, Business Oregon and the Oregon Innovation Council (Oregon InC) approved a $1 million High Impact Opportunity Project.
  - The college continued its investment in the Collaborative Robotics and Intelligent Systems (CoRIS) Institute which was formed based on the success of two internationally recognized programs in Robotics and Artificial Intelligence. This year, CORIS became the Northwest lead for the new Advanced Robotics Manufacturing Institute (ARM), a membership-based consortium dedicated to asserting U.S. leadership in manufacturing through robotics and workforce innovation. The Robotics program is ranked 4th nationally, and 1st on the west coast. Two new faculty hires were made this year to continue growing the institute. Collaboration has significantly increased under the institute umbrella, bringing new and unique funding opportunities for our faculty.
  - The nanotechnology advance by COE faculty introduced transparent transistors fabricated onto the sharp curves of a tiny glass tube as a key step toward an artificial pancreas: a catheter that can detect blood sugar levels and transmit the info to a wearable, computerized insulin pump. This technology paves the way for anchoring a collaboration between COE and the Center for Early Cancer Detection at OHSU.

- The School of Nuclear Science and Engineering shares leadership of the Academic Advisory Council for the U.S. Department of Energy's Versatile Test Reactor (VTR), providing a voice for all academic institutions on design, operations, and interactions with the Reactor. Phase I is a $350 million, 3-year program with the goal of completing the design of the VTR and Phase II is the Reactor Build, a 6-year $3.5 billion initiative.

4. Outreach and Engagement: *Discuss the college's accomplishments on the shared goal of strengthening OSU's impact and reach throughout Oregon and beyond.*

- Positioning OSU's outreach and engagement programs as vehicles for facilitating high-impact learning and effectively utilizing university research and creative work
  - The college began an effort to build collaborative relationships with key business organizations in the state such as Business Oregon and the Oregon Business Association. The message delivered included: supporting their membership by meeting engineering workforce demands; thanking the association for the 20-year efforts of the business community, the legislature and COE donors to transform the college of engineering through strategic investment; asking them to lend their support for increased university and research funding. Through this effort, COE is developing stronger relationships with Oregon Business Association, Portland Business Alliance, Greater Portland Inc. and the Northwest Defense Association. Oregon Business Association agreed on a partnership with Business Oregon to lead the business communities' positioning in support of the Research Development Fund that would provide supporting state-funded cost match for research proposals to federal agencies and industry.
  - The college launched new programs to meet specific needs of strategic engineering partners. These industry partners are aligned with our core strengths, have long standing relationships with the college, participate in internship programs and recruit employees.
    - At an OSU Alumni event in May, Daimler Trucks North America announced a fellowship program aimed at co-recruiting masters' students to OSU. Daimler supports student tuition, a research project and paid internship.
    - Tektronix announced that they would like to advance their brand with the college, especially with women students, and launched the Tektronix Undergraduate Research program. They are providing research support for 10 students and offered each student a paid internship.
    - Intel Labs is set to announce a $300,000 research award to two faculty in the area of Optimizing Power Performance and Battery Testing. In addition, there is a new engagement with Intel around the previously discussed GEM graduate fellowship program.
- Increasing study abroad opportunities and strategic international research partnerships;
  - In addition to the Humanitarian Engineering program activities discussed in section 2 above, COE's first Peace Corps Master's International (PCMI) student graduated with an M.S. in Mechanical Engineering; her thesis combined field study from Peace Corps Service in Tanzania with engineering analysis. Two other OSU PCMI students began the Peace Corps service portion of their graduate program, one in Panama and one in Ghana.
- Engaging alumni and other external partners
  - The college celebrated and honored Oregon Stater award recipients. The Oregon Stater Awards honor alumni and friends whose contributions exemplify the Oregon State Engineer.
  - The Dean's Leadership Council and the School Advisory Boards include many COE alumni. Their perspective is invaluable in advancing the college mission while preserving the

strengths that have created a sound foundation. These alumni serve as strong advocates for COE and the university within their companies and beyond.

- Advancing economic and social progress in rural and urban areas in Oregon and beyond;
  - The vast majority of COE research positively impacts economic and social progress. In addition to the projects discussed elsewhere in this report, faculty and students are engaged in: developing the premier wave energy test facility for the U.S., located off the coast of Newport, OR; designing a new building for the Marine Studies Initiative that will provide safe haven during a tsunami at Hatfield Marine Science Center; a project that will demonstrate how soil liquefaction in an earthquake could affect the Port of Portland, enabling tsunami preparedness; ember research to identify areas that are vulnerable to wildfires; ways to protect eagles from wind turbines; crowd-sourcing snowpack data that is available to a wide variety of stakeholders such as watershed councils, and avalanche forecasters.
  - Greater Portland Inc. asked the college to assist in the successful recruiting the company, Element 6 (synthetic diamonds) to the City of Gresham. Since the announcement that the company will locate in Gresham, Oregon, they have visited the college twice.
- Other initiatives focused on outreach and engagement.
  - The college launched an "Industry Public Relations" program to provide legislative support, build a brand, and listen to key constituency. This an effort to build alliance with 10 to 20 companies and key business/trade associations in Oregon. The goal is to measurably increase the number of key college stakeholders within industry, academia and to build awareness and appreciation of the college's value and impact.

5. Diversity and Inclusion: *Discuss the college's accomplishments on the shared goal of advancing diversity and inclusion at OSU, especially related to increasing the diversity of faculty, staff and students.*

- The 20-member Faculty/Staff Change Team originally assembled in AY17 to work with college leadership to engage all college employees in our culture change process launched its five (COE-funded) inaugural projects in AY18, centered on the following:
  - increasing competency, changing culture, and building an organizational conscience. During the 2017-18 academic year, the college began bringing in acclaimed scholars, authors, and other resources to elevate knowledge around diversity, inclusion, and collaboration. Three high-profile events were held this past year, including a visit by Tricia Rose, internationally acclaimed scholar, public speaker, and award-winning author.
  - design of modules to enhance graduate students' capacities to engage issues of inclusivity, equity, and social justice;
  - development of a scaffolded approach to enhancing undergraduate students' knowledge and skills supporting inclusive and socially just teaming practices;
  - alignment of "Action Plans" developed by engineering faculty and administrators who completed the NSF-supported ADVANCE seminar; and
  - revision of the manufacturing engineering undergraduate curriculum to enhance its flexibility and accessibility.
- A paper describing inception and evolution of the Change Team – and achievement along each of the five projects listed above – was presented at the 1st Annual Conference of CoNECD - Collaborative Network for Engineering and Computing Diversity, in May 2018. The paper, "Advancing the College of Engineering strategic goal of becoming a national model of inclusivity and collaboration", won an American Society for Engineering Education "Best Paper" award, providing national-scale validation for the college's approach to advancing diversity and inclusion

through complementing policy change from the dean's office with enlisting change agents from every employment sector of the college.

- To promote and foster a welcoming and safe environment for all students, staff, and faculty, the college organized 4 Sexual Misconduct training sessions offered by OSU's Office of Equal Opportunity and Access (EOA) for all COE faculty and staff. Similarly, 3 training sessions were organized for graduate students. The training is mandatory, and for Graduate Assistants will be required for contract renewal. An online training option is being developed to facilitate 100% compliance among graduate students.
- The college dedicated an entire issue of the alumni magazine Momentum to reporting on diversity and inclusion efforts in the college. Similarly, an entire podcast season of Engineering Out Loud, a COE created podcast telling the stories of how research and innovation in the college are helping change the world, was dedicated to diversity and inclusion.

6. Faculty and Staff Development and Support: *Discuss the college's efforts to provide professional development opportunities for its employees; to mentor its tenured, tenure-track and non-tenure track faculty; and to support the work-life balance of its employees.*

- COE significantly enhanced annual delivery of a very successful Faculty Advancement and Development Workshop Series in several ways, but most notably:
  - COE envisioned and implemented more equitable, inclusive and just on-boarding of new faculty in the college with a Faculty Bootcamp. The inaugural Bootcamp included three half-day workshops – dedicated to launching faculty careers in (1) teaching and (2) research and scholarship, (3) their own advancement and development as teacher-scholars. These will be delivered annually, and required of new faculty.
  - COE delivered the inaugural workshop of a new Dean's Leadership Series, focused on foundations and applications of leadership. The workshop was open to all associate and full professors, but was intended primarily for those faculty who were recently promoted, and holding interest in taking on more of a leadership role in the college.
- Recognizing that the work of each faculty member should be valued, and that the position description (PD) is central to faculty advancement at OSU, COE has implemented more equitable, inclusive and just mentoring, annual review, and advancement practices as follows:
  - revising PDs to ensure they properly represent faculty contributions – and university values – in relation to (i) scholarship, creative activity and effective teaching; and (ii) building a more inclusive, equitable, and just workplace;
  - revising P&T documentation, including the dossier and associated assessment and letter templates, to properly reflect faculty contributions and university values;
  - providing orientation and training to college and unit P&T committees in regard to the revisions above; and in regard to the value of committee member perspective in relation to one's mere eligibility to vote.
- In part owing to the actions above, in AY18 the college realized a 30% increase in the total number of women promoted to (full) professor in the college history, and a 75% increase in the total number of women ever elected to the college P&T committee since inception of an election process for committee membership (circa 2010).
- To support professional faculty and staff, the college piloted a flex-time schedule in summer FY18 that is offered again this season. This schedule offers the possibility of working four 9-hour days and one 4-hour day during the 40-hour week, in an effort to provide alternatives that might be preferable in the summer.

- In cases where formal university policy did not provide sufficient means to address a work-life issue, college leadership worked with affected faculty to identify paths for avoiding or otherwise mitigating associated work-related inequities; such interactions have led to
  - deliberate, positive action on dual career cases; and
  - improved parental leave practices. COE has developed approaches for faculty to secure leave from campus, typically for at least one term without significant interruption in pay and without legal or HR-related impediments (applied to 2 faculty in AY18).

7. Resource Stewardship: *Discuss the college's efforts to steward resources wisely, enhance support to faculty and students through effective administration, and grow resources through philanthropy.*

   To manage the college finances and to maximize strategic value from all college resources, COE hired a financial and data analyst in FY18. This individual works closely with the dean and executive associate dean to understand resource demands, and opportunities for investment. In FY18, an ineffective budgeting model for the schools was discontinued, and zero-based budgeting was implemented to better understand the specific needs of the college's units. This approach has positioned COE well to make the best use of resources available through the new university budget model.

   COE continues to invest in fundraising to support faculty and students. Beginning in FY18, and going forward, the college is co-funding multiple fundraising positions with the OSU Foundation. This expands capacity for pipeline development, cultivation and retention of major gift donors, and strategic relationship-building with principal gift donors. The college's leadership team and prominent faculty work closely with fundraising colleagues to develop giving opportunities that inspire donors while advancing the strategic plan—for example, establishing unrestricted scholarships that allow the college to support first generation, Pell eligible, and high achieving students. Connecting these donors to the positive impact of their philanthropy is a growing part of operations. The college exceeded the FY18 goal of $15M, including a goal of $7M for the Student Success Initiative.

Oregon State University

College of Engineering

PART 1

Annual Planning Metrics 2017-18

	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Faculty FTE																
Professorial	117.4	109.6	116.3	121.1	123.1	125.3	131.4	136.1	131.6	138.2	152.1	165.6	181.1	189.8	209.1	208.3
Non-Professorial	59.2	56.6	65.4	71.4	74.6	73.3	69.0	76.6	84.2	93.6	93.7	113.6	129.0	131.7	133.7	139.1
Total Faculty FTE	**176.6**	**166.2**	**181.7**	**192.5**	**197.7**	**198.6**	**200.4**	**212.7**	**215.8**	**231.8**	**245.8**	**279.2**	**310.1**	**321.5**	**342.8**	**347.4**
E&G Tenured/Tenure Track	90.4	87.5	91.4	97.5	99.3	96.3	96.3	99.8	100.6	107.0	120.2	132.2	146.4	155.7	158.1	156.8
Faculty Headcount																
Professorial	126	119	128	129	131	132	147	143	138	146	159	174	191	196	217	216
Non-Professorial	65	70	74	86	86	85	79	88	97	106	103	123	138	141	147	149
Total Faculty Headcount	**191**	**189**	**202**	**215**	**217**	**217**	**226**	**231**	**235**	**252**	**262**	**297**	**329**	**337**	**364**	**365**
E&G Tenured/Tenure Track																
0% E&G Funded	3	1	2	4	2	2	4	4	5	2	1	1	0	0	1	1
1%-33% E&G Funded	3	1	2	1	0	2	0	3	2	1	1	3	2	2	0	2
34%-66% E&G Funded	4	3	2	3	3	3	6	9	5	3	3	4	5	7	4	4
67%-99% E&G Funded	4	5	5	6	6	9	11	6	14	11	15	16	8	6	8	13
100% E&G Funded	87	84	89	92	94	89	87	92	88	99	108	118	138	147	154	147
Total Tenured/Tenure Track	**101**	**94**	**100**	**106**	**105**	**105**	**108**	**114**	**114**	**116**	**128**	**142**	**153**	**162**	**167**	**167**

SCH (Academic Year)																*
Undergraduate	62725	63400	63544	61149	59411	59985	64014	69368	74896	79740	87507	94130	97644	106928	114674	*118057*
Lower Division	24366	23528	21330	19876	21371	22197	23626	26833	28503	29203	32819	33771	34769	36196	36849	*36460*
Upper Division	38359	39872	42214	41273	38040	37788	40388	42535	46393	50537	54688	60359	62875	70732	77825	*81597*
Graduate	19372	18496	16642	16535	18256	19074	20042	23054	25304	26117	27276	27452	31567	34841	35757	*34270*
First Professional	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*0*
Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*0*
TOTAL SCH	**82097**	**81896**	**80186**	**77684**	**77667**	**79059**	**84056**	**92422**	**100200**	**105857**	**114783**	**121582**	**129211**	**141769**	**150431**	***152327***

*** 2017-18 SCH (Student Credit Hours)** is an estimate based on actual end-of-term data for fall/ winter and week 10 data for spring 2018. Prior year data based on actual fall-winter-spring data.

All Majors Count (including secondary majors)																
Undergraduate	3161	3155	3087	3064	3142	3221	3449	3764	4217	4463	5114	5836	6565	7120	7480	7970
Graduate	601	626	551	525	569	583	657	733	842	900	975	1094	1230	1304	1377	1368
First Professional	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL Major Count	**3762**	**3781**	**3638**	**3589**	**3711**	**3804**	**4106**	**4497**	**5059**	**5363**	**6089**	**6930**	**7795**	**8424**	**8857**	**9338**

Oregon State University

College of Engineering

Strategic Plan Metrics 2017-18

PART 1

	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Goal 1. Provide a Transformative Educational Experience for all Learners.																
Entering Fall Cohort	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
1.3 One Year Retention Rate	83.7%	85.4%	84.7%	82.0%	81.5%	84.5%	80.9%	85.6%	84.6%	84.2%	85.5%	85.7%	84.7%	85.4%	85.2%	87.5%
Retained in original college	67.5%	68.8%	70.0%	64.0%	68.5%	70.0%	68.4%	71.7%	72.7%	70.4%	73.2%	72.5%	72.1%	72.6%	71.7%	75.1%
Retained to another college	16.2%	16.6%	14.7%	18.0%	13.0%	14.5%	12.5%	13.9%	11.9%	13.8%	12.3%	13.2%	12.6%	12.8%	13.5%	12.4%
Entering Fall Cohort	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
1.4 6-Year Graduation Rate	63.0%	62.2%	62.7%	66.9%	65.1%	66.0%	66.5%	63.8%	63.3%	63.4%	62.3%	62.5%	65.6%	66.1%	62.6%	65.9%
First bachelor's in original college	39.6%	44.0%	45.0%	44.7%	41.5%	45.2%	45.6%	44.2%	43.5%	43.6%	45.1%	44.4%	45.8%	47.6%	46.7%	47.5%
First bachelor's in another college	23.4%	18.2%	17.7%	22.2%	23.6%	20.8%	20.9%	19.6%	19.8%	19.8%	17.2%	18.1%	19.8%	18.5%	15.9%	18.4%
Entering Fall Cohort	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1.5 Junior Transfer 4-Year Graduation Rate	70.5%	77.8%	65.3%	59.1%	70.2%	69.1%	68.8%	63.6%	61.5%	67.0%	65.6%	59.8%	62.8%	65.7%	60.3%	51.3%
First bachelor's in original college	63.4%	69.8%	58.4%	46.6%	64.9%	61.7%	63.6%	55.8%	53.8%	62.5%	59.4%	50.0%	53.5%	58.2%	44.9%	42.7%
First bachelor's in another college	7.1%	7.9%	6.9%	12.5%	5.3%	7.4%	5.2%	7.8%	7.7%	4.5%	6.3%	9.8%	9.3%	7.5%	15.4%	8.7%
1.6 % US Minority Students	13.8%	13.4%	13.0%	13.6%	14.2%	13.3%	14.2%	14.8%	15.2%	16.6%	17.6%	17.9%	19.9%	21.4%	22.8%	24.9%
1.7 % International Students	14.0%	11.0%	9.0%	8.0%	8.0%	9.0%	9.0%	10.0%	13.0%	15.0%	18.0%	20.0%	20.0%	19.8%	19.7%	16.1%
1.8 % High Achieving Oregon High School Graduates **(Weighted HS GPA)**	-	35.0%	36.7%	42.3%	39.0%	37.5%	41.5%	42.3%	43.6%	44.9%	43.1%	46.9%	53.1%	48.7%	55.4%	-
1.8 % High Achieving Oregon High School Graduates **(Unweighted HS GPA)**[1]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	47.3%

1. OSU Admissions began using unweighted HS GPA beginning Fall 2016. Weighted HS GPA is no longer available for analysis.

Goal 3. Strengthen Oregon State's Impact and Reach throughout the state and beyond.																
3.2 Invention Disclosures	23	17	23	22	24	0	23	18	41	29	33	23	26	24	35	*33**

* **2017-18 "Invention disclosures"** is an estimate based on submissions up to June 14, 2018. Prior year values are actual fiscal year totals.

Oregon State University

College of Engineering

PART 2

Annual Planning Metrics 2017-18

	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Resources (Fiscal Year)																
E&G - Ending Budget ($)	24,109,254	26,401,873	28,406,997	27,035,244	26,159,176	31,102,409	32,173,327	28,479,182	34,352,668	37,190,807	45,646,274	54,867,800	61,680,596	68,832,311	71,653,233	*71,920,013**
Total R&D Expenditures ($)	**16,872,297**					**19,421,598**	**23,138,091**	**24,861,292**	**27,373,771**	**29,419,952**	**32,844,215**	**30,304,621**	**36,593,030**	**40,298,186**	**46,613,041**	**FEB 2019**
Awards from Grants and Contracts[1] (#)	231	205	226	197	236	270	177	317	275	215	204	206	308	356	285	**JUL 2018**
Awards from Grants and Contracts ($)	15,910,384	15,150,490	24,403,525	19,450,969	18,264,422	22,869,878	24,575,119	36,673,037	33,905,767	30,963,305	29,656,248	38,193,403	37,382,242	32,876,082	49,521,973	**JUL 2018**
Private Giving ($)							**9,357,350**	**11,521,200**	**12,665,771**	**18,492,346**	**11,168,468**	**23,948,757**	**24,019,998**	**20,624,771**	**17,366,583**	**JUL 2018**

***2017-18 E&G-Ending Budget** is estimate based on 3rd Quarter Unit Forecasts and prior year (FY 16, FY17) actual to 3rd Quarter Forecast ratios.

Strategic Plan Metrics 2017-18

	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Goal 2. Demonstrate Leadership in Research, Scholarship and Creativity while enhancing preeminence in the three signature areas of distinction																
2.1 Total R&D Expenditures	**see APR data above**															

Goal 3. Strengthen Oregon State's Impact and Reach throughout the state and beyond.	
3.5 Annual Private Giving	**see APR data above**

1. From 2000-01 to 2007-08, the number of grant/contract awards is based on the accounting transactions from the College's award index, rather than the actual number of awards received by the college.