College of Science FY21 Financial Plan

Roy Haggerty, Dean January 24, 2020

Overview

Many College of Science (COS, the College) metrics continued positive or turned positive this year: graduation rates, overall enrollment in most academic majors, DFW rates, first-year retention for all students as well as Historically Underrepresented Students (HURS), and others (see COS Financial Plan Metrics and COS Success Metrics which are printed in Appendices G and C, respectively). Our ecampus student credit hours (SCH) surged by 12% last year, in the beginning of what we believe to be a multi-year trend led by new offerings. Our six-year graduation rate is among the strongest and most consistent of all colleges across Pell, HURS, and all students, climbing significantly across these groups in a decade. Majors in the College continue to grow slightly (with the largest number ever).

Nonetheless, the College continues to fight strong headwinds from soft overall OSU enrollment, declining freshmen and sophomore enrollment, shrinking funds allocated to the Academic Productivity Pool (net of ecampus) in the budget model, reduced SCHs from majors outside the College, and escalating OPE costs. OSU's net tuition¹ is expected to grow by 1.9% in FY21 but the Academic Productivity Pool² are projected to shrink by 3.1%. According to Budget Office data and our projections, these headwinds will generate a deficit of about \$1M in FY21 (see graph, or Appendix D) and increasing thereafter unless the Academic Productivity Pool, net of ecampus, is brought into line with tuition revenue.

¹ Net of waivers, ecampus, Vetmed, and Pharmacy

² Net of ecampus

As we stated last year, at their current rates, these headwinds continue to be stronger than any realistic revenue increases. Consequently, they will have to continue to be addressed by a combination of expense reductions and greater central investment within or outside of the budget model.

EXPENSE REDUCTION. The College has decreased the number of tenure-track faculty (TTF) by 9.5% in the past two years. We have also eliminated the executive associate dean position and we have maintained a lean College administration. Nonetheless, to further reduce expenses in the College while minimizing impact on net revenue-generating activity, the College will likely have to continue to reduce the number of TTF by about 3 per year and increase the number of non-tenure-track faculty (NTTF) by about 1 per year. This path comes with consequences. As stated last year, this path will reduce our contribution to the university's R1 mission, harm our reputation, reduce our experiential learning for undergraduates, reduce research, and reduce the number of graduate students.

REVENUE GROWTH. The College is heavily dependent upon overall university enrollment for SCH generation, particularly on the number of freshmen and sophomores, which has <u>declined by 1.6% per year</u> at OSU. To counteract this, we are investing in ecampus, majors recruitment (see our <u>recruitment-focused new website</u> as an example), and student success. To help support growth in HURS, we are working to attract more diverse faculty. Our ecampus SCH grew by 12% last year, significantly more than OSU as a whole, and in Fall, 2019, we launched our first online undergraduate degree, Zoology. Our ecampus enrollment is up more than 20% this academic year. The number of our majors is up modestly, to the largest ever. Our first-year retention (Fall, 2018-19) was the largest ever, our graduation rates have steadily increased, and our DFW rates have declined to the lowest level since we began tracking.

CENTRAL INVESTMENT. As we argued <u>last year (see especially Appendix H)</u>, internal tax rates are unequal across OSU, resulting in units with a general education mission supporting the university as a whole with a larger fraction of their revenue. This results in a shrinking Academic Productivity Pool even when tuition revenue grows. To increase revenue to COS and other high-tax colleges such as CLA, we request equitably distributing the costs of running the university and cross-campus subsidies to all revenue streams, thus increasing the funds available to the Academic Productivity Pool.

We could avoid further cuts to TTF by community support funding of \$1.5M (net recurring in addition to the bridge funds) to be complemented by continuing expense reductions within the College to keep the long-term fund balance positive. We continue to recommend finding an equitable internal tax structure that broadens the tax base and shares costs and strategic investments across the university.

Absent a change to the tax structure, the number of TTF will have to shrink. The scenarios we present come close to balancing the College budget over time, but (1) assume <u>no further erosion of the Academic Productivity Pool</u> in the budget model, (2) significant ecampus growth and (3) will still result in an additional loss of 10% of our TTF.

THIS YEAR'S REPORT. The financial projections of the College are similar in many ways to those last year. Furthermore, opportunities, strengths, and strategies are similar. Consequently, we are providing an updated plan but with similar language and structure to last year's plan.

Opportunities and Strengths

EXCELLENCE IN ECAMPUS LABS. To build a successful business, don't pick an easy problem, pick a hard problem. That is exactly what we are doing when it comes to online lab education. It is one of the hardest things to do well online. If we could teach more of the most hands-on lab topics online in a fully scalable way, we would be able to offer many more degrees with few competitors in the marketplace. Investments in ecampus geared specifically toward generation of top-quality online labs could generate significant new revenue to OSU, COS, and several other colleges. For an example of some of our innovative ecampus work, see a poster of what our online physics team is doing.

SCIENCE FOR EVERYONE. COS teaches 20% of OSU's student credit hours - nearly every student takes at least one science class and most take several. At the same time, 57% of OSU's "gateway" classes (large enrollment, high correlation to success) are in science. Investments to make science classes better will help student success for all of OSU. Our top priorities are diversification of our faculty, expansion of our Learning Assistants Program (student peers), professional development for our instructors, curricular redesign, and coordination of large multi-section classes. Progress on these priorities has decreased the DFW rate in our gateway courses by 19% over four years. We are also advancing our Integrated Professional Development (career education integrated into coursework) so that all science students know before they arrive at OSU that science degrees lead to good jobs.

BIOMEDICAL SCIENCES. OSU can grow significantly in health science research. OSU receives a far smaller fraction of NIH funding than its peers, but has a core of excellent faculty in COS and several other colleges. Strategic investments in facilities, personnel, equipment, mentoring, support, and partnerships could pay off in large research and educational dividends. I am encouraged that the life sciences community across OSU, along with the Research Office have formed a task force to understand past investments and how future investments could be made strategically.

DATA SCIENCE. Data science has emerged as a key field for the future of the workforce and economy. A <u>National Academies study</u> released in 2018³ recommends tailored data science instruction, embracing data science as a field, and planning for expected growth in the discipline in the coming years. We would like to offer a data science certificate with 27 credits to all OSU undergraduates that can be taken along with any degree⁴. We hope that it will be centrally promoted to attract new students, many from outside of both colleges. With a modest investment in faculty and advisors, we could launch a full degree program. Since last year, we have been working on the certificate with the College of Engineering, but progress has been slower than we wished.

MATERIALS SCIENCE. Oregon's economy has the potential to benefit tremendously from new materials for the semiconductor and green energy sectors (e.g., solar power batteries). OSU should lead development with investments in facilities and personnel in science and engineering. There are three primary needs - two expensive and one relatively cheap:

1. Creating a modern, co-located space for the materials science faculty;

³ National Academies of Sciences, Engineering, and Medicine. 2018. Data Science for Undergraduates: Opportunities and Options. Washington, DC: The National Academies Press. https://doi.org/10.17226/25104.

⁴ Our data science certificate is modeled after data science minors offered at MIT and Stanford.

- 2. Hiring more faculty in chemistry⁵, physics, and engineering; and
- 3. Igniting innovation at OSU with changes to promotion and tenure and investments in innovation, such as those being promoted by Science professor Rich Carter.

INCLUSIVE EXCELLENCE. Inclusive excellence in the College is not only a moral imperative, but a financial imperative. A more inclusive College will increase student and faculty retention. Retention of a student after the first year generates <u>net marginal revenue of just under \$40K</u> over the student's time at OSU. Consequently, an opportunity is to be more inclusive.

INCREASED INNOVATION. Innovation means translating research to solve real-world problems. The College is a leader in this area, with several spin-off companies originating in COS. Innovation grows the economy, which OSU needs for financial support. Innovation helps to generate student success by providing experiential learning opportunities and pathways to careers. Innovation can provide research funding while the idea is being developed and later as intellectual property. The College has launched an Industry and Innovation Council to help increase innovation, and we are exploring launching an angel investment group for OSU. The College has also now fully launched a recurring seed program for investment in research and innovation – <u>SciRIS</u>.

Summary of Challenges and Threats Facing Science

NEGATIVE GROWTH IN THE ACADEMIC PRODUCTIVITY POOL. In the Budget Model, the Academic Productivity Pool is getting smaller even though net tuition revenue is growing. Our calculations indicate that net tuition from the Corvallis campus (tuition net of waivers and ecampus) will grow by about 1.9% in FY21. At the same time, the Academic Productivity Pool net of ecampus will shrink by 3.1% – a difference of –5%. Nearly 75% of the College of Science budget comes from this area, and **the wellbeing of COS depends on the pool tracking tuition revenue**.

EROSION IN LOWER DIVISION STUDENT CREDIT HOURS. Lower division student credit hours (LD SCH) are <u>declining at 1.1% per year</u> in Science. This is mostly due to a decline in freshmen and sophomores of all majors at OSU, which have <u>declined by 1.6% per year</u>. Of these first two threats, the decline in the Academic Productivity Pool has an effect <u>approximately three times larger</u> (calculations <u>here</u>) than the erosion of LD SCH.

FACILITIES. Many of our College facilities are in poor shape, making recruitment and retention of both students and faculty increasingly difficult, and hindering both teaching and research. Faculty and student losses can be directly attributed to the challenging conditions in Cordley, Weniger, and Gilbert Halls. Weniger Hall has flooded (water moving between floors) nine times since I became dean in mid-2017. Improved facilities would improve our success on several fronts.

TENURE-TRACK FACULTY HIRES AND RETENTION. OSU's College of Science is undersized relative to its peers nationwide. Our best estimate is that relative to the size of OSU, the College of Science should have up to 15% more tenure-track faculty than we currently have (see FY19 Financial Plan for in-depth analysis). For example, the Department of Physics is the second smallest R1 physics

⁵ According to data from CUPA, OSU Chemistry is 57% of the size of 13 peer units at universities such as Louisiana State, Washington State, Utah State, and University of Tennessee - Knoxville. OSU Physics is 46% of the size of peer units at the same universities.

department in the country and is about half the size of its peer departments. Most other departments are also smaller than their peers. Lack of hiring in core science disciplines threatens OSU's status and reputation, and causes extra challenges in hiring and retention inside and outside of the College. Unfortunately, our current trajectory will make this problem worse.

HIGH FACULTY STARTUP COSTS. To maintain our R1 status, we must continue to hire faculty. However, startup costs are particularly large for some fields within the College. For instance, costs can approach \$1M to bring onboard an experimental chemist, and for many fields costs exceed \$500K. In recent years, the College is paying much more than 2/3 of these costs. This level of startup is extremely challenging for the College and is resulting in difficulty recruiting and failed searches.

THREAT TO PROGRESS ON STUDENT SUCCESS. We have been making good progress on student success. Our DFW rates have declined in gateway classes to the lowest level since we began tracking (see <u>Financial Plan</u> metric S1.6). Our 6-year graduation rate poses one of the most consistently positive trends of any unit at OSU, <u>climbing nearly 10% in a decade</u> for all students, as well as for Pell-eligible, and Historically UnderRepresented Students (HURS). But we have much more work to do. That positive progress and work could be jeopardized if revenue does not keep up with expenses.

Strategies & Actions to Advance Science

Our strategies are the same as in the $\underline{FY19}$ and $\underline{FY20}$ Financial Plans. Metrics and our progress for these are viewable <u>here</u>, and a description of progress on actions is provided in Appendix G. Strategies S1 - S5 are short-term, ongoing strategies, while L6 - L8 are long-term strategies. Brief overviews are below, with more information in Appendix G.

S1. Improve student recruitment, retention, and success.

More than 70% of our budget comes from student tuition, and much of the rest (such as state contribution) is tightly tied to student success. We need to continue to improve student success, with a particular focus on first generation, Pell-eligible, and HURS, and we need more students to complete their degree in science. In FY18-19, we made progress on retention and success, with most of our numbers trending up. We formed a Science Growth task force that is charged with making more progress on recruitment, particularly on increasing our yield rate and converting applicants and admitted students into matriculated students. We are working to attract more diverse faculty and faculty who are more skilled in inclusive excellence to our ranks so that we can improve our teaching, mentoring, and departmental culture. Our College's career and professional development team is working to position students for good careers.

S2. Grow revenue through extended campus and related activities.

Extended campus—including ecampus, PACE, and summer classes—helped us grow our revenues to support our broader mission. Our MS and certificate in Data Analytics have grown to about 80 students in three years, and will continue to grow as long as we can take steps to scale it well. We launched our first online undergraduate science degree – Zoology – and the full year of introductory physics courses online.

S3. Contain costs and discontinue some existing activities.

We had more faculty retire or leave the College than we hired, and this will continue for the foreseeable future. GTA numbers have been reduced. We have discontinued funding to one of our centers. We have shifted administrative support to student support.

S4. Increase research productivity and teaching efficiency.

Efficiency is the amount of output per unit of input. COS is perhaps the most efficient College in terms of teaching. However, in terms of research efficiency, the College could improve. Measures of teaching and research efficiency are shown in Appendix E, section S4, and a more extensive set of metrics and the underlying data are provided here.

The College is underweight in research relative to peer colleges and, to some extent, relative to other Colleges at OSU. For example, the College funding \$/TTF is 28% smaller than Colorado State University, 55% smaller than Michigan State University, 75% smaller than University of Maryland, and about the same as Louisiana State University⁶). We have been trending down in recent years. To grow, we have opened a one-person office of research development, we are providing seed funding for high opportunity research and innovation, we launched a research equipment renewal program, and we are setting aside startup funds for future hires. Our strategy is to make modest investments that will substantially increase the number of faculty with two or more grants and to build teams that are positioned to secure center-level and training grants. Our hiring strategy emphasizes strategic priorities, shared equipment where possible, and lower startup costs.

S5. Partner with the University to improve the College budget.

OSU has provided bridge funds totaling approximately \$1.9M in FY19 and FY20, although this was offset by a mid-year budget cut in FY19. An analysis (Appendix H of the FY20 financial plan) suggested that OSU's internal tax structure disadvantages colleges such as Science and Liberal Arts. The College has made strong returns on investments, but the core budget of the College continues to decline. This problem is most apparent in the fact that OSU's net tuition is expected to grow by 1.9% in FY21 but the Academic Productivity Pool[®], which forms the core of COS' budget, is projected to shrink by 3.1%. If the Academic Productivity Pool is stabilized, COS' budget should stabilize. See graphs in Appendix E, which are also shown here and here.

L6. Partner with the OSU Foundation for a highly successful campaign.

A highly successful campaign is key to continued student success, improved physical facilities and labs in the College, and increased distinction in our signature areas. We are hiring an Assistant Director of Development (ADOD). Recent fundraising is the largest in a number of years.

L7. Renovate and rebuild research and teaching space in Science.

Every building occupied by the College has limited infrastructure for research or teaching. Cordley Hall is about to undergo renovation with other science spaces to follow over the next five to 10 years, depending on the outcome of the capital campaign.

⁶ Data provided through personal communication by science deans at Colorado State University; Michigan State University; University of Maryland College Park; and Louisiana State University, 2018.

⁷ Net of waivers, ecampus, Vetmed, and Pharmacy

⁸ Net of ecampus

L8. Increase distinction in Marine, Biomedical, Materials, and Data Sciences.

The first three of these areas are existing strengths within the College. Data Science is an area we would like to build in research and education.

Financial Planning for FY21

One-to-Three-Year Outlook and Short-Term Program Requests.

The short-term budget for the College is uncertain. Last year, we said that reductions in the FY19 and FY20 budgets would result in a deficit. However, the College ended FY19 with a surplus, and we are projected to do the same in FY20. The change was primarily due to less expenditures than projected, an increase in the Academic Productivity Pool in FY19, and strong growth in our ecampus.

Our projections for the next few years are shown in the graphs in Appendix E, which are also shown here and here.

The Academic Productivity Pool is forecast to decline again in FY21, which is a significant challenge for us. As stated above, the problem is most apparent in the fact that OSU's net tuition⁹ is expected to grow by 1.9% in FY21 but the Academic Productivity Pool¹⁰, which forms the core of COS' budget, is projected to shrink by 3.1%. If the Academic Productivity Pool is stabilized, COS' budget would be more stable.

Absent a structural change to the budget model to stabilize the Academic Productivity Pool, we could avoid further cuts to TTF by community support funding of \$1.5M (net recurring in addition to the bridge funds) to be complemented by continuing expense reductions within the College to keep the long-term fund balance positive.

Our ecampus revenue continues to grow significantly. The majority of students in our ecampus classes are not in Corvallis. Furthermore, some of the face-to-face classes that are growing, such as introductory physics, are at capacity on campus, and so ecampus allows growth that would not otherwise be possible. Last year's enrollment in ecampus grew by about 12%. So far this academic year, we are up by more than 20% over last year.

Our projections for the next few years (<u>here</u> and <u>here</u>) assume that our TTF will decrease by 3 per year, and that our NTTF will increase by 1 per year. This will cause a further decline in our research capacity.

Five Year Forecast Discussion.

Assuming that the Academic Productivity Pools continue to grow slower than inflation, we are projecting negative operating margins for the foreseeable future. Even if Academic Productivity Pools keep up with tuition revenue, operating margins will still be tight. The next section discusses consequences.

⁹ Net of waivers, ecampus, Vetmed, and Pharmacy

¹⁰ Net of ecampus

Cost & Program Reductions and Reallocations.

In the guidance provided for this report, it was noted that revenue growth may not keep up with the costs of delivering existing programs. Colleges were asked to describe what we would do in our respective units to reduce costs, as well as consequences of those changes.

EXPENSE REDUCTION. Expense reduction will require continuing to adjust the balance of teaching and research in the College. Because student recruitment, retention, and success are mission-critical (SP4.0) and revenue-critical (~70% of OSU E&G budget), these must remain our College's priority. Research is mission-critical but less revenue-critical in the short term. Therefore, the College will have to continue a strategy of limited replacement of tenure-track faculty when they leave. We are currently projecting a net loss of 3 TTF per year, resulting in another 10% decline in TTF over three to four years. This necessarily will result in a reduction in research output, which will likely negatively impact the reputation of both OSU and the College of Science. The consequences continue to include that OSU, at least within some areas within COS, will move away from R1 status, we will have fewer experiential learning opportunities, the number of graduate students will decrease, research expenditures will decline, and other colleges will have fewer research partners in Science.

At some point, expense reductions will make it likely that a reorganization of the College may be necessary. Steps that could be taken to reduce costs could include (1) reorganize the College into three schools without departments; and (2) eliminate some degree programs. Taking these steps would be difficult and would in themselves consume resources.

Hiring Plans for FY21

New or Redefined Faculty Positions.

Our hiring priorities emphasize student success, revenue generation, research excellence, and cost containment. To achieve these priorities, we propose minimal (but not zero) hiring of tenure-track faculty. The following searches are now underway or envisioned to begin shortly.

Position	Expertise	Department/Unit	Notes	Strategic Need
Asst Prof	Physical chemistry	Chemistry	New	S4, L8 (materials)
Asst Prof	Virology – human	Microbiology	New, 0.25 CAS	S4, L8 (biomedical)
Asst Prof	Virology – aquatic	Microbiology	New, 0.75 CAS	S4, L8 (marine)
Asst Prof	Analysis, probability or mathematical biology	Mathematics	New	S4, L8 (data sci or biomedical)
Asst Prof, internal hire	Cellular & molecular biology	Biochemistry	Redefined position – low net cost	S4, L8 (biomedical)
Asst Prof, internal hire	Benthic ecology/MSI	Integrative Biology	Redefined, shared with MSI	S4, L8 (marine)
Assoc Prof (possible)	Organic chemistry	Chemistry	Tenured faculty diversity	S1, S4 (materials)

Besides the organic chemistry position, which is only prospective, these represent a gross addition of 3.0 FTE to COS because of shared positions or redefined positions that do not add FTE. However, the net number of faculty will be down because of attrition.

New or Redefined Staff Positions.

The main staff to be hired are a facilities operations coordinator to assist with the Cordley and other renovations and facilities projects, and an assistant director of development. Our director of marketing and communications left and we will be refilling that position.

Position	Expertise	Department/Unit		Strategic Need
Facilities Operations Coordinator	Facilities	Dean's office	New, Shared with Facilities & Administration	L7
Assistant Director of Development	Fundraising	OSUF	New, Reports to OSUF, COS pays half	L6
Director of Marketing & Communications	MarComm	Dean's office	Replacement with net savings	S1, L6
Learning assistant coordinator (tentative)	Pedagogy	Dean's office	Part-time	S1, L6

Positions Not Refilled.

Two of our strategies are to contain costs and increase teaching efficiency. Consequently, some positions have not been refilled. Some positions not refilled are shown below. Because of the sensitivity of the topic, specifics are not shown, but can be provided if requested.

	5	s
Position	Department/Unit	Strategic Need
Executive Associate Dean	Dean's office	S3
Professor	Chemistry	S3, S4
Professor	Chemistry	S3, S4
Professor	Integrative Biology	S3, S4
Professor	Biochemistry	S3, S4
Professor	Mathematics	S3, S4
Asst Professor	Mathematics	S3, S4
Professor	Microbiology	S3, S4

Appendix A: College Portrait

Home to the life, physical and mathematical sciences, the College of Science is a vibrant scientific community committed to expanding the nation's intellectual capital and preparing a scientifically literate public. The college is recognized as a national and global center for excellence in research and scholarship, teaching every OSU student and building the next generation of leaders in science.

We bring unique talent and capabilities to four key areas of interdisciplinary research with global distinction: Marine Science, Biomedical Science, Materials Science and Data Science. These areas represent our global impact in research vital to human and animal life health, the sustainability of our planet, a strong economy with start-ups and innovative market solutions and scientific discoveries that solve the world's most pressing problems.

The College offers internationally recognized programs across a broad spectrum of disciplines: biology, biochemistry and biophysics, biohealth sciences, microbiology, zoology, chemistry, physics, mathematics, and statistics.

Enhancing OSU's reputation as a leader in science.

Our faculty continue to receive national and global recognition in science. For the third year in a row, a College of Science professor was named a Fellow of the American Association for the Advancement of Science (AAAS). Eminent zoologist Bob Mason was the College's fifth AAAS Fellow in only four years.

Microbiologist Jerri Bartholomew was named a 2019 Fellow of the American Fisheries Society (AFS), the world's oldest and largest organization dedicated to advancing fisheries science and conserving fisheries resources.

Mathematics Professor Juan Restrepo was elected as a 2019 Fellow of the American Physical Society (APS), a rare and highly prestigious honor.

The College of Science has 22 Distinguished University Professors, the most of any college at OSU.

Our students are recognized nationally, as well. Three science students were awarded the prestigious Barry Goldwater Scholarship in spring 2019, which is the top undergraduate award in the country for sophomores and juniors in the fields of science, technology, engineering and mathematics (STEM). Four science students received prestigious National Science Foundation (NSF) Graduate Research Fellowship Program (GRFP) awards in 2019.

Encouraging student Success.

Student success is a top priority in the College of Science. We create and support programs that promote student engagement, learning and progress toward our students' own goals.

The Science Success Center, which hosts over 2,500 visits throughout the school year, provides advising and academic support programs and career development opportunities and workshops. This space is a home base for many of our students, specifically transfer students.

The College played a lead role in developing the <u>Faculty-Student Mentor Program</u> (FSMP) last year. The program, which is co-led by Dean Haggerty, is currently focused on providing mentors for

underrepresented minority students, first generation and Pell-eligible students who are in their first year at OSU (both traditional and transfer students). Last year, the first-year retention rate for FSMP students was 88.4%. The retention rate for a group similar to the FSMP participants was 81%. Participants also had a significantly higher fall GPA than a matched group of non-participants.

To boost learning in the introductory Principles of Biology series, College of Science instructors transformed the series 10 years ago from a traditional educational model into an active-learning approach by launching the <u>Learning Assistant (LA) Program</u>, in which advanced undergraduate students facilitate interactive, peer-to-peer learning. DFW rates for the three introductory biology courses reduced from a high of 33.6% to a low of 7% during a 10-year period from 2009 to 2019.

We are part of a five-year \$1 million grant from Howard Hughes Medical Institute to improve instruction in undergraduate STEM classrooms. OSU was one of 33 colleges and universities that HHMI selected to produce sweeping cultural changes in post-secondary institutions through a variety of pedagogical approaches to increase diversity and inclusion of HURS in science programs.

Research and Innovation.

The College of Science is a global center of excellence in research and innovation. Faculty and students focus on research that informs public policies on climate change, identify cost-effective sources of renewable energy and sustainable technology, advance understanding of disease mechanisms to improve animal and human health, and employs data science to enhance the quality of our research and spur economic development.

Many of our scientists bring high-value solutions to bear in the pharmaceutical, biotech and agrochemical industries. In the spirit of our hallmark collaboration, our faculty are honing in on critical block-building discoveries from their colleagues. For example, our physics research focused on more efficient conversion of solar energy and light emission for a new kind of semiconductor that paved the way for the development of Apple's newest retina display monitor by engineering faculty at OSU.

Other groundbreaking research includes the discovery of a new molecule fragmentation technology, a new method for making anti-leukemia compounds previously only available from an Asian tree; a biophysics breakthrough that moves us closer to more effective metastatic cancer treatments; discovery of a chemical mechanism first described over two centuries ago that can revolutionize energy storage; protein modifications that may lead to new cancer therapies that spare healthy cells; a new mathematical model that predicts the evolution of our beaches; discovery of a novel process that allows chemical manufacturers to readily add fluorine to other molecules, enabling pharmaceutical manufacturers to cost-effectively produce high-value product lines, among many other discoveries.

Equally vital, the College moves discoveries into people's lives through faculty and student innovation. Companies emerging from our research include Inpria, Valliscor and eMSion. An incubator for innovation, the College is strengthening pathways for faculty to develop their ideas into solutions that meet marketplace needs to address the world's pressing challenges and drive economic growth. Last year, we launched the Science Research and Innovation Seed (SciRIS) Program to strengthen and build a culture of innovation.

Appendix B: Financial Information

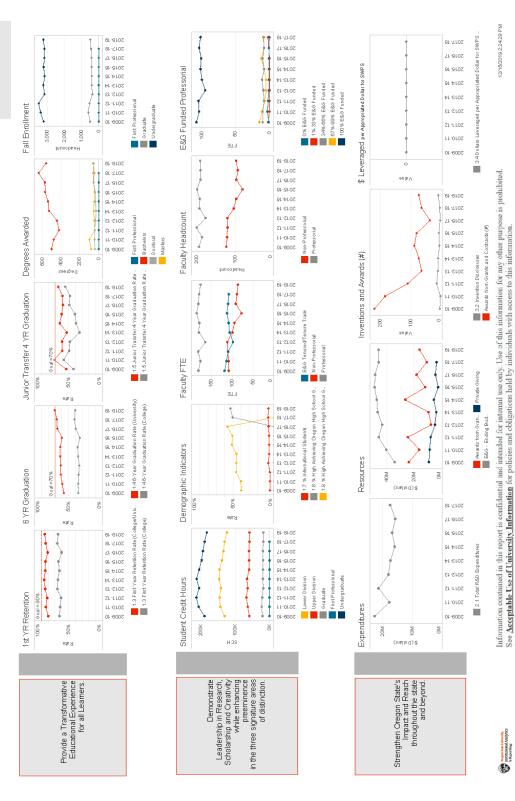
See financial information provided by the Budget Office at this link: <u>Financial analysis</u> (Excel file – most easily viewed if downloaded).

Appendix C: Strategic Plan Metrics

Selected metrics relevant to SP4.0 are shown on the next page. These are from the CORE dashboard titled "College Success Metrics" (report ID DDB0110). A link to the pdf is here. Note for comparisons to the oldest data that prior to 2013, COS also had the Dept. of Geosciences (now in CEOAS), Dept. of Botany and Plant Pathology (now in CAS), Dept. of Science and Math Education (now in Education), and the Environmental Sciences BS (now in CEOAS).



Select Unit College of Science



Appendix D: Enrollment Planning Targets & Assumptions

The College does not possess the expertise to do a high-quality job of enrollment management inhouse. Our projection for the total number of on-campus undergraduate students is flat, and our projection for the total number of on-campus graduate students is declining. We expect the number of ecampus students to continue to increase, with SCH increasing by more than 10% per year and with revenue increasing by 15% per year for the next two to three years. We expect the number of online graduate students to be flat until we can further expand the data analytics program.

For undergraduate students, we see a decline among the in-state student population, but an increase in our out-of-state population. The first follows the general population trend in Oregon, the second is due to our increased marketing out-of-state, particularly in California. The number of undergraduate minority students is slowly increasing. For undergraduate transfer students, we use the DPP enrollment as an indicator. This enrollment is also increasing, which indicates a shift away from first-year students. There is no net effect on the total undergraduate student population. We do not try to predict the number of undergraduate international students, because there was a decline nationwide in the FY19 numbers. We have invested in an international student recruitment campaign which could impact FY21 and beyond. Linear trends would see a small increase, but based on short-term changes, a continuous decrease appears more likely.

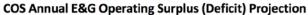
Appendix E: Three-year Financial Projections

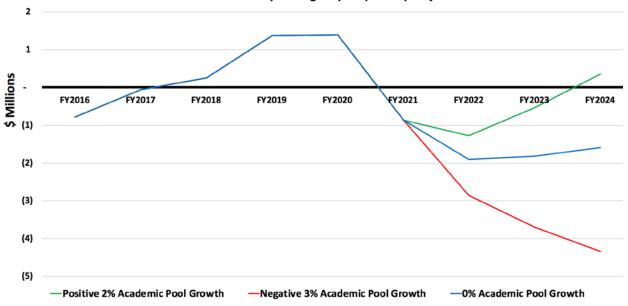
OSU COLLEGE OF SCIENCE - ALL E&G OPERATING PROJECTION EXECUTIVE SUMMARY by Category, FY 2019 Actual - FY 2024 Projected As of 1-22-2020

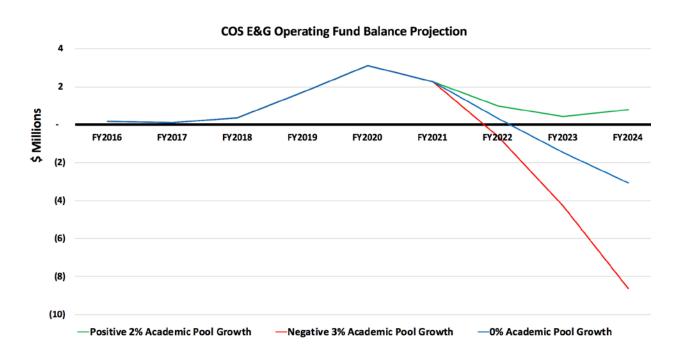
Operating E&G Indexes	Actual	Actual & Proj	Prelim & Proj	Projected	Projected	Projected
	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024
Academic Pools (less ECampus and Summer)	32,127,066	32,973,425	31,624,291	31,624,291	31,624,291	31,624,291
Recurring Central Support	750,000	750,000	750,000	750,000	750,000	750,000
Bridge Funds	1,900,000	1,900,000	1,200,000	600,000	-	-
Adjustments	-	(388,593)	-	-	-	-
Ecamps, Summer Session, ROH	8,433,972	9,622,937	10,693,145	11,923,415	13,337,767	14,963,828
External Fees & Sales	1,066,408	1,072,549	1,072,549	1,072,549	1,072,549	1,072,549
Net Other Budget Transfers	265,160	177,361	(68,397)	(313,783)	(281,938)	(247,466)
Total Net Resources	44,542,606	46,107,678	45,271,588	45,656,472	46,502,670	48,163,203
Salaries and OPE	41,553,295	42,974,259	44,354,745	45,735,523	46,451,190	47,828,989
Services & Supplies	1,929,497	2,146,587	2,189,519	2,233,309	2,277,975	2,323,535
Capital Outlay	106,049	52,386	52,386	52,386	52,386	52,386
Internal Sales	(462,697)	(508,967)	(508,967)	(508,967)	(508,967)	(508,967)
Net Transfers Out/(In)	49,352	49,352	49,352	49,352	49,352	49,352
Total Net Expenses	43,175,496	44,713,618	46,137,035	47,561,603	48,321,936	49,745,295
Ducinated Americal ODEDATING ES C Sumulus //Deficità	1 267 110	1 204 061	(065 440)	/1 00F 121\	(1.010.267)	(1 502 002)
Projected Annual OPERATING E&G Surplus/(Deficit)	1,367,110	1,394,061	(865,448)	(1,905,131)	(1,819,267)	(1,582,092)
Beginning Operating Fund Balance	355,383	1,722,493	3,116,553	2,251,106	345,975	(1,473,292)
	•	,	,		,	, , , , , , , , , , , , , , , , , , , ,
Projected OPERATING E&G Fund Balance	1,722,493	3,116,553	2,251,106	345,975	(1,473,292)	(3,055,384)
NON-Operating E&G Indexes	Actual		Prelim & Proj	Projected	Projected	Projected
	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024
Net Activity in Non-Operating E&G Indexes	449,266	209,413	(250,000)	-	-	-
Beginning Non-Operating E&G Fund Balance	3,419,946	3,869,212	4,078,625	3,828,625	3,828,625	3,828,625
		7 405 470				777.740
Projected TOTAL E&G Fund Balance	5,591,705	7,195,178	6,079,730	4,174,599	2,355,332	773,240

The table above details our financial projections for FY20 – 24, and our actuals for FY19. The scenario here matches the blue line in the graphs on the next page. The major assumptions for this projection include: (1) flat Academic Productivity Pool; (2) net decline in TTF by 3 per year; (3) 15% growth in ecampus revenue per year.

Two other scenarios are shown below. The green line assumes growth in the Academic Productivity Pool, with all other assumptions the same. The red line assumes continued decline in the Academic Productivity Pool.







Appendix F: Academic Hiring in FY21

In the absence of greater central investment, as tenure-track faculty retire, we will have to look at increasing the number of non-tenure-track faculty. We will also examine increasing teaching loads for some tenure-track faculty after the collective bargaining agreement is signed. This will reduce costs while maintaining a transformative education that is accessible to all learners (Goal 2 of SP4.0) but it will degrade our research and innovation missions (Goals 1 and 3 of SP4.0) and reduce our number of graduate students.

While many retiring tenure-track faculty will not be replaced, a small number of hires will be made each year, including the current year, to advance research opportunities within the <u>College's strategic plan</u> and meet departmental programmatic priorities, and to promote equity, inclusivity, and justice (SP4.0 Goal 4). We are committed to setting aside funds for research and innovation seed funding, renewing lab space, purchasing equipment, and seeking funds for new space for existing tenure-track faculty.

Appendix G: Detailed Progress on FY19-20 Investments and Metrics

Our strategies to advance the College of Science are the same as those in the <u>FY19 Financial Plan</u> and the <u>FY20 Financial Plan</u>. We have now collected multi-year data on the metrics proposed in FY19, which are viewable <u>here</u>, current as January, 2020. A printout is provided on the last page. Strategies S1 - S5 are short-term and ongoing strategies, while L6 - L8 are long-term strategies.

S1. Improve student recruitment, success and retention. **ACTIONS**:

- 1. Strengthen our degrees, pathways within degrees, and key courses leading to health sciences professions. <u>Status</u>: Life sciences degrees are growing. Instructional and advisor hires have been made. Professional development for students is expanding within the life sciences. The Learning Assistants program is being made permanent.
- 2. Actively recruit new students from high schools and community colleges, particularly high-achieving students. <u>Status</u>: We hired a transfer advisor and recruiter in 2018, focusing on the community colleges. While our freshman and sophomore numbers our down, the total number of majors is the largest ever, suggesting the strategy is working.
- 3. Lower DFW rates in all Science "Gateway Courses." Status: Our gateway class student success is improving. We are monitoring the combined DFW rate in the gateway classes, and we see a long-term improvement. This past year saw our fifth straight year of improvement, with the lowest ever gateway DFW rate of 20.1% and the largest one-year drop yet recorded. An example of how we are achieving this is here.
- 4. Improve climate for majors in the college and measure climate annually. <u>Status</u>: The <u>Campus Inclusivity Survey</u> is administered biennially. We use this survey instrument to measure progress,

¹¹ Gateway classes were previously called "Roadblock" classes. These are high-enrollment classes that are correlated to student success. They are MTH 111, 112, 241, 251, 252, 254, 306, ST 306, 351, BI 211, 212, CH 121, 201, 232, PH 211, 212.

- which was last administered in Spring 2019. The results of that survey have just been released as of this writing.
- 5. Increase staffing and support for reducing barriers to success, early intervention, and experiential learning. <u>Status</u>: We have added advising staff for transfer students and made personnel changes to improve services for all students, particularly in student engagement.
- 6. Expand integrated professional development. <u>Status</u>: We are making progress, but last year's midyear budget cut resulted in a canceled search. We have just hired a staff member to continue expanding this program. In January, 2020, we held our second-annual "SciencePro", a career faire for science majors.
- 7. Increase online student success. Status: We have not yet begun to work on this in a sustained way.

In addition to the actions noted above, we have seen the number of graduating students in COS climb consistently, 6-year graduation rates have climbed, and overall retention rates have risen.

METRICS:

- 1. COS retention rates within major for 1^{st} and 2^{nd} years for all students, for HURS, and for Pell
- 2. COS 6-year graduation rates for all students, for HURS, and for Pell-eligible
- 3. Number of COS majors
- 4. Number of COS majors who are high-achievers
- 5. Number of COS SCHs
- 6. Combined weighted DFW rates in historically "Gateway Courses" MTH 111, 112, 241, 251, 252, 254, 306, ST 351, BI 211, 212, CH 121, 201, 232, PH 211, 212 for academic year in each of face-to-face and online environments
- 7. Results from College climate survey for students in spring term 2019

S2. Grow revenue through extended campus and related activities. ACTIONS:

- 1. Launch online Zoology degree by fall term 2019. Status: Complete, and enrollment is strong.
- 2. Increase ecampus offerings, with focus on key courses, online degrees, partnerships, and licensing, and write a business plan for ecampus expansion within College. <u>Status</u>: Complete and we are now looking out two more years. Ecampus enrollment surged by 12% last year and is on track to increase by more than 20% this academic year. An important question is to what extent are ecampus SCH replacing on-campus SCH? We looked at Fall 2014 and Fall 2019. In 2014, 56% of our ecampus SCH were to on-campus students, which decreased to 40% in 2019.
- 3. Expand 4+1 offerings within the College. <u>Status</u>: All of our departments with an undergraduate program (other than Statistics) either now have a 4+1 program or will soon have one. While our numbers are still small, they are growing. Overall numbers will likely plateau at less than 20 students each year.
- 4. Build and market virtual labs and elevate OSU's brand around expertise in this space. <u>Status</u>: We are expanding our online lab capability in Chemistry, Integrative Biology, Biochemistry and Biophysics, and Physics.
- 5. Grow Data Analytics MS. <u>Status</u>: The degree and certificate have grown from zero students two years ago to about 80 students today. Additional growth will require more investment, and we are looking at the ROI.

METRICS:

- 1. Number of online degree majors
- 2. Number of ecampus SCHs

3. Number of 4+1 students in College of Science

S3. Contain costs and discontinue some existing activities.

The College of Science is committed to offering high quality courses and programs for the students of OSU. We will undertake the numbered items below, and will only undertake subsequent bulleted items if fiscal conditions force them.

ACTIONS:

- 1. Not replace some retiring faculty; backfill some retiring Tenure-track with Non-tenure track faculty. <u>Status</u>: We continue to hire tenure-track faculty at lower rates than attrition, so the number of TTF continue to decline.
- 2. Develop efficiencies to decrease number of GTAs in some departments. <u>Status</u>: Chemistry has moved aggressively to reduce the number of GTAs. Other programs are managing their numbers carefully.
- 3. Examine cost-benefit of COS funding of all centers. <u>Status</u>: Complete. We have discontinued the funding of one center.
- 4. Reduce clerical support in the Dean's office, shifting FTE to student engagement. <u>Status</u>: Complete. One assistant has moved, shifting focus from 0% to 75% student engagement.
- 5. Not offer some classes. <u>Status</u>: We have discontinued a number of classes as can be seen in our metrics, and the number of small classes has declined significantly. We have also increased the caps on some classes in Mathematics.
- 6. Examine 201 accounts. <u>Status</u>: Complete. The vast majority of funds in College 201 accounts are for active commitments. However, we did find approximately \$100K that can be repurposed.
- 7. Reduce commitments to startup and external collaborations. <u>Status</u>: Complete. We are putting lower caps on startup offers.

METRICS:

- 1. E&G Expenditures per SCH
- 2. Number of SCHs/GTAs

S4. Increase research productivity and teaching efficiency.

Teaching efficiency – amount of teaching per E&G \$ and amount of teaching per professorial FTE (TTF and NTTF). Other colleges, with names not shown, are given for comparison. The average teaching load in the College is 3 courses per year for TTF. While lower than some colleges, COS is still the most efficient teaching college because of relatively large introductory classes and a large number of NTTF.

	SCH/1000 E&G \$	SCH/FTE
cos	4.38	1152
	3.64	988
	2.07	708
	2.78	536
	3.30	527
	1.35	478
	0.52	254
	1.26	232
	0.95	223
	1.23	215
	1.69	175

Research support efficiency – amount of extramural research support per E&G \$ and amount of extramural research support per professorial FTE (TTF and NTTF). Other colleges, with names not shown, are given for comparison. Based on benchmarking against other colleges at OSU and science colleges at other universities, COS' extramural support for research could increase.

	Res \$/E&G \$	Res \$/FTE
	7.0	1,662,659
	0.7	225,560
	2.0	207,241
	0.5	163,084
	0.8	156,609
	0.8	149,502
cos	0.4	94,075
	0.1	41,565
	0.1	22,231
	0.0	8,236
	0.0	4,261

ACTIONS:

- 1. Establish a full-time Research Support Services office with focus on major proposals to increase extramural funding. <u>Status</u>: Complete.
- 2. Implement tenure-track workload policy, including restrictions on teaching courses with few students. <u>Status</u>: A policy outlining our current practices is complete, but further development must wait for a collective bargaining agreement.

- 3. Require all small classes (less than seven at graduate level, less than 12 at undergraduate level) to have Dean's approval to be taught in-load. *Status: Complete*.
- 4. Review all position descriptions with non-standard teaching loads. Status: Still to be done.
- 5. Incentivize course buy-outs by TTF. <u>Status</u>: Still to be done with the exception of standardizing the cost of a course buy-out. Note that this probably cannot be done now without a collective bargaining agreement.

METRICS:

- 1. Number of proposals submitted with budget more than \$500K
- 2. Number of courses taught in load with enrollments < 12 (undergrad), <7 (grad)
- 3. F&A dollars
- 4. Research expenditures per tenure stream faculty

S5. Partner with the University to improve the College budget. **ACTIONS:**

1. Work with the Provost, the Budget Office, and the Provost's Council of Deans to create a budget model that funds COS at levels that are in proportion to other similar units nationwide but still allows appropriate and necessary subsidies to flow to other OSU units. See Appendix of FY19 Financial Plan. Status: COS was provided bridge funding in FY19. However, some of this was eliminated via the mid-year FY19 budget cut.

METRICS:

1. Ratio of COS size: OSU size, relative to national peers. According to CUPA data, OSU's COS is about 15 - 25% smaller than its peers relative to the size of the peer institutions¹².

L6. Partner with the OSU Foundation for a highly successful campaign. ACTIONS:

- 1. Fully onboard new development staff. Status: Complete.
- 2. Develop a compelling vision and concomitant strategic plan for the campaign. Status: Complete.
- 3. Invest up to one quarter of the Dean's effort in fundraising. <u>Status</u>: I achieved this last year, but with not refilling the Executive Associate Dean, I am short of that commitment this year. Last year, we had an excellent year, with approximately \$10M. We are on track this year for another good. Year, with a little under \$5M to date.
- 4. Expand our capacity in alumni and community relations. <u>Status</u>: We are in the process of hiring an Associate Director of Development (ADOD).

METRICS:

- 1. Annual private giving and grants.
- 2. Metric TBD on alumni and community relations.

L7. Renovate and rebuild research and teaching space in Science. **ACTIONS**:

1. Renovate Cordley Hall. <u>Status</u>: Cordley is on schedule for renovation.

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¹² See previous years' reports.

- 2. Raise funds for rebuilding and then rebuild infrastructure for departments outside of Cordley Hall. <u>Status</u>: We look forward to successful fundraising for a Collaborative Innovation Complex.
- 3. Renovate other lab and teaching space in the College. <u>Status</u>: Renovations are underway for a few labs in the College.

METRICS:

1. Progress on items above.

L8. Increase distinction in Marine, Biomedical, Materials, and Data Sciences.

ACTIONS:

- 1. Invest in personnel in marine science, sustainable materials, biomedical science, and data science. <u>Status</u>: Since the first financial plan when these strategies were developed, one TTF was hired in data science. and two TTF in materials science. We are in progress or searching for TTF in biomedical science, data science, and marine science.
- 2. Partner with other colleges, the Marine Studies Initiative, and relevant Centers and Institutes to build OSU's strength in marine science area. <u>Status</u>: A partnership on a spousal accommodation with MSI has resulted in two TTF hires for the MSI.
- 3. Raise funds for endowed professorships in each area of distinction. <u>Status</u>: Since these strategies were first written, we have raised funds (as a bequest expectancy) for one endowed professorship in Biochemistry.

METRICS:

1. Number of faculty in areas of distinction.

College of Science Financial Plan Metr	ics, Jan 2020 Snapshot	FY14-15 AY13-14	FY15-16 AY14-15	FY16-17 AY15-16	FY17-18 AY16-17	FY18-19 (FY18) AY17-18	FY19-20 (FY19) AY18-19	Trend	Comments
	S1.1 Retention rates within each major for 1st and 2nd year students - for all	students for LIRM s	tudents and for Pa	ll-aligihla studants	e (This is ratanti	on rate within the	a [Iniversity)	* UG only, Fall term snapshot	
	1st Yr Retention rate - OSU	84.2%	83.8%	84.8%	83.4%	84.8%	84.2%	* 1st Yr retention is for prior AY Fall term (e.g. AY1718 report out is	for Fall 2016 cohort 201701)
	1st Yr Retention rate (College / University) - CoS	86.4%	84.5%	84.3%	81.1%	84.0%	85.4%	* 1st Yr retention is for prior AY Fall term (e.g. AY1718 report out is	, ,
	1st Yr Retention rate - CoS HURS	85.9%	78.4%	72.3%	70.5%	77.2%	82.2%	* 1st Yr retention is for prior AY Fall term (e.g. AY1718 report out is	, ,
	1st Yr Retention rate - CoS Pell Eligible	85.9%	79.6%	80.7%	77.6%	75.2%	81.7%	* These values have shifted slightly from the NovDec. 2018 pull (, ,
	2nd Yr Retention rate - OSU	75.8%	77.0%	76.0%	78.3%	77.1%	, 77.8%	* 2nd Yr retention is for two terms prior (e.g. AY1718 report out is	
	2nd Yr Retention rate - CoS	77.2%	79.0%	74.7%	79.2%	75.9%	79.2%	* 2nd Yr retention is for two terms prior (e.g. AY1718 report out is	- · · · · · · · · · · · · · · · · · · ·
	S1.2 6-year graduation rates - for all students, for URM students and for Pel	l-eligible students							
	6-year Graduation rate - OSU	61.5%	63.1%	64.3%	63.3%	65.3%	67.0%	* 6-year Graduation rate for AY17-18 report out is for Fall 2011 Coh	ort
	6-year Graduation rate - CoS	62.6%	62.6%	66.0%	66.8%	67.6%	70.4%	* 6-year Graduation rate for AY17-18 report out is for Fall 2011 Coh	ort
Strategy 1: Improve student recruitment, success and retention, aka "Student Success"	6-year Graduation rate - CoS - HURS	56.4%	57.1%	56.3%	59.8%	65.1%	63.5%	* 6-year Graduation rate for AY17-18 report out is for Fall 2011 Coh	ort
and recention, and Student Success	6-year Graduation rate - CoS - Pell eligible	63.3%	61.3%	60.4%	64.3%	64.5%	64.5%	* 6-year Graduation rate for AY17-18 report out is for Fall 2011 Coh	ort
	S1.3 Number of COS majors (UG Only)	2,812	2,793	2,823	2,768	2,805	2,878	* These values have shifted slightly from the NovDec. 2018 pull (see Comments).* Fall term snapshot, l
	St.4 Number of COS majors (UG Only) who are high-achievers	1,231	1,289	1,130	1,121	1,190	1,412	* Fall term snapshot, UG not grad, non-degree or post-bacc, stude	nts with CoS primary major only (not
	S1.5 SCHs TOTA	224,451	219,778	215,317	217,438	216,008	215,895	* LD, UD (inclusive of eCampus) and Graduate (Calculated) [NOT	f: These values do not match CORE rep
	Undergraduate Only	204,414	200,143	195,934	197,221	196,651	195,993	Calculated	
	Lower Division	135,632	135,367	130,900	131,423	130,164	128,349	* LD, UD (inclusive of eCampus) and Graduate	
	Upper Division	68,782	64,776	65,034	65,798	66,487	67,644	* LD, UD (inclusive of eCampus) and Graduate	
	Graduate	20,037	19,635	19,383	20,217	19,357	19,902	* LD, UD (inclusive of eCampus) and Graduate	
	S1.6 Combined weighted DFW rate in "Gateway Courses" (MTH 111, 112, 241, 25	24.5%	24.5%	24.2%	23.0%	22.2%	20.1%	* Not inclusive of INTO or eCampus	
	S1.7 College climate / Satisfaction survey for students in spring term	TBD	TBD	TBD	TBD	TBD	TBD		
	S2.1 Number of online degree major programs offered	o	0	0	0	1	2	MS in Data Analytics, BS in Zoology (F19)	
Strategy 2: Grow revenue through extended campus and related activities	S2.2 Number of ecampus SCHs	16,573	18,461	19,891	22,113	24,492	28,482	* LD, UD	
alla l'alacca accivito	S2.3 Number of 4+1 students in College	0	0	o	0	2	In progress	* Does not include Yr o (See contacts at URL to right)	
Strategy 3: Contain costs and discontinue some	S3.1 E&G Expenditures per SCH \$	165 \$	171 \$	182 \$	186 \$	195 \$	198	Calculated - E&G funds are less Special Programs & Targeted Prog	rams (Fund 0012xx, 0013xx - TRF, RERI
existing activities	S3.2 Number of SCHs / GTAs	587	601	593	555	571	567	* TOTAL SCH / GTA FTE (SCH and FTE summed over entire AY)	
		FY14-15	FY15-16	FY16-17	FY17-18	FY18-19 (FY18)	FY19-20 (FY19)		
Strategy 4: Increase research productivity and	S4.1 Number of proposals submitted with budget more than \$500K	43	41	41	41	49	36	FY19 data from Bettye 1/16/20, FY18 From Bettye Maddux 12/4/18	AY17-18 = FY18-19
teaching efficiency	S4.2 Number of courses taught in load with enrollments < 12 (UG), < 7 (G)	96	118	115	69	44	45	* Only Lecture and Online courses and excludes INTO sections	
	S4.3 F&A dollars \$	2,872,341 \$	2,868,546 \$	3,049,501 \$	3,061,841 \$	3,493,019 \$	3,380,410	* Indirect cost recovered	
	S4.4 Research expenditures per tenure stream faculty \$	136,775 \$	127,311 \$	125,629 \$	118,476 \$	121,512 \$	120,673	Calculated - Research expenditures do not include 201,	
Strategy 5: Partner with the University to improve Science budget	S _{5.1} Ratio of COS size: OSU size, relative to national peers					86.70%	In progress	From Roy Haggerty 12/14/18	
Long-term Strategy 6: Partner with the OSU	LS6.1 Annual private giving and grants (\$M) \$	5.2 \$	6.4 \$	5.4 \$	6.3 \$	4.4 \$	10.0	From Marlys 1/13/20 Year End Fundraising Progress, Previous valu	es 12/13/18, AY17-18 = FY18-19 (private {
Foundation for a highly successful campaign for Science	LS6.2 Metric TBD on alumni and community relations	TBD	TBD	TBD	TBD	TBD			
	LS7.1 Progress on items below								
Long-term Strategy 7: Renovate and rebuild research	LS7.1.1 - Renovate Cordley Hall	n/a	n/a	n/a	n/a	In progress	On track		
and teaching space in Science	ing - and then rebuild - infrastructure for departments outside of Cordley Hall	n/a	n/a	n/a	n/a	In progress	On track		
	LS7.1.3 - Renovate other lab and teaching space in the College	n/a	n/a	n/a	n/a	In progress	On track		
Long-term Strategy 8: Increase distinction in	LS8.1 Number of faculty in areas of distinction	n/a	n/a	n/a	n/a	113	In progress	From Doug Keszler, 12/14/18	

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