

Academic Programs: Undergraduate and Graduate Briefing

BACKGROUND

This briefing summarizes key information about academic programs and student achievement; catalogs progress on implementing the [Graduate Education Strategic Plan](#); outlines the programs and initiatives aimed at delivering high quality, globally relevant, and affordable education at both undergraduate and graduate levels; and discusses education-related opportunities and threats facing the university.

ACADEMIC PROGRAMS

The Office of Academic Affairs and the Graduate School continue to see active work on new program development. Over the last ten years, 17 new programs were introduced at OSU-Cascades (11 are unique offerings in Bend, 6 are existing Corvallis programs now also offered in Bend). During the same time frame, the university eliminated three programs in Bend—two because they were replaced by other offerings. The Ecampus portfolio continued to grow over the last ten years during which OSU added 30 Corvallis programs to the Ecampus platform. In just the last year, two new undergraduate programs offered only via Ecampus were launched. The Data Analytics MS program, also offered only via Ecampus, was introduced just five years ago and is now one of the ten largest graduate programs at OSU. Also during the last ten years, OSU expanded its portfolio of programs on the Corvallis campus, adding a total of 50 new programs, while eliminating 21. Note that some of the Ecampus growth overlaps with the Corvallis growth; for example, the new Business Analytics major was simultaneously added to class offerings in Corvallis and on Ecampus.

OSU's increase in degree offerings during this period reflects national trends. Data from Integrated Postsecondary Education Data System (IPEDS) show that between 2012 and 2018, higher education institutions added over 41,000 different degrees, a roughly 21% increase. While many new programs at OSU have been in STEM disciplines, OSU has also expanded its offerings in the humanities and social sciences (e.g., Creative Writing, Music Studies, Marine Studies, Public Policy). OSU faculty are responding to student interest, changes in the job market, and changes in their disciplines.

In terms of student interest and enrollment, the ten most highly-enrolled undergraduate programs (on average) over the last five years are spread among six colleges (Agricultural Sciences, Business, Engineering, Liberal Arts, Public Health and Human Sciences, and Science) and the University Exploratory Studies Program. The highest growth undergraduate programs are Computer Science (in large part because of the very highly enrolled post-baccalaureate program), Mechanical Engineering, and Psychology. Similarly, the ten most highly-enrolled graduate programs (as of fall 2021) are spread among seven colleges (Business, Education, Engineering, Forestry, the Graduate School, Public Health and Human Sciences, and Science).

As part of a new Academic Unit Assessment process, OSU will track the status of academic programs more closely through a collection of a standardize set of metrics. Organized into dashboards, the metrics will provide academic leaders with up-to-date information about enrollments, student progression, and student success in a cross-sectional view by college. Academic leaders will also have a regular window into each program's assessment of student

learning. A biennial leadership meeting with each college will reflect on data, trends, and areas of high performance or those that need further attention.

During AY21, and as an element of the Graduate Education Strategic Plan (GESP), a task force developed the following metrics to evaluate the strength of graduate programs: enrollment, five-year change in enrollment, percent of students who identify as underrepresented minorities, reputation (as measured in part by selectivity and yield), and time to degree. Strong graduate programs can have almost any size: some of the strongest OSU graduate programs are unique in the state and very well regarded, even if they have low enrollments. A few examples illustrate the breadth of OSU’s strongest graduate programs (in alphabetical order): Adult and higher education, business administration, creative writing, data analytics, fisheries science, geography, natural resources, and robotics.

In another element of the GESP, over the past two years, ideas from both deans and faculty led to a plan to create two new interdisciplinary graduate programs: Translational Data Sciences (provisional title) and Sustainability. Leaders have been identified for both programs and they are working with faculty and Ecampus to prepare program proposals.

PROGRESS ON STRATEGIC METRICS

The Office of Academic Affairs and the Graduate School continue to track progress on key student success metrics, as shown in Table 1. There has been good progress toward reaching 90% for first year retention and 70% for six-year graduation, though there is still work to do to close equity gaps. The data in Table 1 are based on freshman cohorts, and performance is tracked for transfer students (a growing proportion of the undergraduate population). First-year retention among OSU’s full-time transfer students is somewhat lower than for the freshman cohort (81.8% in 2021, versus 86.8% for the freshman cohort). Similarly, the four-year graduation rate for transfer students (59.7% in 2021) is substantially lower than the six-year graduation rate of the freshman cohort, though direct comparisons of these groups can be challenging.

Table 1 — Oregon State University Undergraduate Student Success Metrics

Updated November 2021

	1 Year Retention Rate (%)			6 Year Graduation Rate (%)		
	2011	2015	2021	2011	2016	2021
Overall OSU	81.5	83.4	86.8	60.7	63.3	68.2
Pell	80.1	78.7	83.1	56.3	57.0	59.4
Non-Pell	80.9	82.3	85.6	62.9	67.4	72.5
Pell – Non-Pell Gap	-0.8	-3.6	-2.5	-6.6	-10.4	-13.1
URM	79.0	77.9	84.3	53.9	54.5	59.7
Non – URM	81.7	84.2	87.3	61.4	64.3	69.5
URM – Non-URM Gap	-2.7	-6.3	-3.0	-7.5	-9.8	-9.8
Male	81.5	84.2	86.6	58.5	59.5	64.5
Female	81.5	82.5	86.9	63.0	67.4	72.2
Male – Female Gap	0.0	1.7	-0.3	-4.5	-7.9	-7.7

Nonresident	75.3	80.7	80.5	55.8	60.5	66.0
Oregon Resident	81.7	84.3	87.5	61.3	64.4	68.9
Nonresident – Resident Gap	-6.4	-3.6	-7.0	-5.5	-3.9	-2.9
First-Generation	79.4	79.3	80.7	N/A	57.0	60.7
Not First-Generation	82.3	86.5	88.6	N/A	65.8	71.0
First-Generation Gap	-2.8	-7.2	-7.9	N/A	-8.8	-10.2

Cohorts are for first-time college, full-time degree-seeking undergraduates admitted for the designated fall term or preceding summer term. 2011, 2016 and 2021 one-year retention rates are for students entering in 2010, 2015 and 2020, respectively. 2011, 2016 and 2021 six-year graduation rates are for students entering in 2005, 2010 and 2015, respectively. First-generation status was not collected on application before 2010. **Red typeface indicates areas that need improvement.**

Despite the many factors contributing to lower working efficiency, during all but one term since the COVID-19 pandemic began, more graduate students completed their degrees than ever before in the corresponding term (and the one exception, fall 2020, was only three students fewer than in fall 2019). Each of these completions (shown in Table 2) reflects an individual story of perseverance in the face of setbacks, and the OSU community celebrates these students’ successes.

Table 2 — Oregon State University Graduate Student Completions

	Winter	Spring	Summer	Fall	Total
CY2021	227	606	227	293	1353
CY2020	211	599	203	244	1257
CY2019	201	598	193	247	1239
CY2018	204	544	196	215	1159

ON-GOING INITIATIVES AND PROJECTS

Academic Program Planning

OSU initiated an Academic Program Planning (APP) process just before the beginning of the COVID-19 pandemic. By necessity, that process was put on hold as faculty and staff spent many months reacting and adjusting to the pandemic with remote work, remote instruction, and other inconveniences. The purpose of APP is to help the colleges at Corvallis and OSU-Cascades, and the Graduate School, work in more coordinated and strategic ways to build (and suspend) academic programs. As OSU emerges from the pandemic, the Office of Academic Affairs and the Graduate School have begun to re-ignite the APP process as a series of conversations among academic leaders about comprehensive efforts to address the grand

challenges of the early 21st century, including climate change; social, economic, and health-related inequities; and the devaluation of knowledge.

Baccalaureate Core Reform

An effort to reform the Baccalaureate Core is continuing, with a “Reform 2.1” committee preparing to make recommendations to the full Faculty Senate at its May meeting, for a vote at its June meeting. During winter term there was extensive engagement with university stakeholders, including academic and professional faculty, students, and community college partners, and the Reform 2.1 committee will synthesize feedback in making its recommendations. Parameters of the reform work ensure that the new general education program will not put undue burden upon transfer students and that it will consist of no more than 45 credits. Another key element is that recommendations from the Racism and Antiracism Curriculum Taskforce are being considered as part of the reform process. Once a new model for general education at OSU is chosen, faculty estimate that all the necessary changes to curriculum and policies will take roughly two years to implement, and the groundwork for this next phase will begin in earnest in summer 2022.

Center for Teaching and Learning Activities

In winter term, OSU officially launched the Center for Teaching and Learning (CTL) Fellows program. Coordinated by the CTL, the Fellows are teaching faculty from participating colleges who form a professional learning community to learn about, collaborate on, and implement best practices in pedagogy. The Fellows also engage with other instructional faculty in their home colleges to help promote better teaching practices across the university. The program was born out of the pandemic when the Office of Academic Affairs implemented this structure to support faculty during the year of primarily remote instruction.

Other efforts coordinated through the CTL are intended to expand faculty awareness of, and access to, resources related to inclusive pedagogy. The Career Champions program, piloted as a University Innovation Alliance project, is now offered through the CTL. Participants learn tangible ways to add more career connection in the classroom, while advancing diversity, equity and inclusion and learning more about barriers to access for students of color, low-income students, and first-generation students. During the fall and winter terms, the CTL helped to coordinate several college-based sessions for faculty on inclusive pedagogy.

Common Course Numbering

In work related to Baccalaureate Core reform, a statewide effort to align 100- and 200-level courses transferred in high volume among Oregon community colleges and public universities is underway, as mandated by Senate Bill 233, which passed in the 2021 legislative session. The bill established a statewide Transfer Council to oversee alignment of these courses in terms of their learning outcomes, number of credits, descriptions, and course name and number. Four faculty subcommittees of the Transfer Council have been formed, to begin the first round of work. Vice Provost for Academic Affairs Alix Gitelman is a member of the Transfer Council.

These subcommittees are in the areas of mathematics, statistics, writing, and speech/communications. A fifth subcommittee has also been formed to do the operational work of aligning these courses across the disparate catalog systems used among the 17 community colleges and the seven public universities of Oregon. Several of the specific courses in this first

round of common course numbering are required in OSU's current Baccalaureate Core, and they will likely remain in the revised general education program.

Innovating Ways to Reach and Serve

During the pandemic, many students experienced the high quality, carefully designed courses and programs offered on the Ecampus platform. Ecampus accelerated its development of new courses and programs, including graduate programs; initiated and implemented a partnership with Guild; and is piloting eight microcredentials (six undergraduate and two graduate). The Graduate School has also revamped the Accelerated Masters Platform, which allows OSU undergraduates to transition smoothly into one of about 20 OSU graduate programs by earning up to 22 graduate credits while completing their bachelor's degree. Discussions about possible dual degree programs with other universities are underway.

OSU recently began participating in the Western Interstate Commission for Higher Education's (WICHE) Western Undergraduate Exchange (see Vice Provost Boeckenstedt's January ASC briefing) and the Western Regional Graduate Program (WRGP). OSU began offering discounted tuition to students from WICHE states in five pilot programs: Athletic training, nuclear engineering, pharmaceutical sciences, public health, and radiation health physics. A total of 20 WRGP students enrolled in these programs in fall 2021, and OSU leaders are considering next steps.

OSU Grad Advantage

The National Academies (2018) report on Graduate STEM education for the 21st century recommended that universities make efforts to boost graduate students' transferrable skills beyond the specialization provided in their degree program. This recommendation stems from the observation that the stability of careers has changed—workers rarely stick with the same career, let alone the same job—and that the skills needed to succeed at any given job have broadened. (Surveys of recent alumni in two OSU programs confirmed the importance of skills like teamwork, data management, public speaking, and conflict resolution; skills that they did not acquire in graduate school.) In response, a task force identified five key skill areas. The Graduate School catalogued existing opportunities across the university for graduate students to acquire those skills, and then created a student self-assessment tool that allows students to evaluate their aptitude in the five key areas and generates a student-specific report that suggests opportunities to bridge identified gaps. The university is rolling out these capabilities as "[OSU Grad Advantage](#)" and, during coming years, Graduate School leaders will identify needs and create new opportunities, both on-campus and online, to fill gaps in acquiring these essential skills.

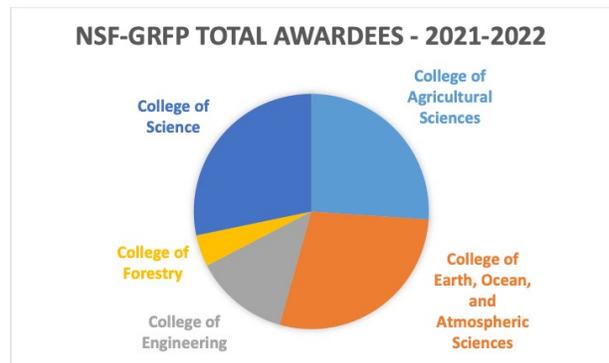
Student Experience Customer Relationship Management System (CRM)

A key project being facilitated by the Undergraduate Student Success Committee (expanded to include representatives supporting graduate student success) is the development of use cases to inform a request-for-proposal for a student engagement CRM system. This tool will allow for much better, and better-coordinated engagement and communication with students at the undergraduate and graduate levels. The committee anticipates the selection of a tool in summer 2022, with preliminary use of the CRM beginning in fall 2022. Ultimately, faculty and staff will be able to use this tool to be more proactive in advising students. The tool will allow for more consistent and coordinated engagement with all students, and seamless technical transitions for undergraduate students who continue at OSU for graduate study.

Supporting Graduate Students

The Graduate School administers and supports competitive awards, scholarships, and tuition waivers for graduate students. For AY2021-22 these include:

- Provost’s Fellowships (12-month full awards) to 20 continuing fellows and 17 new fellows; \$613K, supporting the most promising new recruits selected by colleges.
- Provost’s Scholarships (supplementary support to recruit stellar doctoral students), with awards of at least \$3,000 to 56 students; about \$306K.
- National Science Foundation - Graduate Research Fellowship Program (GRFP) - a national award program of prestigious fellowships given each year to a select group of master’s and doctoral students in science and engineering fields. NSF provides stipend support and additional support for summer tuition and academic term fees, while the Graduate School coordinates the fellowship program, provides academic year tuition waivers, and full Graduate Fellow health insurance. OSU currently has 46 NSF fellows (see chart), supported through \$1,282,277 in funding provided to OSU from NSF. In addition, the Graduate School provided tuition waivers totaling \$387,108 for these fellows.



- OSU Foundation and Gift Graduate Fellowships - Approximately \$880,000 in stipends were provided through the OSU Foundation and OSU gift account earnings to support 46 Graduate Fellowships. In addition to stipend support for each of these students, the Graduate School allocates academic year tuition waivers totaling over \$520,000. Colleges with the largest number of such fellowships are Agricultural Sciences (12), Engineering (11), and Forestry (10).
- The Graduate School administers several additional fellowships including the Prestigious Diversity Fellowship and Promising Scholar Fellowship, which currently provide stipends and tuition support for nine students totaling \$291,000 this year.
- OSU partners with the ARCS foundation, which currently supports 44 students with \$264K this year. OSU Foundation Board member Caron Ogg is currently serving a 2-year term as president of ARCS National.
- The Graduate School also provides tuition waivers to OSU qualified fellowships; in addition to those listed above, the waiver program covers tuition tied to training grants, supporting a total of 180 students this year at over \$2M.
- The Laurels Block Grant program provides financial support to academic units so they may diversify and strengthen their graduate programs through a competitive process. This year the Graduate School awarded funding to 19 academic programs in eight colleges, totaling \$546,464, to support 38 students on tuition waiver scholarships and 21 tuition awards for students with graduate assistantships. The largest block grants went to the colleges of Education (\$137K), Engineering (\$125K), and Liberal Arts (\$94K).

As they do with undergraduates, many offices at OSU work together to support graduate and professional students in crisis, including significant exception requests, dismissals, grievances, complicated advising issues, health/mental health crises, etc. The caseload this year has tracked trends before COVID. In addition, the Graduate School has implemented a tracking process to identify and reach out to students, their advisors, program directors, and associate deans, when students' GPA falls below the required 3.0, when they are at risk of timing out (5 years since oral preliminary exam), or when they are languishing (>8 years since enrolling). As an example, when faculty began identifying languishing students four years ago, the list was about 30 students; last year it was only two.

University Accreditation and Program Assessment

OSU's Mid-cycle Self-evaluation Report was submitted to the Northwest Commission on Colleges and Universities on March 11, and a (virtual) site-visit by the review committee is scheduled for April 25-26. In its report, OSU provided updates to the NWCCU on progress toward full re-accreditation (or what NWCCU calls the "Evaluation of Institutional Effectiveness") scheduled for 2026. In response to a recommendation following OSU's *Year Seven Self-Evaluation Report* in 2018, the mid-cycle self-evaluation focused on outcomes-based metrics that measure OSU's progress on mission fulfillment. These metrics also inform and catalog ongoing efforts related to the actions and tactics in Strategic Plan 4.0. As an example, Table 1 above is replicated from the Mid-cycle Self-evaluation Report and demonstrates OSU's progress on improving first year retention and six-year graduation rates.

The self-evaluation also highlighted program assessment efforts in three programs—the B.S. in Biology, the Theatre Arts Minor/Option, and the graduate programs in Food Science and Technology. All three programs are striving for the ideal of full-cycle assessment, wherein assessment of student learning informs the continuous evolution and improvement of program curricula and delivery. The self-evaluation also describes the Academic Unit Assessment (AUA) process being developed by the Provost's Office, in which performance measures for all academic departments and schools (units) are being assembled and reviewed biennially. The AUA will include data at the academic program level. It will also provide for cross-sectional comparisons of programs' progress toward meeting university educational, research, and diversity, equity and inclusion goals. This new process replaces academic program reviews previously performed on 7- to 10-year cycles for all graduate and undergraduate programs.

NEW INITIATIVES AND PROJECTS

New activities in support of academic programs continue to be driven by SP4.0 actions, specifically: to provide distinctive curricula and support innovative pedagogy to advance OSU's mission and vision; to increase learning opportunities and ensure access; to expand pathways to an OSU credential; to increase retention and graduation rates for all students; and to integrate inclusive excellence principles and practices into all aspects of the university.

Academic Readiness Preparation for Undergraduates

In fall 2021, OSU piloted during OSUWelcome academic readiness primers in math, writing, biology, and chemistry for incoming undergraduate students. A primary concern was that students starting in fall 2021 would have spent much of the previous 18 months learning through remote delivery of instruction. The sessions were not very well attended, though faculty believe them to be beneficial to students, and some of the problems were related to scheduling during an extended period of move-in. In planning for OSUWelcome in fall 2022, academic readiness

sessions will be better integrated with other activities during that week, and the colleges will assist in encouraging incoming undergraduate students to attend these sessions. In addition to preparing (or refreshing) students for academic content, these sessions will also include information about the hidden curriculum, about best methods for studying, and about the importance of self-care and mental health.

Alternative Credentials

In January 2022, Provost Feser charged a small workgroup to develop a white paper on alternative credentials and how OSU might start developing them to engage learners needing or desiring shorter, faster credentials. Broadly, alternative credentials provide alternatives to full degrees (e.g., BS, MS), and they typically take much less time to achieve. Many types of alternative credentials are for-credit, while others are non-credit. OSU's existing portfolio of undergraduate and graduate certificates fall in the category of alternative credentials, but even those require relatively high credit loads for students to complete—upwards of 25 credits for undergraduates and 18 credits for graduate students. As mentioned above, OSU is piloting via Ecampus a set of “microcredentials.” These consist of three courses, packaged together to make a cohesive whole. Upon completion of a microcredential, students receive a digital badge which they can affix to a resume or an online profile. Currently, these microcredentials are not visible on student transcripts.

With a combination of microcredentials and certificates, the university will be able to consider “stackable credentials,” in which a student can accumulate credits within structured credentials (i.e., microcredentials and certificates) until they fulfill the requirements of a full degree. The benefits to such an approach are twofold — students receive “rewards” in the form of completed microcredentials or certificate along the way, and, if a student needs to stop out for any reason, they will still leave with some form of credential(s), rather than with no official acknowledgement of the work they completed. Going forward, OSU will continue the microcredential pilot, build a stackable pathway to one undergraduate degree in the College of Business, and pursue development of non-credit to credit pathways.

Experiential Learning Hub for Undergraduates

Faculty know that undergraduate students who participate in experiential learning are retained and graduate at higher rates than those who do not. The term “experiential learning” captures various high-impact activities such as study abroad, undergraduate research, service learning, internships, capstone courses, and leadership experiences. Approximately 50% to 60% of OSU undergraduate students participate in these types of experiences, and the faculty would like to increase that number. OSU is working to create an Experiential Learning Hub. While not a physical space, the Hub will coordinate central resources for students, advisors and faculty to increase participation in experiential learning and to facilitate consistent access to opportunities across the colleges and among different student demographic groups. The Hub will connect to the colleges in various ways, but all with the intent of helping students make connections between their majors and the multiple opportunities OSU has to offer.

Supporting Graduate Student Success

A key factor in success for graduate students, especially those from underrepresented groups, is having a successful working relationship with their advisors. The Graduate School and the Office of Faculty Affairs have rolled out mentorship training for faculty delivered by the Center for Improvement of Mentored Experiences in Research (CIMER) at University of Wisconsin. In

May 2021, 24 OSU faculty were trained by CIMER, and those faculty, led by the Graduate School's Associate Dean Steph Bernell, began offering mentorship training workshops in November 2021. By the end of this academic year, they will have conducted at least 14 workshops with participation from nearly 200 OSU faculty, far exceeding the expected rate of uptake. The training uses evidence-based methods to “improve [mentoring] relationships at all career stages and promote cultural change that values excellence in research mentoring as a critical aspect of diversifying the research workforce.”

Transfer Student Success

With both the Baccalaureate Core reform and the common course numbering project, OSU seeks to have seamless articulation of coursework for transfer students coming from other Oregon postsecondary institutions, so they progress rapidly toward their degrees without a buildup of extra courses. As OSU continues to make pathways into the university easier, it is important to also ensure support for transfer students once they arrive at OSU. These students are typically older than the more traditional 18-year-olds coming directly from high school—they often have jobs, families and other obligations. OSU is considering locating a Transfer Center space in Snell Hall where transfer students could meet and study, and have ready access to advising support specific to their needs. Staff in this center could facilitate course articulation conversations for students who transfer to OSU from outside of Oregon public postsecondary institutions. In addition, staff can help all transfer student adjust to OSU and connect them to resources available to all students.

OPPORTUNITIES

Several opportunities present themselves in a post-pandemic environment:

- OSU students are asking for greater flexibility in how instruction is delivered. Face-to-face delivery and remote asynchronous delivery through Ecampus are well established, but the university must now consider remote synchronous delivery as well as hybrid combinations of multiple modalities.
- Faculty have begun conversations about OSU's role in preparing students to tackle the world's greatest problems—climate change, systemic inequities, and the erosion of trust in knowledge and science.
- With international travel opening back up, OSU expects to increase access to and participation in study abroad and other global learning opportunities.
- Pent-up demand from international students manifested as a large increase in graduate applications for fall 2022, even as graduate applications from domestic students plummeted. However, since many OSU programs are highly selective with spots limited by Graduate Assistantship funding opportunities, these shifts in applications may not change enrollment in a straightforward way.
- Expected increases in federal research funding, for example, in climate-related studies and cybersecurity, may translate into modest increases in graduate assistantships.
- Pandemic-related introspection and economic instability have prompted some to consider graduate school as the next step in their journey.
- Continued interest in Ecampus offerings is anticipated.

THREATS

As OSU emerges from the COVID-19 pandemic, leaders must be sensitive to the anxiety and exhaustion the last 24+ months engendered among many members of the university community. Nevertheless, the Graduate School and the Office of Academic Affairs are pressing forward with many key projects—Academic Unit Assessment, the single student engagement CRM, Baccalaureate Core reform, the Graduate Education Strategic Plan—that will impact faculty, staff, and students in many ways. Of course, the hope is that these and other projects will ultimately make things more efficient and effective for all parties, but it must be acknowledged that there will be growing pains along the way.

The pandemic unfortunately accelerated declines in interest from students in China and elsewhere to study in the US, owing to many factors, including perceptions of the US and attractiveness of alternatives like those in the UK and Australia.