

## Educational Programs Briefing & Discussion: Graduate

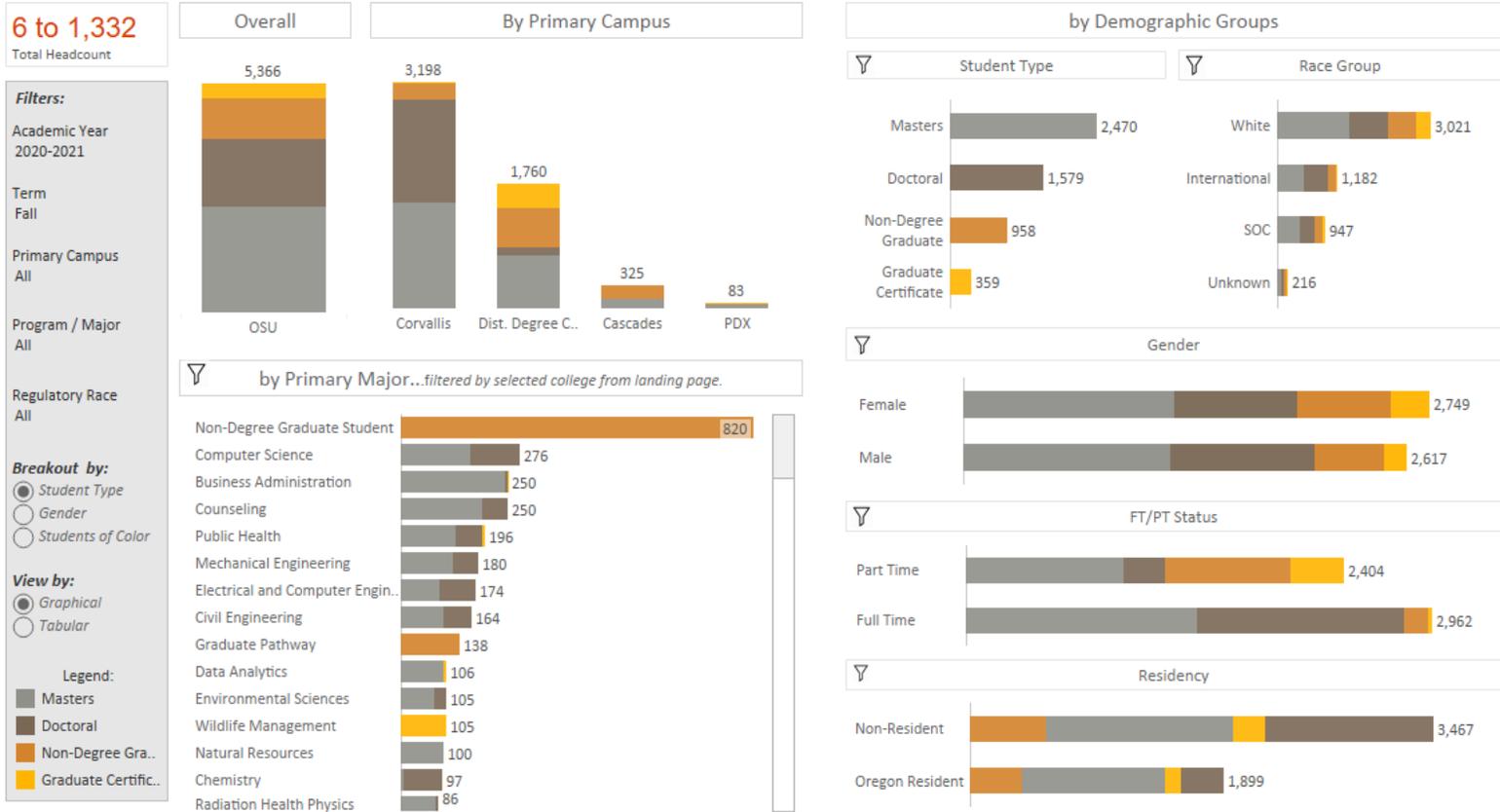
This briefing builds on last year’s report, providing additional details and updates on graduate programs and priorities, including progress on SP4.0, in the context of COVID-19.

### BACKGROUND

OSU currently has over 80 graduate programs and certificates. Figure 1 shows the 14 largest programs by enrollment, as well as nondegree graduate students, and the overall demographics of OSU’s graduate student population. Of the largest programs, five are in the College of Engineering, two in the College of Science, and one each in the colleges of Business, Education, Public Health and Human Sciences, Agricultural Sciences, and Forestry, and in the Graduate School. (Professional programs in Veterinary Medicine and Pharmacy are not included in this tabulation.) Sixteen programs are designated as interdisciplinary programs, the largest of which is Environmental Sciences.

Some of the smaller programs also serve unique roles appropriate to OSU as a land grant university, for example those with specialties in agriculture and forestry. A task force developed a set of metrics as indicators of program strength, which will be applied to all programs this spring for discussion with deans and program directors to pursue improvements in the portfolio.

**Figure 1. Graduate student enrollment summary. Numbers shown are counts of students.**



**TRENDS**

Overall, some key metrics are the inverse of those at the undergraduate level: only about 35% of applicants are admitted, and only about 35% of graduate students are Oregon residents, versus for undergraduates an admission rate of about 70% and about 70% are Oregon residents. The most competitive graduate programs are Animal Science, Biochemistry and Biophysics, Microbiology, Robotics, and Creative Writing, which admit between 8 and 12% of applicants.

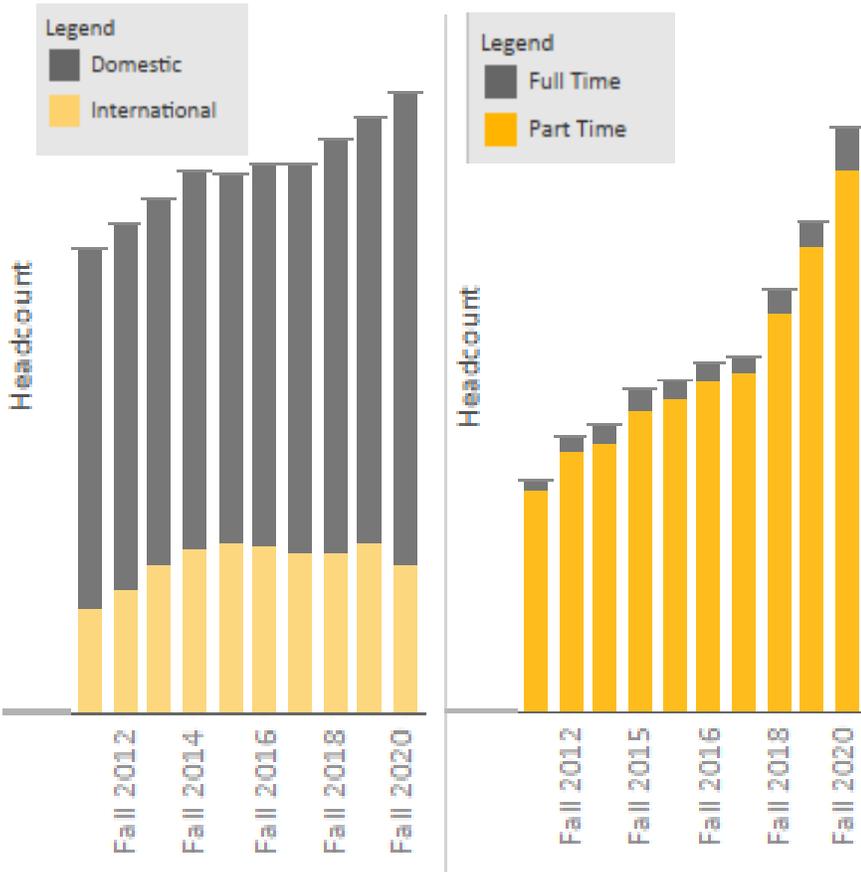
**OPPORTUNITIES AND THREATS**

**COVID-19 Impacts on Graduate Students and Programs**

Fall 2020 graduate enrollment was up from fall 2019 from 5,136 to 5,366, in spite of a nationwide drop in international enrollment (new international students were down 39% nationally), owing to strong growth in Ecampus enrollment to 1,760 (Figure 2). As in the last two major economic downturns, demand for graduate enrollment rose, and the availability and reputation of Ecampus is attractive to prospective students learning from home. However, the increases in both overall and Ecampus enrollment were consistent with pre-pandemic growth so, other than the drop in new international student enrollment and the increase in full-time Ecampus students, it is difficult to discern a pandemic effect on graduate enrollment.

However, we do have evidence that many Oregon State graduate students are struggling. As shared at the November ASC meeting, a survey in September showed that about half of the respondents reported doing worse or much worse than before the pandemic. Progress has been slowed by both academic and nonacademic factors: students are stymied by travel restrictions that cancelled or curtailed conferences, field work, and ship time; lab access is reduced due to occupancy limits; collaborations are slowed when colleagues encounter life challenges; internships and human subjects research have been cancelled. Students are worried about getting sick or infecting others; those who are teaching have had to struggle along with faculty to provide virtual instruction, support, and assessment; many are struggling financially, some are caring for children at home. Beyond what was learned from the survey, OSU saw a spike in student care cases in spring 2020 that, although it has abated, continues

*Figure 2. Total graduate enrollment (left) and Ecampus enrollment (right). Source: OSU Institutional Analytics & Reporting.*



above pre-pandemic levels. Some students may be delaying graduation to avoid a weak job market or, in the case of international students, an inability to return to their home country. Of our most prestigious awards, the Provost's Distinguished Graduate Award, four out of 83 awardees for fall 2020 deferred acceptance to fall 2021.

However, despite these challenges, the rate of degree completions has not slowed. In fact, total completions in spring 2020 were the highest of any spring quarter, and the same was true in summer and fall quarters. This fact is even more remarkable given that many universities, including University of Oregon, have extended an extra year of support to current graduate students, leading in some cases to suspending admissions for fall 2021. There is evidence both at OSU and nationally of a much higher rate of deferrals in fall 2020, especially among masters-seeking international students, which could lead to an even larger surge in enrollment in fall 2021.

## INITIATIVES

### Graduate Education Strategic Plan

The new Graduate Education Strategic Plan<sup>1</sup>, released November 2020 after over a year of campus engagement, charts a course for significant repositioning of graduate education at OSU and answers one of the actions in SP4.0 to be highly strategic in building graduate programs. The plan focuses on five themes: creatively expand OSU's support for students; strengthen core competencies and transferrable skills; promote interdisciplinary opportunities; innovate how OSU reaches and serves prospective and current students; pursue a robust portfolio of graduate programs.

Even before the pandemic, the university planned to make substantial shifts in graduate education. The pandemic and the national reckoning with systemic racism have further spurred action. Key driving forces:

- Nationally, the production of PhDs has far exceeded available faculty positions for decades, especially in the humanities. Over half of STEM PhDs go on to jobs outside of academia (at OSU it's 62%);
- PhD education at OSU and most universities focuses almost exclusively on the production of research-capable scholars, a misguided focus on "preparing all [PhD] students to be professors at research universities [which] is surely a problem because there are few such positions" [The New PhD, 2020];
- Even for those few who will become professors, rigorous preparation for teaching is rare;
- The velocity with which people move from job to job and even from career to career has accelerated in recent decades, demanding intellectual flexibility and a facility with transferrable skills that are rarely if ever taught during a typical graduate education;
- Prominent among these transferrable skills is the ability to understand and promote diversity, equity, and inclusion;

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<sup>1</sup> <https://gradschool.oregonstate.edu/about/strategic-plan>

- Many of the students pursuing masters degrees are “non-traditional” in that they have returned to school full- or part-time after a significant break or interruption (e.g., starting a family, switching careers, or serving in the military).

As many publications<sup>2</sup> have noted, universities have been slow in adjusting processes and cultures to this new reality.

OSU is well positioned to be a national leader in graduate education innovation. Our culture of collaboration, engaged scholarship, and innovation, combined with our reach and flexibility through Ecampus, provide a good starting point. During the next 18 months, OSU's key efforts include:

- Rolling out a mentorship training program for faculty who advise graduate students, to ensure (a) cultural literacy and support for underrepresented students; (b) mentoring and advising that promotes a student-centered focus and encourages students to pursue professional development opportunities appropriate to their actual career goals;
- Developing a central portfolio of opportunities to acquire transferrable skills, supported by a self-assessment tool to guide students toward the opportunities most suited to them, and documented by badges or other microcredentials (more about this below);
- Pursuing a campus-wide approach to developing a new interdisciplinary graduate program, while also carefully examining the current portfolio of graduate programs to focus investment wisely;
- Innovating how to reach and serve students. The University is working on 3+2 programs (i.e., 3-year bachelors paired with a 2-year masters in the same field) both within OSU and also in a partnership with Willamette University and OSU College of Forestry, overhauling the Accelerated Masters Platform, implementing the joint degree program in Bioengineering with UO, contributing to the development of the partnership Ecampus is building with Guild to match offerings with employers, exploring certificates, badges, and microcredentials, and more.

### **Promoting Diversity, Equity and Inclusion**

The graduate education enterprise at OSU - the Graduate School, programs, faculty, and leaders - is increasing its efforts to promote diversity, equity, and inclusion in all aspects of graduate education. Some actions underway or completed:

- Training faculty in culturally sensitive mentoring, a centerpiece of the new faculty mentor training mentioned above, aimed at improving success of underrepresented students;
- Rapidly expanding the adoption of holistic admissions practices, a strategy that considers the whole student and touches all aspects of the admissions process. Typically, holistic admissions augments the consideration of traditional measures of academic achievement (e.g., GRE scores, college GPA) with rigorous consideration of an applicant's unique experiences and non-cognitive factors associated with success in graduate school;

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<sup>2</sup> For example, National Academies 2018, 'Graduate STEM Education for the 21st Century'; Cassuto and Weisbuch 2020, "The New PhD".

- Revamped several underutilized diversity-oriented fellowships into a better-organized, higher-visibility Prestigious Diversity Fellowship and Promising Scholar Fellowship;
- Analyzing admissions statistics to explore disparities in admission rates between majority students and students of color in some programs;
- Improving recruitment practices to better reach underrepresented groups.

### **Transferrable Skills**

A key theme in the Graduate Education Strategic Plan is developing a portfolio of opportunities to acquire transferrable skills in addition to the specialized training a graduate degree offers. The infographic in Figure 3 shows the key areas (“core competencies”) and specific skills identified by a task force. We are now building out an inventory of both for-credit and non-credit offerings in each area. The most important, overarching area is justice, equity, diversity, and inclusion, which touches each of the other four areas.

Figure 3. Transferrable skills and graduate core competencies.

# GRADUATE CORE COMPETENCIES

These broad competencies are meant to complement those acquired via the specific discipline, degree, and/or graduate program

