

## **OREGON INSTITUTE OF TECHNOLOGY (Oregon Tech) 2017-19 CAPITAL REQUESTS NARRATIVE**

### **INTRODUCTION**

Oregon Tech is the only polytechnic university in the Pacific Northwest. Our multiple areas of expertise and close connection to Oregon industry make Oregon Tech unique. We would serve all of Oregon and the entire NW region better with adequate investment to grow our highly competitive, high-ROI programs. Oregon Tech has a positive impact on Oregon's economy. In terms of the earning power of its graduates, Oregon Tech has more than 700 graduates per year, of which 90% either have a job or continue with their graduate education within 6 months of graduation. Even using a conservative average starting salary of \$55,000/year, this equates to \$34,650,000 earnings. Since approximately 70% of graduates remain in Oregon, this equates to an attributed increase in income tax (70% of earnings equals \$24,255,000 in Oregon payroll, which, multiplied by Oregon's 9% marginal income tax rate equals \$2,182,950 in incremental income tax for Oregon from OIT's new graduates annually).

Oregon Tech is a vibrant and sustainable university that requires a facility master plan that is continually evolving to meet current needs and will help us anticipate future opportunities and utilize best practices. Plans are currently underway to update the 2006 Oregon Tech Facilities Master Plan. The facilities master planning includes an assessment of existing conditions, additional renewable-energy opportunities, and exploration of best practices that will result in a master plan that captures priorities, costs and timelines. The master plan will serve as the Klamath Falls and Wilsonville campuses interactive database of existing building information, which will be integrated into other data tools such as energy monitoring, security, maintenance, and technology, and will be used as a facility management tool. The Facility Master Planning process will link facilities master planning to academic programs, including simulations of the master plan in the classroom.

The Klamath Falls campus was mostly built in the mid-1960s and is beginning to show its age, despite our best efforts to keep up with maintenance, code, ADA, safety, energy efficiency and obsolescence issues. A January 2016 update shows the deferred maintenance backlog on the campus at \$32.38M, broken down in the following categories:

Oregon Tech Deferred Maintenance Backlog as of January 2016:

- Interiors - \$4.99M total, including doors (\$400K), ceiling and floor tiles containing asbestos (\$975K), lighting upgrades for safety and energy efficiency (\$1.6M), painting (\$875K), restroom modernization (\$740K) and various ADA issues (\$400K).
- Exteriors - \$14.34M total, including doors (\$405K), seismic upgrades (\$10.5M), window replacements (\$1.45M), lighting (\$300K), siding and painting (\$1.29M), concrete sidewalk and stair replacements/repairs (\$400K).
- Mechanical - \$2.21M total, including geothermal/chiller maintenance (\$545K), HVAC upgrades/replacement (\$1.34M), elevator modernization (\$330K).
- Utilities - \$9.2M, including geothermal- and domestic-water well maintenance (\$785K), transformer replacements (\$640K), electrical panels and distribution needs (\$5.3M), fire and life safety needs (\$2.48M).

- Roofs - \$1.64M, for repairs and replacements.
- **Total - \$32.38M**

Given these deficiencies, there is great need for both continued investment in capital improvement and repairs as well as renovation projects that will address the most urgent needs. In addition, Oregon Tech currently has record high enrollment (projected to serve 6,500 annual unduplicated head count enrollment this year - up from just over 5,000 in 2010-11) and needs funding for new facilities to serve this growing enrollment. Much of this growth is in areas of critical workforce needs in Oregon (e.g., engineering and health professions), which go far in meeting the State’s 40-40-20 goals, meeting the workforce needs of our various employers, enabling the creation of start-up companies, and serving as incentives for outside industries to consider relocating to Oregon. In addition, much of the enrollment growth is comprised of first generation, low-income, under-represented and rural student populations, thus the delta they will obtain from a college education in terms of impact on their lives, contributions to society and earnings power will be very significant.

Oregon Tech’s debt burden ratio for the last three years is as follows:

Oregon Tech	<u>FY2015</u>	<u>FY2014</u>	<u>FY2013</u>
Debt burden ratio (includes foundation)	5.19%	4.55%	4.99%

The only new institutional debt contemplated in this request is for \$5.0M in Article XI-F debt associated with a new student recreation center, should the students vote to tax themselves to finance such a project. This would add approximately \$300,000 (\$5.0M @ 5% for 30 years) in annual debt service. Adding this annual payment would increase the debt burden in FY 2015 to 5.66% using the same denominator as was used in the calculation above.

**2017-19 CAPITAL CONSTRUCTION REQUEST PRIORITY RANKING**

Oregon Tech is proposing the following rank order for the three capital construction and modernization projects to be considered by the Higher Education Coordinating Committee (HECC). You will note that these are the same three priority projects that we submitted in 2015. In 2015-17 we were given partial funding (\$11.7M of \$48M requested) for our first priority project. The working title, justification and detailed description of each project are included below along with an impact statement, timeline, estimated cost and funding plan for each project.

Oregon Tech respectfully requests that these three projects be included in the 2017-19 Legislative Capital Requests submission as capital construction and modernization projects.

**Priority 1 - CENTER FOR EXCELLENCE IN ENGINEERING AND TECHNOLOGY/RENOVATION OF CORNETT HALL**

Oregon Tech requests \$42 million to continue modernizing Cornett Hall and build a new integrated Engineering and Technology lab and classroom building. The plan allows the renovation of Cornett Hall with minimal interruption to programs housed in the building as well as the design and construction of a new facility to serve the growing enrollments in these workforce-critical areas. Our plan is to use the funding authorized in 2015-17 to begin renovating Cornett Hall as the first phase of this project. The next phase involves finishing the renovation of Cornett Hall and constructing a new classroom and laboratory facility that will focus on engineering, innovation and economic development.

Justification and Impact: Oregon Tech's current Facility Master Plan includes concepts for the modernization and expansion of the current Engineering & Technology Building (Cornett Hall) on the Klamath Falls campus. This project will enable Oregon Tech to continue to excel in its delivery of Engineering & Technology education and other STEM programs. Last year, Oregon Tech was ranked 45th in the nation in undergraduate engineering education by *U.S. News & World Report* for those universities where Bachelors and Masters Degrees are the highest offered. The renovated and expanded Engineering & Technology Center will empower Oregon Tech to expand its training opportunities for high school and middle school technology educators and provide opportunities for coordinated lab utilization with the regional community colleges (Klamath Community College currently shares lab space in Cornett Hall). Oregon Tech's curriculum will be delivered in updated and ADA-accessible labs and classrooms, in a variety of formats and timeframes, giving our increasingly diverse student body every opportunity to learn and succeed in these challenging Engineering & Technology programs. The "smart" designed classrooms and labs will offer flexible configuration of the space to enable multi-use functionality, which provides better utilization of the facility capacity and supports future introduction of new curriculums without additional capital investment.

The Center for Excellence in Engineering and Technology/Renovation of Cornett Hall project will provide expansion space for the Oregon Renewable Energy Center's educational and outreach programs by accommodating more applied research with industry partners as well as consumer and small business education services. With the completion of the Geothermal Power Plant, the 2-megawatt solar array and the implementation of the Renewable Energy Engineering Master's program, Oregon Tech is positioned to be a leader in Renewable Energy, Engineering and Advanced Manufacturing education.

The existing facility, Cornett Hall, was originally built in 1964 and has been adapted over the years to accommodate a wide variety of programs. The building's envelope and systems are beyond their useful life and have a substantial Deferred Maintenance backlog. In addition, the building has inadequate structure to comply with seismic codes and emergency egress, requires asbestos abatement, and is not ADA-accessible. Completion of this building project eliminates multiple life-safety and ADA-compliance issues, expands the building's functionality and will increase its efficiency.

Over the last 10 years, Oregon Tech has positioned itself nationally as an educational value in Allied Health and Engineering & Technology programs. Superior applied-technology education is a result of dedicated faculty and modern teaching facilities. The \$30+ million Martha Ann Dow Center for Health Professions on the Klamath Falls campus, finished in September of 2009, gave Oregon Tech the ability to provide one of best educations available nationally in the Allied Health programs offered. This

excellence is evidenced by all Allied Health programs being at or close to enrollment capacity. Oregon Tech now requests similar funding to upgrade its Engineering & Technology classrooms and labs to allow its dedicated faculty to work in modern facilities that can accelerate student success and expand the diversity of its students enrolled in its Engineering & Technology programs.

Oregon Tech expects a successful campaign of fundraising, both for cash gifts as well as gifts in-kind of equipment for this capital project relative to our institutional capacity. Similar success in fund raising and gifts in kind was achieved for the Martha Ann Dow Center project.

Timeline:

- Design and Planning Begin in 2017.
- Bid Construction Documents 2018.
- Construction to begin Summer/Fall 2019
- Estimated Completion Spring 2021

Program Summary Concept: **(new facility only, not including Cornett)**

- Laboratory/Classroom/Invention Space 61,000 gross sq. ft. (GSF)
- Office Space 12,000 GSF
- IT Data Center/Offices 2,000 GSF
- Gathering/Study & Common Space 15,000 GSF
- Gross Square Feet (GSF) 90,000 GSF

Project Cost (estimated):

- Technology and Engineering Center Design & Planning / Architect & Engineering: \$6.4M
- Construction Costs/Infrastructure Development: \$28.1M
- Furnishings & Fixtures: \$3.0M
- Lab Equipment: \$1.0M
- Contingency: \$4.5M
- **Total: \$42.0M**
- Total Square Feet – 90,000 sq. ft.
- Construction Costs per SF \$312.22
- Maintenance Costs per SF \$8.00

Funding Requested:

- Article XI-Q Bonds: \$38.0M (State to pay debt service)
- Article XI-G bonds: \$ 2.0M
- Local match/gifts: \$ 2.0M
- **Total: \$42.0M**

**Priority 2 - NEW STUDENT SERVICES CENTER BUILDING/POSSIBLE STUDENT RECREATION CENTER:  
\$15.0M/\$5.0M – Total \$20.0M**

Construction Cost Justification and Impact:

Oregon Tech requests \$15.0M to build a new LEED Silver, two-three-story ~40,000 GSF building as the new home for student engagement and enrollment on campus. The Building will bring together programs from four separate buildings, streamlining the student experience and making more efficient campus operations. The new building will potentially house enrollment services, admissions, financial aid, registrar, student receivables and cashing services, disability services, veterans' services, student success center and career services in a one-stop location. This move will free up space in four buildings for needed growth for both academic and administrative functions. This building will support student recruitment and retention, helping Oregon Tech to achieve our 40/40/20 goals. The three-story building is configured to be an inviting and welcoming front door to campus, a first stop for new students and a gathering place for returning students.

If the new building is located at the Klamath Falls campus entrance, it will become a gateway to the center of campus. It would be situated for visibility and ease of access for visitors. A two-story porch and glass lobby invites students into the building and provides immediate way-finding within the space, including a welcoming help desk. The building will be designed as a crossroads, connecting popular paths in new ways. Due to the steep site, the building could be entered on grade at any of the two-three levels, creating a new accessible way to traverse some of the most difficult terrain on campus. The southwest corner would be the primary entrance and gives direct ADA access to the first level. On the second floor, the north facade exit bridges directly to the Campus Union. The entrance on the northeast corner would have a direct-accessible path to the Residence Hall from level two. A second primary entrance to the building from the parking lot would open directly into the upper level of the two-story lobby.

Oregon Tech is expanding Student Success Programs to focus on providing supplemental support for students who have academic needs, are first-generation college students, returning veterans, and students with disabilities or are low-income. These services will require additional learning and staffing space. Some of the student success programs include tutoring, mentoring, networking, college-success classes, and developmental academic advising. Many of our at-risk students require supplemental instruction early and often, due to under-preparation in STEM courses and the rigor of Oregon Tech's academic programs. The additional learning spaces in the new Student Center Building would provide each student with the greatest chance of success by connecting each student with as many resources and services as possible in one building. This supports Oregon Tech's goal to provide timely intervention with struggling students to improve the chance of degree completion, and shortens the number of academic terms to graduation. Student success programs also decrease the students' cost and the State's risk of lost education dollars due to students withdrawing prior to graduation.

In addition, Oregon Tech is working with its students to determine the feasibility, cost and funding for a new student recreation center. At this point, we are requesting a placeholder of \$5.0M in Article XI-F bonds to fund the construction of a small recreation center. This project will need to be approved by students in a referendum in order to implement a new student recreation center fee to be assessed to all students enrolled on the Klamath Falls campus. (Note: debt burden impacts of this project discussed earlier).

Timeline (assuming the project is authorized in 2017-19):

- Design and Planning Begin in 2017.
- Bid Construction Documents 2018.
- Construction to begin Summer/Fall 2019
- Estimated Completion Spring 2021

Program Summary Concept (not including recreation center component):

- Office Space ~28,000 GSF
- Gathering/Study & Common Space ~12,000 GSF
- Gross Square Feet (GSF) 40,000 GSF

Project Cost (estimated – again not including recreation center component):

- Student Center Design & Planning / Architect & Engineering: ~\$2.2M
- Construction Costs/Infrastructure Development: ~\$10.5M
- Furnishings & Fixtures: ~\$800K
- Contingency: ~\$1.5M
- **Total: \$15.0M**
- Total Square Feet: 40,000 GSF
- Construction Costs per SF \$262.50
- Maintenance Costs per SF \$7.00

Funding Requested:

- Article XI-Q Bonds: \$15.0M (State to pay debt service)
- Article XI-F bonds: \$ 5.0M (assumes student referendum supports project)
- **Total - \$20.0M**

### **Priority 3 - BOIVIN HALL MODERNIZATION: \$7.4M**

Modernization Renovation Cost Justification and Impact:

Oregon Tech requests \$7.4M to modernize Boivin Hall into a LEED Silver classroom and lab building. This project updates the interior and exterior of the existing 47,400 GSF Boivin Hall. The building remodel includes the complete redevelopment of the interior and a limited amount of envelope upgrades. The project includes substantial upgrades to all of the building systems and will bring the buildings into compliance with current building and safety codes, ADA, and other pertinent regulations. Work will include some repartitioning, as classrooms and offices are right-sized for current uses and upgraded to current technology (smart classrooms). The work will include new finishes throughout, new floors, ceilings, and lighting. It also will widen corridors, update ADA-accessible restrooms, and create study/interaction spaces. A new lounge space will be created in the center of the plan with new skylights and upgraded finishes, some fixed casework for study alcove seating, and upgraded finishes in social spaces. The project also includes HVAC, plumbing, and seismic structural upgrades. Exterior improvements will include some new windows in classrooms and offices and new weather vestibules. On the exterior, cladding failures will be addressed and new brick piers will be added to match the recent Owens Hall modernizations.

Timeline (assumes project authorization in 2017-19):

- Design and Planning Begin in 2017.
- Bid Construction Documents 2018.
- Construction to begin Summer/Fall 2019

- Estimated Completion Spring 2021

Project Cost (estimated):

- Design & Planning / Architect & Engineering: \$267K
- Construction Costs/Infrastructure Development: \$6.02M
- Furnishings & Fixtures: \$667K
- Contingency: \$445K
- **Total: \$7.4M**
- Total Square Feet – 40,400 sq. ft.
- Construction Costs per SF \$149.01

Funding Requested:

- Article XI-Q Bonds: \$7.4M (State to pay debt service)
- **Total: \$7.4M**

Alignment with State and Institutional Goals:

- ✓ **40/40/20 goal:** Oregon Tech has established enrollment goals in its Academic Master Plan (AMP) to meet or exceed its portion of the state's overall 40/40/20 goal for bachelor's and master's degrees. The Oregon University System's previous calculation for enrollment at Oregon Tech, based on historical proportions of OUS graduates, is 5,400. As noted above, we are already serving 6,400 head count this year and this could easily grow to 8,100 by 2025. To achieve the state's graduation targets, Oregon Tech will need to enroll over 1,100 additional students by 2025 to reach its projected headcount and graduation targets, an overall increase of 23% over 10 years, or approximately a 2.5% net gain per year. Oregon Tech will also need to engage in robust student support strategies to increase the retention and graduation rates of its student body.

Per the Academic Master Plan, Oregon Tech will focus its academic investments in four key areas, tied to its strategic assets: Klamath Falls, Wilsonville, Online and Extension Campuses. Each campus serves a different type of student and a unique learning model. With appropriate strategic investments in faculty, facilities, equipment and support services, each asset quadrant has the potential for realistic, measured enrollment growth, catering to traditional, place-bound, non-traditional, diverse, and technology-supported students and learning environments. Currently, the urgent facilities needs are in Klamath Falls.

Oregon Tech's Academic Master Plan calls for a multi-pronged approach to reaching its growth targets, including increasing the number of students enrolled through academic program growth and innovation; offering more flexible pathways to degrees and certificates through partnerships and non-traditional educational delivery methods; and increasing the diversity, retention and success of the students it serves.

The Center for Excellence in Engineering and Technology/ Renovation of Cornett Hall is a key element of the Academic Master Plan to enable academic program growth and innovation. Improvements to Cornett Hall will make it safe and accessible for all students to learn in the industrial-grade labs, while the new Center will provide opportunities for multi-disciplinary, invention and collaborative spaces and modern teaching facilities.

The Student Success Center also plays a critical role in achieving Oregon Tech’s graduation goals. By consolidating student services for ease of access, and expanding retention and academic success programs. The university is striving to improve the graduation rate and address the wide range of student needs for veterans, learning and physically disabled students, first-generation students, and the growing number of partnerships and pathways programs.

The Boivin Hall Renovation will also provide right-sized, flexible, smarter classroom spaces and increase ADA accessibility.

Oregon Tech graduates approximately 730 students per year, and is striving to reach over 1,000 graduates per year, with expansion space in Cornett Hall /new Center for Excellence in Engineering and Technology in Klamath Falls, Student Success Center, and Boivin Hall Renovation. All projects will increase the university’s ability to serve a diverse population of students. The impacts will be observed when Oregon Tech reaches its goals by 2025.

✓ **Statewide economic development or workforce goal (identify the goal or goals addressed):**

The state developed the Oregon Talent Plan in 2015 to target investment in key occupations and industries to close talent gaps and to establish aspirational goals for economic development. According to the Talent Plan (2015-2017), Oregon Tech is right on target to fulfill the state’s goals.

“While key talent gaps exist at all skill and education levels, the Oregon Talent Council’s (OTC) legislative mandate is to focus on *professional and technical occupations critical to the competitiveness of Oregon’s traded sector and high growth industries*. This mandate, along with the very modest amount of investment funding provided, requires that the OTC further focus this initial Talent Plan on areas it believes will provide a strong return on investment in the short to medium term.

Therefore, the criteria for which occupations in this initial plan will be analyzed and prioritized include:

- Occupations classified as professional and technical in nature, including skilled craft positions
- Occupations that pay at or above the state average wage
- Occupations that require some form of postsecondary training
- Occupations that have a demonstrated demand through 2022 and have been identified by industry as hard to fill or mission critical

Finally, for this initial Talent Plan, the OTC will focus the above criteria on five industry sectors that are of growing economic importance to the state, and/or that enable the growth or advancement of multiple industries. These are: Technology, Advanced Manufacturing, Energy Technologies and Utilities, Healthcare, Bioscience.”<sup>1</sup>

Based on the compelling evidence in the Oregon Talent Plan, Oregon Tech is well-positioned to close some of the talent gaps, with improved classrooms and labs that will help attract students to Klamath Falls, and exceptional academic support services for the myriad of rigorous degree programs. Oregon Tech produces graduates with professional and technical occupational degrees, high-paying salaries, and

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<sup>1</sup> [http://www.oregon.gov/EMPLOY/OTC/Documents/OTC\\_TalentPlanDraft\\_11-5-15.pdf](http://www.oregon.gov/EMPLOY/OTC/Documents/OTC_TalentPlanDraft_11-5-15.pdf)



in all of the high-demand industry sectors that the state aspires to grow. These capital projects are essential for Oregon Tech’s growth and industry-responsive talent development.

✓ **Institutional goal (identify the goal or goals being addressed):**

Oregon Tech’s capital project requests establish the foundation for fulfilling multiple institutional goals. Oregon Tech’s Strategic Action Plan 2020 states:

“We will have advanced our strategic vision if we are (subset):

- Growing and transforming to meet the needs of the State of Oregon, as its demographics and industry needs change and intersect over time.
- Focusing on and **expanding access** for Oregon students – particularly those who face significant barriers -- to meet our 40-40-20 obligation and ensure that Oregonians are not left behind; and successfully advocating for the financial resources to ensure students can be supported to stay in college and earn a degree.
- **Building and maintaining state-of-the-art labs and classrooms to ensure that our graduates are learning in the same environments and on the same sophisticated equipment that they will encounter in high-tech and healthcare workplaces.**
- Offering a **safe campus environment** for our students, faculty and staff, and an open and welcoming environment for our community neighbors that reflects our philosophy of engagement, equity, passion for intellectual pursuits, and public service.
- **Leveraging all the assets of Oregon Tech: A rural residential campus in Klamath Falls (Oregon Tech Klamath Falls), a non-residential urban campus in Wilsonville (Oregon Tech Wilsonville), an online campus (Oregon Tech Online), and extension operations (Oregon Tech Extension).**

In addition, Strategic Action Plan, Goals 3, focuses on one of Oregon Tech’s most distinguished academic characteristics: Experiential learning for student success. Oregon Tech’s tagline, “hands-on learning for real-world achievement,” describes its applied education model, with integrated classroom and lab instruction, complemented by experiential learning. Oregon Tech will increase the success of its students with improved instructional spaces, complemented by increasing industry partnership that expand experiential learning opportunities throughout a student’s education. The Center for Excellence in Engineering and Technology / Cornett Hall Renovation, and the Boivin Hall Renovations will have a positive impact on graduate success.

✓ **Other Statewide goals and impact of the project on improving access and success for underrepresented, first generation, rural, and low income students. Describe how the impact of the project on these student groups will be measured and when the impacts can be observed.**

Oregon Tech’s Strategic Action Plan, Goal 4 is focused on Diversity, Retention and Success of Students. The new Student Success Center will be designed to support more diverse, first-generation students, as well as providing space to enhance faculty training and skill development. Faculty advisors need to stay current with the changes in both a student’s and the university’s environment and how these changes impact a student’s ability to reach their academic and career goals. Frequent and recurrent training for faculty advisors would center on trends in student populations (i.e. risk-factors and their impact on learning, environmental stresses, goals, attitudes, and abilities) and changes in academic requirements, services, and processes.

The Student Success Center will also allow Oregon Tech to further expand retention and academic advising to support on-time graduation, supported by professional academic advising staff.

Oregon Tech is evaluating a transition to a hybrid advising model that includes both professional and faculty advisors. The professional advisors will conduct a more holistic approach to helping the student achieve their academic goals. The faculty advisor's focus will be on program requirements to ensure a student reaches their ultimate career goals. The two advisors will work closely ensuring the student receives all the support needed to be successful while at Oregon Tech and in the workforce. The Center will also better integrate Academic Advising with Career Advising so students can chart their path to both a degree and a professional career after graduation.

Oregon Tech currently measures and reports student diversity (23%), PELL-eligible (32%), freshmen retention rate (78%), six-year graduation rate (46%) and graduate success rate (90%) to the HECC (2015-2016). The impact of the capital investments will be measured by a positive increase in these outcomes.