

The background of the cover is a photograph of the Oregon Tech campus. A large, curved, rusted metal sculpture dominates the left side of the image. In the center, a wide set of concrete stairs with black metal railings leads up a grassy hill. Several students are walking on the paths. Large, leafy green trees are scattered throughout the scene, and a parking lot with several cars is visible in the background under a cloudy sky.

Oregon **TECH**

College of Engineering,
Technology, and Management

Oregon's Polytechnic University

2024
Annual Report

Oregon TECH

College of Engineering,
Technology, and Management

\$70K Average Starting
Salary

- **6 Departments**
- **19 Undergraduate Programs**
- **4 Graduate Programs**
- **1,497 Students**
- **30+ Labs**
- **20+ Student Organizations**
- **3 Research Centers**
- **Over \$300K in Scholarships**
awarded to 99 ETM Students

96% Placement Rate
after graduation

Greetings,

Welcome to the inaugural 2024 Annual Report of the College of Engineering, Technology, and Management at Oregon Tech! As the new Dean of the College, I'm thrilled to share some of the incredible accomplishments that have taken place across our departments this year. Our faculty, staff, and students have achieved remarkable success at regional, national, and international levels, and I am proud to share these achievements with all our stakeholders.

Since joining Oregon Tech as Dean in January 2024, we have launched a new interdisciplinary bachelor's program in Construction Management, generously supported by a \$500,000 grant from the Beavers Trust, which allows us to focus on heavy construction. Our faculty has secured over \$4 million in external funding, supporting cutting-edge research and innovation. Our students have excelled on the world stage, competing in prestigious international competitions like SAE Baja, Formula, and ASCE Steel Bridge, where they performed exceptionally. Meanwhile, our Business Department has continued to inspire entrepreneurial thinking through events like "Catalyze Klamath," "Ready, Set, Innovate," and "Jump into Business," attracting and preparing students for success in the innovation-driven world.

Our commitment to small class sizes, hands-on learning, and applied research—hallmarks of Oregon Tech—ensures that our students benefit from an educational experience that is both immersive and practical. Our state-of-the-art facilities, made possible through more than \$170 million in recent investments, provide the ideal environment for this work. We are equally proud of our students' outcomes, with a 96% job placement rate and an average starting salary above \$70,000.

I invite you to explore the exciting updates from each of our departments in this report and to visit us anytime to witness these achievements firsthand.

Go Owls!

Neslihan Alp,
Ph.D., P.E., ASEM Fellow

Dean
College of Engineering,
Technology & Management



APPLIED COMPUTING & GEOMATICS

Geomatics program receives national professional education award: \$25,000

Oregon Tech's Geomatics program has received a 2023 National Council of Examiners for Engineering and Surveying (NCEES) Surveying Education Award. The award is a measure of a program's success in inspiring its graduates to achieve their highest educational and professional aspirations.

The NCEES Surveying Education Award recognizes surveying/geomatrics programs that best reflect NCEES' mission to advance licensure for surveyors to safeguard the health, safety, and welfare of the public. Universities from across the U.S. apply and only 13 were awarded prizes of \$25,000 to \$10,000; Oregon Tech was awarded the only \$25,000 prize.

July 2023

Oregon 2023 Surveyor of the Year: Jack Walker

Oregon Tech is proud to announce that Geomatics Professor and Department Chair Jack Walker has been honored as the 2023 Surveyor of the Year by the Professional Land Surveyors of Oregon (PLSO). The award, presented at the PLSO 2024 Conference Jan. 19, recognizes Walker's outstanding contributions to PLSO and the geomatics profession.

"I was surprised and humbled to receive this award," said Walker. "Oregon Tech Geomatics graduates hold prominent positions in the profession, and I am grateful to have contributed to their career success."

Walker, an Oregon Tech alumnus, began his academic journey studying Civil Engineering, but after taking courses in surveying, he changed majors and has enjoyed more than four decades studying and teaching geomatics. After 40 years, Jack Walker retired as a Geomatics professor from Oregon Tech in June of 2024.

January 2024

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NCEES

Students using surveying equipment on the Oregon Tech Klamath Falls campus.



Professor Jack Walker testing Drone.



BUSINESS MANAGEMENT



DEPARTMENT SPONSORED EVENTS
AND PROGRAMS



Richard Bailey



Sandra Bailey



Pat Schaeffer

The Business Management department said a very fond farewell to three of its long-standing professors this year: Richard Bailey, Sandra Bailey, and Pat Schaeffer. Richard, Sandra, and Pat educated Oregon Tech students for a combined total of 60 years. Their expertise, professionalism, and drive to educate tomorrow's leaders has been an asset to Oregon Tech throughout their tenure.



New Degree Program: **CONSTRUCTION MANAGEMENT**

A Bachelor of Science in Construction Management will be offered at Oregon Tech beginning in Fall of 2025. This program is being supported by alumnus Bill Dutra (Civil Engineering Technology Class of 1971), Executive Chairman and founder of The Dutra Group.

Sustainability Studies

in Nordics - The world as a classroom

Management Professor and chair, Dr. Sonja Bickford, along with the College of Health, Arts, and Sciences Interim Dean, Dr. Nate Bickford, and Natural Science Professor, Dr. Jherime Kellermann took a group of 25 students to universities, businesses and agencies in 4 north European countries for three weeks in August 2024 to provide Oregon Tech students a chance to network, engage, and learn through a cross-cultural exchange and explore leadership, sustainable transformation, and innovation.



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STEEL BRIDGE

As part of the American Society of Civil Engineers and American Institute of Steel Construction, students from Oregon Tech's Civil Engineering program participated in the Pacific Northwest Student Steel Bridge Competition held April 6 in Vancouver, British Columbia.



CIVIL ENGINEERING

Research Collaboration with UTA

In October, Dr. Jintai Wang hosted researchers from the University of Texas at Arlington to collaborate on a project testing a pavement icing sensor and driver warning system. The goal of the project is to enhance winter road safety through this warning system.

While on campus, one of the UTA researchers, Ph.D. candidate Taryn DeLorenzo, presented to students and faculty. The sensor was installed in the southwest corner of campus, specifically in Parking Lot E, and will gather data for six months. The team plans to return in April 2025 to evaluate the data collected during the winter season.



UTA Team with Dr. Neslihan Alp (center) and Dr. Jintai Wang (far right) installing the Ice Sensor.

Oregon Tech Civil Engineering Students showcase Asphalt Research at Industry Meeting

In December, Oregon Tech Civil Engineering students Serena Moha and Kacie Schmidt (pictured left), along with Dr. Roger Lindgren, presented their research findings to industry leaders and officials from the Oregon Department of Transportation (ODOT) at the Annual Meeting of the Asphalt Pavement Association of Oregon (APAO).

The students' presentation focused on the early results of their research, which investigates the incorporation of aramid/polyolefin fibers into asphalt mixtures.

The study involves performance testing of both field- and laboratory-prepared asphalt samples, evaluating their durability in addressing cracking and rutting distresses. Lindgren noted that their research aligns with an industry shift toward Balanced Mix Designs (BMD) in asphalt pavement, which he believes is poised to become the industry standard in the coming years.



COMPUTER SYSTEMS ENGINEERING TECHNOLOGY



Annual Alumni BBQ

Oregon Tech alumni Allan Snippen '07 and TeriAnn '07 and Jesse Stafford '07 welcomed alumni for an afternoon of food, refreshments, lawn games, alumni swag, and great conversation at the Snippen residence in Reno, Nevada in August, 2024. It was a great opportunity to connect with University leadership including the Dean of the College of Engineering, Technology, and Management, Dr. Neslihan Alp, Vice President of Student Affairs, Dr. Mandi Clark, CSET Department Chair, Dr. Stefan Andrei, Executive Director of Development, Mira Wonderwheel, and Director of Student Services, Elizabeth Stovall.

Max (2014 Computer Systems Engineering Technology)
& **Charlene Blumenthal** (2013 Respiratory Care)



OIT.EDU/CSET



Oregon NASA Space Grant Consortium Winner

In June of 2024, CSET professors Dr. Stefan Andrei (PI) and Dr. Ganghee Jang (co-PI) were awarded a \$80,385 grant from the Oregon NASA Space Grant Consortium, with support from Dean Neslihan Alp, for a project titled "Investigation of protective covers for solar panels and maintenance controllerlike resistant to space elements powering satellites and other engine-based systems from the Earth Orbit and beyond." CSET student Cameron Robinson will be working with fellow CSET student Chase Uhrich on the duration of this project, which will be completed by May 2025.



Cameron Robinson was awarded first place with a poster called "Developing a 2D LIDAR Collision Avoidance Algorithm for a Quadcopter" in April 2024, during the Student Poster Competition at the 11th Institute of Electrical and Electronics Engineering (IEEE, pronounced "Eye-triple-E") Conference on Technologies for Sustainability (SusTech 2024); a top conference in computer technologies. Cameron's mentor throughout the duration of the project was CSET professor Dr. Ganghee Jang.

Agro-PV Dome

If we're to have Renewable Energy (RE) to be 30% of the energy mix of the country by 2030, we will have to build a lot of solar farms, which need large flat areas of land with max sunlight. The challenge is the land need of agriculture – the traditional users of such lands in our country. At some point soon enough (if not already happening right now), there will be fierce competition for such ideal lands. We cannot have all the RE we want, but not eat. The AGRO-PV Dome is an innovative way to have both production of clean power and agriculture from the same plot of land in sustainable manners. This is OREC (Oregon Renewable Energy Center) and Oregon Tech in action!



Oregon Tech Renewable Energy Students win Visionary Award at Statewide Invention Competition



Oregon Tech Renewable Energy Engineering student Adama Toure and Electrical Engineering student Jordan Harris-Toovy won the Visionary Award at the June 27 Invent Oregon Collegiate Challenge (InventOR) for their fault detection technology that monitors the life of solar panels. InventOR stated that the concept, if realized, has the potential to make a lasting impact on the world.

Toure and Harris-Toovy's company, named Second Life Solar, developed a low-cost solar panel monitoring prototype that uses sensors to detect and classify faults in solar panels. The team said this new technology could improve solar panel reliability and safety. The technology also enables the safe refurbishment of used solar panels for grid-connected applications, reducing solar panel waste and contributing to a circular economy in the solar panel industry.

The Visionary Award included a \$2,500 prize that Toure and Harris-Toovy will use to incorporate their startup and develop their next prototype. Toure and Harris-Toovy received an invitation to InventOR after competing in Oregon Tech's Catalyze Klamath Challenge in April.

ELECTRICAL ENGINEERING & RENEWABLE ENERGY

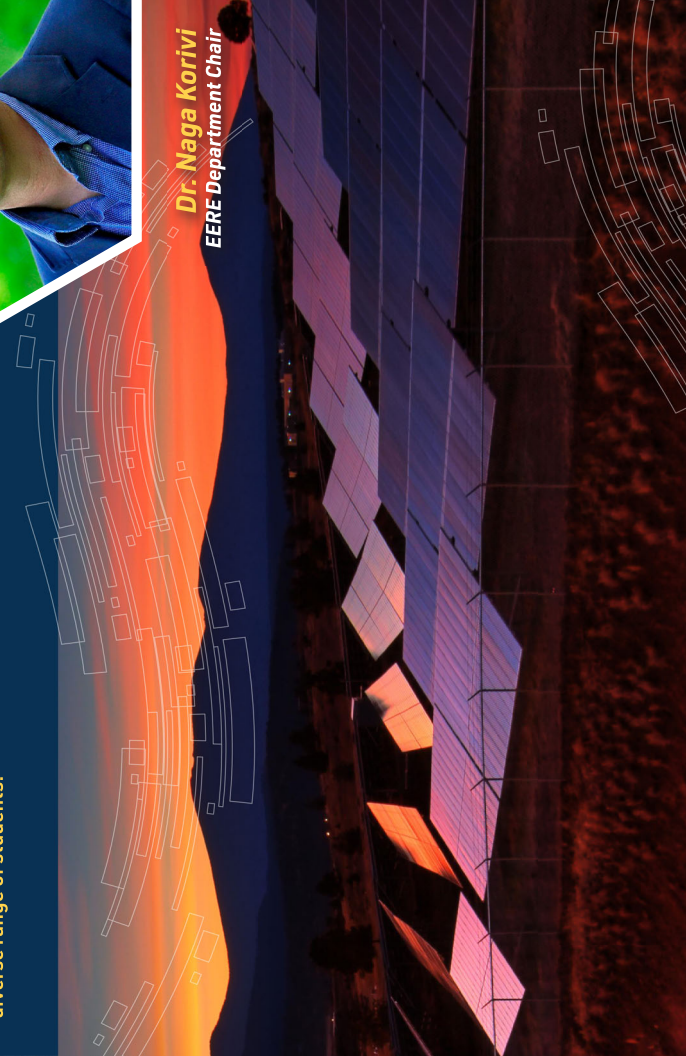
Electrical Engineering & Renewable Energy receives Intel Funding to grow Semiconductor Manufacturing Pipeline

The Electrical Engineering and Renewable Energy (EERE) Department at Oregon Tech has received funding from Intel Corporation, one of the world's largest semiconductor chip manufacturers, to grow the talent pipeline of trained students for semiconductor manufacturing and design.

The project aims to broaden access to experiential learning opportunities in semiconductor manufacturing technologies to a diverse range of students.



Dr. Naga Korivi
EERE Department Chair



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MANUFACTURING & MECHANICAL ENGINEERING & TECHNOLOGY

Twenty-six students from Oregon Tech's Baja Racing team traveled to Lebec, California, April 25-28 to compete in Baja Society of Automotive Engineers (SAE) California, where students test their self-built off-road vehicle for performance and endurance. Baja SAE is a Collegiate Design Series competition run by SAE International.

The interdisciplinary team efforts of spending more than 10,000 hours in building the car resulted in Oregon Tech finishing No. 17 out of 61 teams from Canada, Mexico, India and the United States. This was the highest ranking in Oregon Tech history in the Baja SAW competition.



The three-day competition, which included static and dynamic events. The static events consisted of engineering design, safety, and cost presentations. The dynamic events included an acceleration braking event, a maneuverability event, a hill climb, and a four-hour endurance race that pitted all the vehicles against each other on an extreme rough off-road course.

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Additive Manufacturing of Aerospace Parts with a Controlled Risk of Fatigue Failure

MMET Professor Dr. Mostafa Saber was awarded a grant from the Air Force Research Lab (AFRL) of over \$1.17M to seek, identify, and validate an agile alternative manufacturing solution for a commonly used metal component in aerospace applications. The main objective of this two year project will be to investigate the effect of post-processing on the mechanical behavior of additively manufactured aerospace parts under dynamic loading conditions.

April 2024



U.S. AIR FORCE

Formula SAE Competition

Oregon Tech students spent 10,000 hours building a formula car to represent Oregon Tech at the international level at the Formula SAE competition in the Spring of 2024.



OMIC R&D, a collaborative innovation center under Oregon Tech, is dedicated to fostering growth, advancement, and success for manufacturers. The center's researchers partner with industry leaders to optimize the use of existing technologies and pioneer the adoption of new and emerging innovations, driving transformative solutions for the manufacturing sector.

Summer 2024 Oregon Tech Student Interns:

Tai Adams, Jacob Davidson, Dylan Davis, Cole Erhardt, Sean Hall, John Isherwood, Zack Kane, Keith Klaty, Zander Ortega, Zane Strassheim



CONGRATULATIONS!



Congratulations to the almost 400 ETM students who graduated at the end of the 2023-24 academic year!

ETM Programs

Business (Multiple Options) BACHELOR'S/MINOR
Civil Engineering BACHELOR'S/MASTER'S
Computer Engineering Technology BACHELOR'S
Construction Management* BACHELOR'S/MINOR
Cybersecurity BACHELOR'S
Electrical Engineering BACHELOR'S
Electronics Engineering Technology BACHELOR'S
Embedded Systems Engineering Tech. BACHELOR'S
Engineering (Multiple Options) MASTER'S
Geomatics (Multiple Options) BACHELOR'S/MINOR
Health Care Management (Multiple Options) BACHELOR'S
Health Informatics BACHELOR'S/MINOR
Information Technology BACHELOR'S/MINOR
Manufacturing Engineering Tech. BACHELOR'S/MASTER'S
Mechanical Engineering BACHELOR'S
Mechanical Engineering Technology BACHELOR'S
Operations Management BACHELOR'S
Renewable Energy Engineering BACHELOR'S/MASTER'S
Software Engineering Technology BACHELOR'S
Technology and Management BACHELOR'S

**Begins in Fall 2025*

For full details on all available offerings, visit the website below.

ETM Undergraduate Accreditations

