Fall 2022

WASHINGTON STATE UNIVERSITY
TRI-CITIES

Momentum

School of Engineering & Applied Sciences Newsletter

CONTENTS

LETTER FROM THE DIRECTOR

With great pleasure and appreciation, we would like to celebrate the first edition of our School of Engineering and Applied Sciences (SEAS) newsletter, Momentum. I hope you are all as excited as I am with this newsletter launch. It will be distributed biannually to students, campus, professional societies, alumni, and communities to communicate our accomplishments to date and goals for the future.

As we reflect on the Spring 22 semester and look forward to the 22-23 school year, we remain steadfastly committed to student success, providing profession-ready workforce to the Mid-Columbia and wider regions. I am certain that SEAS at WSU Tri-Cities has played an important role in this community for underrepresented and first-generation students to earn not only a bachelor's degree, but also master's and Ph.D. degrees in engineering and computer science. We are here to provide all students with quality education, paid internship opportunities, and research activities. We are excited to announce that we will be offering a cybersecurity bachelor of science degree in Computer Science in the near future. Thanks to an equipment grant from Battelle, which operates the Pacific Northwest National Laboratory in Richland, WA, we can now take the first step towards modernizing the engineering laboratories on the Tri-Cities campus. This grant will benefit students and faculty, to support the instruction of advanced technologies under safer environments and better prepare students for their future professions after graduating.

The School of Engineering and Applied Sciences also serves as an education and research pipeline for the Pacific Northwest Clean Energy Hub and the Institute for Northwest Energy Futures (INEF) at WSU Tri-Cities. The school has thus set the goal of establishing two interdisciplinary research centers, aiming for recognition as SEAS' niche research areas for next three years. We are exploring the possibilities of establishing an Energy Research Center. We are also collaborating with faculty members at other WSU campuses to submit a proposal to the NSF Research Traineeship (NRT) program, proposing to train next generation robotics workforce on autonomous and robotic system for nuclear-waste treatment.
Welcome back, we look forward to another great school year.

Changki Mo, Ph.D.
Academic Director of the School of Engineering and Applied Sciences

School of Engineering and Applied Sciences

Established in 2016 as WSU's latest tenure-offering academic unit, the School of Engineering and Applied Sciences (SEAS) offers bachelor's, master's and doctoral degree programs in Computer Science and Civil, Electrical and Mechanical Engineering.
All engineering programs at WSU Tri-Cities are accredited by the Engineering Accreditation Commission of ABET. Computer Science programs are accredited by the Computing Accreditation Commission of ABET.

ABET Computing Accreditation Commission

ABET Engineering Accreditation Commission

The school director is Dr. Changki Mo. The school leadership consists of a team of program leads, student club advisors. The school also receives advice from its Industrial Advisory Board, IAB. The school programs are led by 15 full-time faculty members and 21 adjunct members and supported by an administrative manager and laboratory director.

Leadership

Changki Mo, Director

Program Leads

Civil and Environmental Engineering: Yonas Demissie
Computer Science: John Miller
Electrical Engineering: Mohamed Osman
Mechanical Engineering: Joseph Iannelli

Academic Support

Academic Support Staff: Allysha Hanson
Engineering Technician III: Karl Wooster

Industrial Advisory Board

The inaugural IAB meeting took place on Friday, April 29, 2022.

Civil Engineering committee members:
Paul Giever (CE committee chair), Pete Rogalsky (SEAS IAB chair), Alaa Aly
Computer Science committee:
Mahantesh Halappanavar, Neil Corrigan (CS committee chair)
Electrical Engineering committee:
Don Gregoire, Enio Montenegro, Jason Fuller (EE committee chair)
Mechanical Engineering committee:
Chad Hendrix, Karthik Subramanian, Lance Stephens (ME committee chair)

Student Organizations & Advisors

American Society of Mechanical Engineers:
Prof. Changki Mo, advisor
Coding Cougs: Prof. Luis Dela Torre, advisor
Institute of Electrical and Electronics Engineers: Prof. Mohamed Osman, advisor
Maker's Club: Prof. Che-Hao Yang, advisor

Faculty Spotlight | YONAS DEMISSIE

Prof. Yonas Demissie serves as an associate professor of civil and environmental engineering and a researcher for an ecology research program, “Equitable, Multi-Scale Decision-Making Towards Human and Ecosystem Health.” Supported by a $3 million grant from the National Science Foundation’s Research Traineeship (NRT) initiative and led by WSU Pullman, this program focuses on educating graduate students to address the human and ecosystem health challenges in the Columbia River and its watershed. This research program will financially support a Civil and Environmental Engineering Ph.D. student located on the WSU Tri-Cities campus.

In 2021, Prof. Demissie, was appointed as an associate editor of the “Stochastic Environmental Research and Risk Assessment” journal, which carries an impact factor of 3.821. In that year, he organized and co-chaired a conference session on “Advances in Modeling Hydrometeorological Extremes and Adaptation for a Resilient Society” at the fall 2021 meeting of the American Geophysical Union (AGU), held in New Orleans, LA. More recently, in 2022, he was appointed as both an Associate Editor of the “Frontiers in Water” journal and a special issue editor on “Advances in Modeling and Risk Analysis of Floods under Changing Climate” for the Water journal, which has an impact factor of 3.166. Later this year, he will organize and co-chair a conference session on “Advances in Modeling Hydrological Extremes and Engineering Practices” at the fall 2022 AGU meeting, which will take place in Chicago, IL.

Three of Prof. Demissie’s research students have recently graduated and are excelling in their career endeavors. Yasir Abduljallel earned his Ph.D. degree in the spring of 2021, soon after, joined FEMA as a Senior Project Engineer. Danielle Young and Matthew Williams earned their Master’s degrees respectively in the 2021 spring and fall semesters. Prof. Demissie and his graduate students had two journal articles published.

1. *Abduljaleel, Y., Y. Demissie, “Evaluation and Optimization of Low Impact Development Designs for Sustainable Stormwater Management in a Changing Climate,” Water, 13(20), 2889, 2021*
2. *Moges, E., Y. Demissie, L. Larsen, F.Yassin, “Sources of Hydrological Model Uncertainties and Advances in their Analysis,”, Water, 13(1), 28, 2021*

Faculty Spotlight | Yuxin Zhang

With a Ph.D. in aeronautical engineering from Rensselaer Polytechnic Institute (RPI), Prof. Zhang is an assistant professor of mechanical engineering and a member of both the American Physical Society (APS) and the American Institute of Aeronautics and Astronautics (AIAA). A recipient of RPI’s Mechanical, Aerospace and Nuclear Engineering Teaching Award, he teaches undergraduate and graduate courses in the fluid thermal engineering sciences.

He engages his students in hands-on real-world projects. In his spring 2022 ME 306 course, Thermal and Fluids Laboratory, for instance, he supervised impactful projects. One of them was entitled: “Design and Construction of a Subsonic Wind Tunnel”. Presented at the 2022 WSU Tri-Cities Research Symposium, this ongoing project seeks to design and construct a cost-effective, portable low-speed wind tunnel as a general platform for future course activities. Another project was entitled: ‘Prototype Ventilator Design,” which won the 2022 Best Course Based Project Award at the WSU Tri-Cities Research Symposium.

Under his supervision, a team of M.E. senior design course students developed a “Rotating Bed Reactor Media Removal and Replacement” system, which won the Research Symposium Best Capstone Project Award. Recently, Prof. Zhang was named a Fellow (2021) in the “Differential Equations Model and Resource Creators” (DEMARC) program, which is funded by the National Science Foundation (NSF) Division of Undergraduate Education (DUE). In this connection, DEMARC selected him to participate in a challenging and innovative faculty development workshop, which aims to help those experienced in teaching modeling-based differential equations to create shareable classroom resources.

Year in Review | 2021 - 2022

New Coug Orientation

Committed to student success, SEAS participated in graduate and undergraduate student orientations. Held on Friday, October 29, 2021, a graduate program open house and orientation engaged 10 faculty and 33 students, including 5 current and 28 prospective students.

Awards & Recognitions

WSU President Kirk Schulz recognized 62 individuals and organizations for their outstanding leadership and service to the university and the community during the President's Award for Leadership ceremony on April 19 in Pullman. SEAS honorees were Josiah Cantu, Maksim Karazhbei, Reem Osman. Congratulations!

Faculty recognized three students with the Outstanding Student Award for their outstanding academic achievement during their time at WSU Tri-Cities. The 2022 Outstanding Student awards for the School of Engineering and Applied Sciences went to Esther Ulyanchuk - mechanical engineering, Timothy Cain-computer science, Johnathan Lund - civil engineering.

At the Evening of Excellences awards ceremony the student organization, Makers Club, received the 2022 Student Excellence "Leaders in Action" award. SEAS' CS students continue to distinguish themselves, as they secured a win in the 2022 CrimsonCode Hackathon.

Thus spoke SEAS' students! Based on their teaching evaluations, the outstanding 2021-2022 Academic Year teachers were Prof. Akram Hossain (CE), Prof. Joseph Iannelli (ME) and Prof. Che-Hao Yang (ME). Their enthusiastic mission is SEAS's faculty's mission: to graduate profession-ready students for leadership in our societies.

Akram Hossain

Joseph Iannelli

Che Hao Yang

Nathan Tenney

Nathan Tenney, one of SEAS' adjunct faculty members in Computer Science received the 2022 WSU Tri-Cities Outstanding Adjunct STEM Faculty Award. Endowed with a donation from Peter Smith, former interim vice chancellor for finance and administration, who recognized the importance of adjunct faculty to our campus, the WSU Tri-Cities Outstanding Adjunct STEM Faculty Award recognizes an adjunct faculty member who exemplifies high-quality teaching in Science, Technology, Engineering, and Mathematics related academic programming. This award includes a personalized gift and a monetary award.

Commencement

The spring 2022 commencement was held at the Kennewick Toyota Center on May 7. Diplomas were conferred to as many as 88 School of Engineering and Applied Sciences graduates. This graduating class consisted of 12 bachelors of science in civil engineering, 20 individuals with a bachelors of science in computer science/ bachelor of arts in computer science, 12 bachelors of sciences in electrical engineering, 24 bachelors of science in mechanical engineering, 13 masters graduates, and 5 Ph.D. graduates. At the commencement, the SEAS gonfalon carrier was Evan Wolfe, an EE graduate. Named outstanding seniors were Johnathan Lund (CE), Myles DeSmet (CS), Evan Wolfe (EE), and Josiah Cantu (ME).

Order of the Engineer Ring Ceremony

The Order of the Engineer Ring Ceremony was held on the WSU Tri-Cities campus on Friday, April 29. At this milestone event, 51 bachelors of science, 11 masters of science and 4 Ph.D. WSU Tri-Cities Engineering graduates were inducted into the Order. Five local engineers were also inducted.

Battelle Grant

In May of 2022, WSU Tri-Cities School of Engineering and Applied Sciences received a $50,000 grant from Battelle, operators of the Pacific Northwest National Laboratory, in Richland WA. Battelle provided the SEAS with this grant to purchase updated equipment for the school's high-bay laboratory. This grant will benefit students and faculty, to support the instruction of advanced technologies under safer environments and better prepare students for their future professions after graduating.

SEAS in the Community

SEAS has enthusiastically contributed to a variety of conferences and workshops. The school contributed a workshop to WSU's Cyber Summer Program, last June, and two other workshops to the STEMCon event, last March, presented by Professors Luis De La Torre, John Miller, Changki Mo, Che-Hao Yang, and two SEAS students: Ethan Aaberg and Hunter Ritchey.

On the WSU Tri-Cities campus, SEAS also hosted the 2022 ASME FutureME Conference, at which twelve SEAS undergraduate and graduate students delivered presentations on their respective research projects. As a guest speaker, Kelly Mears, ASME Columbia Basin Section's Chair, delivered a presentation entitled: "ASME and Your Future." The keynote speaker was Robert S. Wegeng, President of STARS Technology Corporation, who delivered a presentation entitled: "The Future of Hydrogen is Now."

Heyne brings a passion for sustainable aviation fuels and teaching to WSU Tri-Cities

TRICITIES.WSU.EDU/NEWS – Joshua Heyne joined Washington State University Tri-Cities April 25, 2022 as director of the Bioproducts Science and Engineering Laboratory, co-director of the Bioproducts Institute and associate professor of mechanical engineering in the School of Engineering and Applied Sciences.

In his previous position as associate professor at the University of Dayton, Heyne's expertise in aviation fuels secured regular funding, totaling $5 million, from the nearby Air Force Research Laboratory and the Federal Aviation Administration.

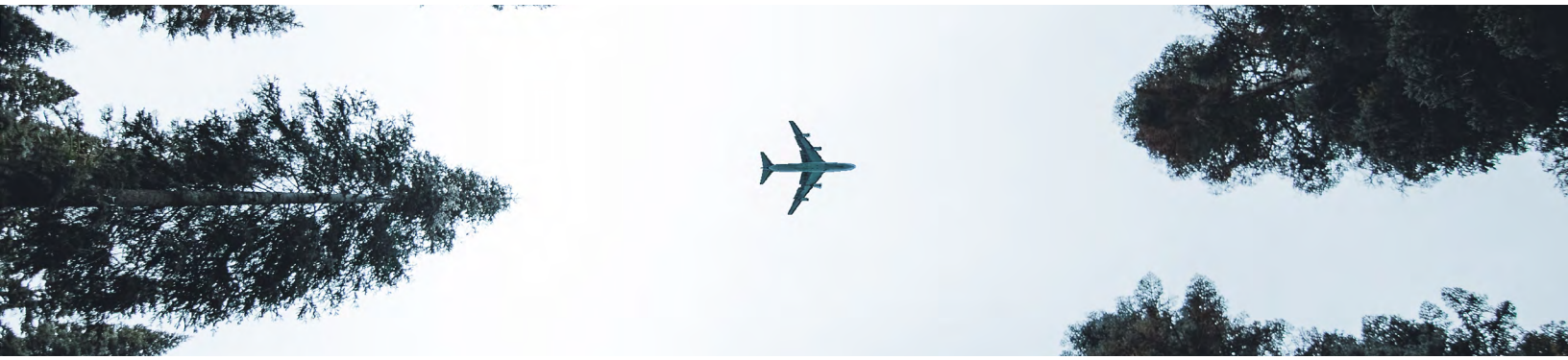
Recently his work has focused on the development of sustainable aviation fuels, which are low-carbon fuels produced from biomass. He was the principal investigator for the integration and coordination activities of the National Jet Fuels Combustion Program of the FAA's ASCENT Center of Excellence, which was composed of 150 members and 40 institutions at its peak. Heyne's collaborations with dozens of companies, academic laboratories and national laboratories establish partnerships for sustainable aviation fuel development.

Heyne recently co-authored a study published in the journal Fuel with Bin Yang, professor with WSU's department of biological systems engineering. The study analyzed a WSU-developed jet fuel based on lignin, an organic polymer that makes plants tough and woody. The experimental plant-based jet fuel could increase engine performance and efficiency, while dispensing with aromatics, the pollution-causing compounds added to conventional fuels.

In his role as teacher, Heyne not only provides students with information but motivates them to learn independently. He challenges students to master material and communicate it effectively. He has mentored many graduate students with the philosophy that developing human talent to the fullest is one of our most important societal challenges.

Heyne holds four degrees from three universities, including a Ph.D. in mechanical and aerospace engineering from Princeton University.

tricities.wsu.edu/heyne-brings-a-passion-for-sustainable-aviation-fuels-and-teaching-to-wsu-tri-cities



New cybersecurity degree offered

By Tina Hilding, Voiland College of Engineering and Architecture
Washington State University will begin offering a new undergraduate cybersecurity degree starting in fall of 2023, thanks to $2 million in Washington state funding.

The new program aims to meet burgeoning demand for computer scientists with expertise in cybersecurity.

“Many businesses and communities are concerned with a myriad of computer security threats, ranging from personal digital banking information or company data breaches to security of the electric power grid,” said Partha Pande, director of WSU’s School of Electrical Engineering and Computer Science (EECS). “We look forward to training our students in this important field and to meeting the increasing demand for cybersecurity professionals in our state.”

An increasing number of companies make use of cloud services in their operations, and the number of cyberattack incidents have been steadily increasing. Data theft of critical information and ransomware that harms computer systems are challenges for companies across the world. The number of jobs for cybersecurity experts is expected to grow by more than 30% in the next decade with more than 16,000 available positions every year, according to the Bureau of Labor Statistics. The median salary for information security analysts was more than $100,000 in 2021.

WSU’s new undergraduate degree program will be available on the Pullman, Tri-Cities, and Everett campuses. In addition to learning in traditional computer science courses, students will take classes and learn skills in privacy principles in modern communications, security protection mechanisms, secure communication protocols, and security in virtual and cloud environments. As interest in its programs grow, the School of EECS will be hiring several new faculty members.

Last year, a Department of Defense (DOD) grant also supported the establishment of a WSU-led cybersecurity education and research program that is training ROTC and DOD-skilled civilian workers in cyber basics, operations, and defense.

news.wsu.edu/news/2022/06/14/new-cybersecurity-degree-offered

National Science Foundation and European Awards support students in Sweden and the U.S.

Aug. 4, 2022

news.wsu.edu – Students from Washington State University and Sweden's Linköping University will participate in a pioneering exchange and research program in engineering and scientific computing, emphasizing the computing-based design philosophy that is supporting the international development of Boeing's and Saab's new T-7A Red Hawk training aircraft.

The aircraft is an all-new advanced pilot training system designed for the U.S. Air Force, which will train the next generation of pilots for decades to come. As Boeing and Sweden's Saab have long-standing ties to WSU and LiU, respectively, they will also support this program, which provides students with an unparalleled opportunity to learn how challenging designs are advanced through international cooperation of multinational corporations.

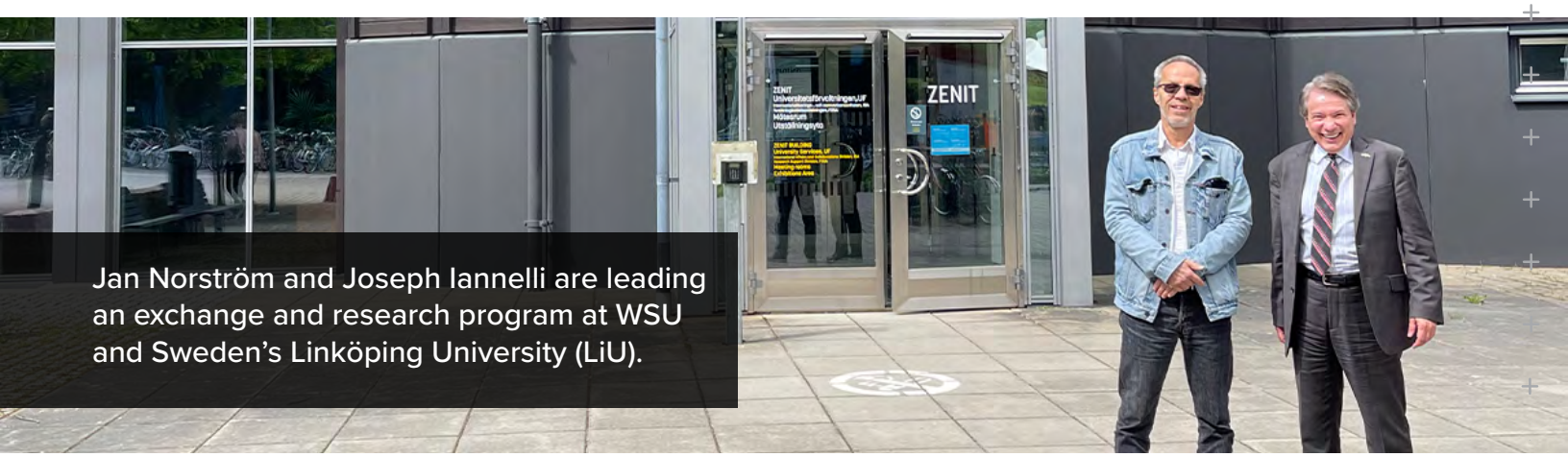
WSU was awarded $300,000 by the National Science Foundation to support WSU students in Sweden. The WSU-LiU team also received matching funding from the European Erasmus+ program and the Swedish Foundation for International Cooperation in Research and Higher Education to support the LiU students at WSU.

"One of the objectives of this program is to graduate profession-ready students who are internationally educated and ready for leadership in a globalized society," said Joseph Iannelli, a professor of mechanical engineering in WSU's School of Engineering and Applied Sciences, who is leading the program.

Jan Nordström, a distinguished professor of computational mathematics, and Andrew Winters, a WSU alumnus and assistant professor in computational mathematics will supervise the students' research projects at LiU.

"LiU's multi-disciplinary strategy with Boeing and SAAB projects will expand students' preparation for international high-tech environments," said Nordström.

"This project will also prepare students for employment opportunities with corporations that employ scientific computing and operate in the U.S. and Sweden." said Iannelli. Students will benefit from studying in Sweden and the U.S. while gaining familiarity with the cultures of both countries.



Jan Norström and Joseph Iannelli are leading an exchange and research program at WSU and Sweden's Linköping University (LiU).

Boeing and Saab will enrich this program. They will advise on aerospace-related scientific computing projects and mentor students, who will be offered opportunities for company site visits and internships. Students will also learn how computing-based designs lower development costs, increase first-time quality of prototypes, and decrease time to bring complex systems, such as aircraft, to markets.

“Boeing is proud to support the education of up-and-coming engineers through this unique exchange and research program,” said Craig Bomben, Boeing vice president of flight operations and enterprise chief pilot. “This partnership will prepare students for the engineering field and help them fulfill their career ambitions.”

WSU and LiU have been developing their international partnership for several years, after Iannelli’s 2018 outreach to LiU. Thereafter, the two universities signed a memorandum of understanding and a reciprocal student exchange agreement.

A comprehensive internationally-ranked peer university, LiU emphasizes multidisciplinary research and manages Sweden’s National Supercomputer Centre (NSC). “By pooling their teams and financial resources, WSU and LiU can advance education and research at the international level more effectively,” Iannelli said.

The three-year project will involve 42 diverse students; 21 from WSU and 21 from LiU. Each of the participating WSU students will receive a $12,000 fellowship. The project synergistically integrates two study-abroad semesters with a research experience and matched student cohorts. At LiU, the WSU students will be collaborating with an equal number of LiU students who will then complete an exchange semester at WSU. At LiU the Swedish students will assist the WSU students with the local culture and vice versa at WSU.

In Sweden, the WSU and LiU students will learn how physical systems function through computer-based simulations that rely on mathematical algorithms. The WSU students will also take English-taught courses at LiU and transfer their academic credits towards their WSU degree requirements. The program is expected to begin in January.

https://news.wsu.edu/news/2022/08/04/national-science-foundation-and-european-awards-support-students-in-sweden-and-the-u-s

WSU Tri-Cities named winner in Phase One of Inclusive Energy Innovation Prize

June 7, 2022

RICHLAND, Wash. – Washington State University Tri-Cities was named a winner in Phase One of the Inclusive Energy Innovation Prize by the U.S. Department of Energy. This first-of-its-kind competition aims to further climate and environmental justice during the transition to a net-zero-carbon economy by directly funding disadvantaged communities. As one of 18 winners, WSU Tri-Cities was awarded $200,000 to implement its Empowering the Future Energy Workforce plan.

The Inclusive Energy Innovation Prize supports grassroots innovation, community-centric networks, and ground-up solutions to accelerate climate and clean energy technology advancement alongside disadvantaged communities.

During Phase One, the WSU Tri-Cities team was one of 266 to submit an impact plan detailing their experience in engaging and supporting disadvantaged communities.

Jillian Cadwell, adjunct professor of civil engineering at WSU Tri-Cities and the team lead for the grant said, “The DOE prize will be a catalyst to develop new academic programs, research collaborations and entrepreneurial activities in the areas of clean energy and climate innovation including a research-based course with industry mentors and incubator integration aimed at engaging, retaining and empowering Hispanic/LatinX students.”

Cadwell spearheaded the grant proposal alongside Kathleen McAteer, vice chancellor of academic and student affairs; Sandra Haynes, chancellor; Paul Carlisle, adjunct professor entrepreneur in residence; and Raul Contreras and Martin Valdez Torres from the Tri-Cities Hispanic Chamber of Commerce. Institutional and industry partners that will collaborate on this project include the WSU/ Pacific Northwest National Laboratory’s Advanced Grid Institute and Energy Northwest.

In addition to the cash prize, WSU Tri-Cities will also receive in-kind mentorship and other support services to help implement the proposed programs and related activities to further meet the community’s unique needs. The grant will also help establish the Institute for Northwest Energy Futures, a new applied-research center to help address the increasing demand for resilient, safe and affordable energy systems, including low-carbon electricity and transportation fuels.

Phase Two of the Inclusive Energy Innovation Prize is anticipated to close in April 2023 when up to six teams will receive awards from a prize pool of $1.5 million. To learn more about WSU Tri-Cities winning concept, and to follow its progress visit: americanmadechallenges.org/inclusiveenergyinnovation/

https://tricities.wsu.edu/wsu-tri-cities-named-winner-in-phase-one-of-inclusive-energy-innovation-prize/

Undergraduate Programs

Civil Engineering B.S.

Civil engineers help communities solve problems. Civil engineering involves designing and maintaining crucial infrastructure, preserving the natural environment, and improving the quality of life for all. Those working in civil engineering use a combination of math and science to assist in the planning of water systems, electric energy generation, highways, railroads, buildings and bridges.
tricities.wsu.edu/engineering/civil

Computer Science B.S., B.A.

The WSU Tri-Cities computer science program includes courses on software design, network design, computer graphics, scientific computation, programming tools and more. In today's technological world, computer science is applicable to virtually every industry and the Tri-Cities has a huge need for computer science graduates.
tricities.wsu.edu/computerscience

Electrical Engineering B.S.

Electrical engineering involves the design, building and maintenance of electrical equipment and technology. Electrical engineers work on various projects ranging from microchips and computers to power generators and aerospace systems. Much of the underlying technology that runs our modern world is conceived by electrical engineers.
tricities.wsu.edu/engineering/electrical

Mechanical Engineering B.S.

Mechanical engineering plays a key role in various industries including computers, robotics, aerospace, energy, health, automation and manufacturing. Those studying mechanical engineering use motion, energy and force to design and produce machines that solve problems. tricities.wsu.edu/engineering/mechanical

WSU Tri-Cities electrical engineering program was exactly what I was looking for. It feels like a small community where everyone gets along. Every one is helpful. It's also easy to get involved in different clubs and activities. It's a great fit.
-Cynthia Castillo, Electrical Engineering Alumn

Have Questions? Contact Us!

Office of Undergraduate Admissions
509-372-7250
tricities.admissions@wsu.edu
tricities.wsu.edu/admissions

Office of Graduate Programs & Research
509-372-7394
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tricities.wsu.edu/engineering

Graduate Programs

Chemical Engineering M.S., Ph.D.

Faculty research is broadly focused in three areas: sustainable energy systems, biomolecular engineering, and biomechanics. Within these areas projects are focused on chemical and biological catalysis and kinetics; chemical and biological fuel cells; biofilm engineering; novel sensor technologies; cardiac and reproductive molecular engineering; and molecular, cellular, and musculoskeletal mechanics. The graduate programs are flexible, allowing students to develop a program that fits individual needs. A Master of Science is typically completed in 1-2 years.
voiland.wsu.edu

Civil and Environmental Engineering M.S., Ph.D.

Our programs provide a solid foundation in the fundamentals of engineering and science combined with technical expertise in specialized areas of the field. The faculty members in the CEE program are leading experts in their respective disciplines. Our faculty members lead academic instruction and research activities in concrete materials, including ultra-high performance concrete and engineered cementitious composites, understanding of surface and subsurface hydrology and their sustainability through innovative use of modeling and experimental data, and reaction kinetics.
tricities.wsu.edu/engineering/graduate/civil

Computer Science M.S., Ph.D.

The computer science discipline systematically builds a body of knowledge of theories and models and shows how this body of knowledge can be used to produce solutions to real-world computational problems. Today's information technologies, such as e-mail, the Internet, mobile apps, and e-commerce, are all the result of the work by computer scientists and engineers.
tricities.wsu.edu/engineering/graduate/computerscience

Electrical Engineering M.S., Ph.D.

The electrical engineering graduate program plays pivotal roles in the economy of the region, leading initiatives in technology and preparing a new generation of innovators. Graduate students play an essential part in carrying out the school's mission to conduct research that will make a difference to industry, government, and society.
tricities.wsu.edu/engineering/graduate/electrical

Mechanical Engineering M.S., Ph.D.

Our school offers programs of study for full-time and part-time students leading to the degree of Master of Science (MS) in mechanical engineering. Thesis and non-thesis options are available for the MS degree. Programs of study are individualized with an interdisciplinary focus. Students are expected to pursue their degree programs with success and to earn the MS degree in two years. The program will culminate with a final oral examination and a written thesis (MS thesis option) or project report (MS non-thesis option). Financial aid in the form of an assistantship is available for dedicated, quality, full-time MS students.
tricities.wsu.edu/engineering/graduate/mechanical

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