

WVU

Professors look for new academic options to attract more students

BY LINDSEY FLEMING
DPNews@DominionPost.com

Students on WVU's campus have plenty of new academic options to choose from in fields on the rise, from environmental engineering to esports.

The university's Board of Governors recently approved an online graduate engineering program during its regular meeting, as well as a new bachelor's degree in biology geared towards those looking for careers as doctors, dentists and physician's assistants and a second supply chain-focused degree.

Other programs previously introduced have had a chance to get off the ground. Professors who helped shape those undergraduate majors share how they're progressing and how students will benefit from such offerings.

Engineering Technology
The Benjamin M. Stalter College of Engineering and Mineral Resources B.S. Engineering Technology degree program is designed for learners looking for a new route to get them into the wider world of engineering.

"One of the things we noticed is the need for a more hands-on approach," said Robin Hensel, a teaching professor in the college's fundamentals of engineering program, adding that while students in different disciplines all experience this, it usually happens in their junior or senior years. "Many students want to see what's applied a lot earlier."

In the case of engineering technology, students use manufacturing equipment in labs right away. This is meant to help them learn how to use the proper materials, sensors, electric parts and processes that will prepare them for careers in manufacturing, energy, industrial and technical service sectors, as well as become their own bosses, if they so choose.

"The state and region have a lot of manufacturing jobs, and those companies need workers," Hensel said.

And because manufacturing is so broad, Hensel added that graduates will be able to find jobs in everything from product design and testing to con-



WVU file photo

West Virginia University students in the undergraduate robotics engineering program will have opportunities to conduct research in robotics and participate in student projects and competition groups.

struction and automation. In order to help them develop technical skills in certain fields, students must choose two areas of emphasis from five options: mechanical engineering technology, industrial engineering technology, engineering management and entrepreneurship, energy technology or multi-disciplinary engineering technology.

When the program started in fall 2023, there were 29 students registered. Now, there are 55. "I would estimate we could have somewhere between 75 and 80 by next fall," Hensel said, adding that employers in the industry are already asking for graduates. "It just shows that there's a need out there."

Esports Business and Entertainment
When most people think of esports, they envision competitors on stage during tournaments, said Chris Scroggins, academic director of WVU's esports program.

Understandable, as such international events earn winners major prize money and can draw millions of viewers. However, Scroggins said, "there are all different kinds of stakeholders involved."

Offered as one of the university's intercollegiate programs, the bachelor's degree in esports business and entertainment is designed to prepare students for all aspects of the growing, multibillion-dollar industry, as well as teach them skills that can be applied more widely.

"Look at disciplines that have long endured, like marketing, finance, economics, digital media and production," Scroggins said. "This is a vibrant multidisciplinary offering with a core in esports that is the shiny thing to teach the other things." The major, housed in the College of Intercollegiate Programs, also has courses delivered by the College of Applied Sciences, the Chambers College of Business and Economics and the Reed College of Media.

Scroggins said after the success of WVU's competitive teams, which launched in 2021 and have won championships in Call of Duty, Madden, Rocket League and Valorant, the administration became interested in the possibility of expanding esports into the classroom. That began with a minor in esports management in spring 2023, and now the major, which debuted this past fall for incoming students. He added that WVU is the first Power 5, R1 institution in the nation to offer such a major.

"We take a holistic approach to the esports curriculum and building a community. It's definitely innovative," he said. It helps that students have access to WVU's competitive teams, some with members who have agents.

"It's a perfect way for them to learn, to pair them up with the teams, helping them coordinate and coordinate events. It's really going to inform the curriculum side of things." Not to mention, Scroggins added, give graduates the kind of experiences future employers are looking for.

"They're going to have a great resume and a major that will make them highly employable."

Environmental Engineering

Lance Lin knows for a fact that students are interested in the new environmental engineering degree offered by the Benjamin M. Stalter College of Engineering and Mineral Resources, as many have approached him seeking classes that cater to their passion for environmental issues like climate change.

Charged with developing the program, Lin, who is the chair of the Wadsworth Department of Civil and Environmental Engineering, said it features four areas of emphasis — water supply and resources, water quality engineering for human society, air pollution, control and climate change, and environmental health, risks and public health.

Given that West Virginia is one of the primary energy-producing states in the country and deals with its fair share of environmental issues, Lin said the major is geared not just toward global issues, but local ones as well.

For instance, he taught an air pollution class and did a case study based on a Department of Environmental Protection report and an agreement between the state DEP and Union Carbide Corp. regarding ethylene oxide emissions. In 2023, the corporation and agency set new measures that limit possible emissions from the UCC facility in Institute. The colorless gas is a known human carcinogen, according to the U.S. Environmental Protection Agency.

"We like to use real-world examples," Lin said, which helps engage students.

With 16 students enrolled in the major, he said he sees it as on track for growth, something that potential employers are anxious to see.

During WVU's career fairs, Lin said more than 200 companies visit the campus and "a majority are here to hire environmental and civil engineers. Our students, most of them have multiple job offers by the time they graduate."

Robotics Engineering

While robotics engineering is one of the more recent additions to WVU's curriculum, Jason Gross, associate professor and chair of the Department of Mechanical, Materials and Aerospace Engineering, said many of the elements for the bachelor's degree program have been in place for some time, in part because "robotics is interdisciplinary in nature."

The university's long history of success in robotics competitions also plays a large role. Since 2011, WVU has taken home prizes in several national and international competitions, including nine first-place honors.

"We have a lot of faculty expertise," Gross said, adding there are also a handful of research labs already on campus.

Students in the program will explore mechanical systems, computer systems, and engineering systems, and be required to complete a year-long capstone project.

As with the other majors mentioned in this article, he said the market is more than ready for future robotics engineering graduates, citing a recent World Economic Forum Future of Jobs report ranking it among the fastest-growing professions globally.

"And we live 70 miles south of one of the largest robotics clusters in the world," Gross said of Pittsburgh.

Meeting with an industry group there recently, he said he discovered there are roughly 7,000 jobs available in the robotics sector in the area. Many West Virginia companies that have historically been interested in robotics are also looking for those with robotics degrees.

"Right now, we're ahead of the game," he said, as WVU is only one of a few universities in the nation to offer a robotics undergraduate program. "Fast-forward 50 years, and I think every single engineering college will offer robotics."

TEACHERS

Pay raises not enough

BY JIM BISSETT
JBissett@DominionPost.com

It almost seems like ancient history now, and it was only 2018 when it happened.

That's when West Virginia, in the most fundamental ways of the state's contentious labor history, took the nation to school.

That's when one woman carried a picket sign in Colorado that read, "Don't make me go West Virginia on you."

A nine-day work stoppage here, during a particularly frigid February six years ago, by teachers and other public employees put the Mountain State's traditional economic inequities under a glare even colder.

Public schools in all 55 counties were shuttered as the fight against low wages and teacher shortages rolled on.

Parents and their children joined teachers and cafeteria workers on picket lines (often in snow and freezing weather) for the duration of the movement that empowered public employees in other states to do the same.

Which is how that picket line worker — and picket sign crafter — in the Rocky Mountain State came to be inspired by the Mountain State.

Teachers and other public workers here would emerge from it all with a 5% pay raise in 2018, and that percentage has been a regular occurrence in Gov. Jim Justice's administration as elected lawmakers signed on with the paycheck left.

Nearing the end of the 2024 legislative session, those employees got another one, which, the governor noted, marks four in a row under his watch. "You remember way back when we did a 5% pay raise?" Justice said. "It was the biggest pay raise, percentage-wise, in the history of our state."

Justice, who is finishing his second and final term as governor, said that a trend he wants to see continue.

"I know the job you do," he said. "I know how hard you work every day."

Such labor battles, in such states as West Virginia, don't always stay won, Sam Brunett told The Dominion Post previously. "It's a revolving door," said Brunett, who teaches art at Morgantown High School and is finishing his term as president of the Monongalia County Chapter of the American Federation of Teachers, one of two such unions in the state.

He's referring to the ever-rising premiums for PEIA — the Public Employees Insurance Agency, which covers him, his fellow teachers and other state employees.

"This is like a train going in slow motion towards a brick wall," he said. "You already know what's going to happen." Translation: Any raise you get is going to be eaten by your premium.

Benefits, he said, are why people take jobs. And why people don't take jobs.

Brunett, who was named West Virginia's Art Educator of the Year in 2018, is going into his 30th year in the profession.

Now, he isn't so sure about aspiring teachers following him into the field.

Which, he said, doesn't make a very good lesson plan for state starting at a teacher shortage. "This is going to keep kids away," he said of the rising cost of benefits. "We aren't gonna be able to recruit anybody."

Power your life

Make power outages a thing of the past with a home standby generator.

Crites Electric has been doing generator installations and service for over 45 years.

All repair techs are Generac factory trained.

Crites has won award after award from Generac to distinguish their dealership as one of the best in the country. They have been Premier dealer 8 times, and won regional dealer of the year and core award for being the best in the continental US and Canada out of over 5,000 dealers! We have generators in stock ready to go!

Call or go online today for more information

<p>Crites Electric Inc</p>	<p>Sales: 304-472-0148 Service: 1-800-924-5793 Website: www.criteselectrical.com</p>	<p>GENERAC</p>
-----------------------------------	--	-----------------------

Only premier dealer in North Central WV-National winner & North East US winner of Generac Awards.