

## NEWS RELEASE

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## Physics professor's passion for teaching honored with UW System Excellence Award

*McCullough loves helping students learn challenging subject, works to increase women in STEM fields*

[Story Link](#)

### Photos attached

FOR IMMEDIATE RELEASE

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Menomonie, Wis. — After more than 20 years, Professor Laura McCullough's motivation when she enters the classroom at University of Wisconsin-Stout hasn't changed.

"On the first day of class, I tell my students that I am not here to teach them physics; I am here to help them learn physics. It's all about them," McCullough said.

McCullough's dedication to her profession and students is being recognized by the UW System with a Teaching Excellence Award, the System's highest such honor. She will receive the award Friday, April 8, at the Board of Regents meeting at UW-Stevens Point.

"These outstanding UW educators inspire students and colleagues alike to achieve their full potential," said Regent Cris Peterson, chair of the selection committee. "We celebrate their dedication and innovative approaches to student success."

Physics, for some students, can be intimidating. McCullough's goal is to make it less intimidating, especially for students taking college-level physics for the first time.

"I love taking a roomful of students who may come in terrified of physics and bringing them to a place where they are not just comfortable with physics but actively able to see and engage in the science that is all around us every day. I love helping students who are certain that they're going to fail realize that not only can they learn this stuff, but they can enjoy it," [McCullough](#) said.

McCullough's teaching philosophy is student-centered. She has used standards-based grading for 10 years; students must pass learning objectives that demonstrate their understanding of the material, a method that supports students with learning disabilities. She also includes course content and activities that focus on career placement.

"In today's college, the goal for grades should be a demonstration of learning, not a comparison to other students," said McCullough, who teaches in the [department of chemistry and physics](#).

During the pandemic, she adapted her instructional techniques to engage with students online, such as recording lectures using Learning Glass, a "lightboard" that allows an instructor to face students while writing or sketching on transparent glass. In 2021, she earned UW-Stout's Outstanding Educator Award in the [College of Science, Technology, Engineering, Mathematics and Management](#).

McCullough knew in high school that she wanted to teach physics in college. She earned bachelor's and master's degrees in physics and a Ph.D. in science education, the first from Hamline University and other two from the University of Minnesota. She began teaching at UW-Stout in 2000.

"I love sharing my passion for the science of the physical world with my students. UW-Stout is a perfect place to do all of that, with its emphasis on hands-on work and its focus on the practical side of being a polytechnic university," she said.

Thus, in her classroom, students might: see McCullough use a balloon to help explain charges of static electricity and how to use an electroscope; have to wire a light bulb with a battery; use a slinky to understand sound waves; use a popper toy to help understand energy; and use a sound meter, mirror and guitar for other practical examples.

"I have so many demonstrations and activities designed to draw my students into doing the science and not just thinking about it, and UW-Stout supports that style of learning," she said.

UW-Stout offers a [minor in physics](#) and an [applied physics concentration](#) within the [applied science](#) program. Students from numerous other majors within CSTEMM also take physics courses.

"While Dr. McCullough instructs all levels of physics courses, she is most passionate about teaching entry level physics," said Glendali Rodriguez, provost and vice chancellor of Academic Affairs. "She desires to positively impact student critical thinking and the development of understanding at the onset of their college education. Her success is evident via strong enrollments in her courses and outstanding instructor evaluations as a reflection of her student-centered instructional practices."

## **Research on women in science, physics**

McCullough's main research interest is gender and science, especially women in physics and STEM fields.

She published the book "Women and Physics" in 2016; developed a [physics gender bias website](#), which originated with a National Science Foundation grant; presents her research regionally and nationally; has served on the UW System's Women and Science Advisory Board for nearly 20 years; and was co-team leader of the U.S. delegation to the International Conference on Women in Physics from 2019-21.

"When I started physics graduate school, I was the only woman in a group of 20, which made me realize that there was a big problem in physics," she said. "Despite decades of efforts,

women continue to be underrepresented in many STEM fields, mine included. Only 20% of physics degrees go to women, despite women making up more than 50% of college graduates.

“Many people who would be great assets to the field are turned off or turned away by STEM as it is currently taught and practiced, and that is a terrible waste of both talent and enthusiasm. We should want to improve the representation of minoritized groups for simple fairness, but if that’s not reason enough, think of all the discoveries that will never be made and the work that will go undone because of people who were turned away,” McCullough said.

McCullough said receiving the award “is a validation of decades of work and focus and joy. It has already boosted my energy and enthusiasm in my classes.

“As a culture, we talk about valuing teaching and teachers, but we don’t always follow through on that emotional ideal with tangible, real-world actions. If we care about what our children and young people are learning, and how we want to raise them to act and become their best selves, we need to recognize the impacts teachers have on their lives, and we need to invest time, attention and funds on the people and institutions that are educating future generations.”

The Teaching Excellence Award is in its 30th year. Other winners this year are a social work professor from UW-Superior and the UW-Parkside communication department. Recipients each receive \$7,500. Learn more from the UW System [news release](#).

*UW-Stout is [Wisconsin’s Polytechnic University](#), with a focus on applied learning, collaboration with business and industry, and career outcomes.*

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## **Photos**

Professor Laura McCullough uses balloons in a physics class this spring to help students learn about static electricity. McCullough is a 2022 recipient of the UW System Teaching Excellence Award.

Laura McCullough has taught physics at UW-Stout since 2000.

Laura McCullough works with students in one of her physics classes this spring.