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NEWS RELEASE

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STEAM camps offer nearly 275 area middle, high school students hands-on preview of education at UW-Stout

They discover career paths in microbiology and genetics; develop innovative patterns in fashion design

[Story Link](#)

Photos attached

FOR IMMEDIATE RELEASE

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Menomonie, Wis. – For two weeks in June, 118 area high school students stepped into campus labs at University of Wisconsin-Stout and learned what it's like to be a student at [Wisconsin's Polytechnic University](#).

In hands-on learning experiences led by faculty, they discovered career paths in science, technology, engineering, and art and design during UW-Stout's [Summer STEAM Experience](#).

The weeklong camps highlight the value of creativity and critical thinking in genetics; graphic design and printmaking; fashion; film making; metalwork; video game design and other disciplines.

Students interested in the cellular makeup of the human body and the fashions that cover it joined Professor Mike Bessert in a Jarvis Hall Science Wing biology lab and Lecturer Sarah Eileen Smith in the Maker's Lab in Fryklund Hall.

In Bessert's Microbiology: Genetics and DNA Analysis camp, 19 students used a diverse array of lab technology to gain skillsets they can apply in biochemistry, forensics or health fields.

They collected DNA field specimens and used various techniques to copy and study DNA and discover how scientists solve problems within DNA.

“This camp gives the students a taste of what it’s like to be a biology student here at Stout,” said Bessert, program director of [P.S.M. conservation biology](#). “Similar to the Molecular Cell Biology college course, the goal is for them to become familiar with some of the most prominently used DNA extraction and quantifying techniques used in the field.”

In the Fashion Drawing and Draping camp with Smith, interim program director of [fashion design and development](#), 10 students brought their fashion designs to life.

Their hands-on introduction to patternmaking included draping fabric on 3D dress forms and sketching professional fashion figures.

“They’re all doing great,” Smith said. “They’re doing exactly what our first-year fashion students practice in the Pattern Development course in their first week at Stout.”

Nearly 115 students entering grades six to eight will join the [Junior STEAM Experience](#) this summer, a series of specialized camps with hands-on experiences in Chain Making, Fashion Design Drawing, Storytelling and Video Production. Thirty-eight students will participate in a new Video Game Design Week.

Two steps closer to their careers in genetics and forensics

On the third day of camp, after collecting samples of their own hair follicles, Bessert walked his students through a two-step polymerase chain reaction, or PCR, optimization technique – a gradient thermal cycle to find the perfect temperature to view the strongest signal of DNA markers, or alleles, in the human genome.

They then used gel electrophoresis to visualize and analyze the DNA markers. At one end of the gel, an electric current is applied to pull DNA fragments through the gel. It is a technique the FBI uses to help identify people through genetic traits, Bessert said.

Maura Bright and Mila Mitchell took a time-lapse video on Mitchell’s phone to capture the process and rewatch the dark bands slowly lengthen within the gel.

In another activity, Bessert and the students collected deer tick specimens from animals at the Dunn County Humane Society to see if the samples contained the borrelia bacteria that causes Lyme disease.

Bright, a Chippewa Falls junior, wants to be a geneticist. She discovered the concept of genealogy when she was 12, when she compared her and her sister’s traits with their parents’ and noticed the difference in the color of their eyes.

Mitchell, a first year at Stanley-Boyd High School, became interested in forensic science watching TV with her mom and after completing a school project on genealogy.

Alyxandria Lunemann, a Bloomer High School senior, has always loved science. She was looking into future careers in chemistry “but it didn’t fit the description of what I had in mind,” she said.

Then when Lunemann talked with a professor who explained their research on the makeup of fruit flies and yeast and possible mutations in genes, she thought, “This is what I want to do. Mutational genetics is the study of the human genome and mutations within it, such as gigantism, dwarfism, albinism or sickle cell anemia,” she said.

“I feel that Stout’s STEAM camp is a good representation of what it will be like researching in a genetics lab. I’m glad to be here.”

Fashion inspiration through exploration

During an exploratory draping time, Smith encouraged her students to play with fabric to see how it laid over the dress forms, how it can be shaped, and to experiment creating pleats and ruffles. Her only parameter for them was that their dress must be sleeveless or strapless.

While drawing their designs, Smith asked students to pay attention to and accentuate body shapes. They looked for inspiration in images in her slideshow presentations and on their phones, referring to current and classic fashion trends, movies, books, nature and even architecture.

“Be intentional with each aspect of your design, just as each aspect of architecture in a building or branch of a tree has its function,” she said.

Three of the students – Annella Wolbert, Samantha Anderson and Addison Bauste – will be first-year students this fall at Menomonie High School. They joined the fashion camp because they are inspired by the creative of clothing. This was their first time draping and drawing fashions.

While draping the 3D forms, Wolbert’s inspiration was to go with the flow and see where the fabric led her. Anderson’s design was inspired by Taylor Swift’s Grammy outfit – a corset gown with a high leg slit and train.

Bauste’s sketches, including a blue and pink gown with a heavy shoulder ruffle, were inspired by “The Summer I Turned Pretty” book series and a mix and match of outfits she saw online.

Wolbert and Anderson have sewed before, creating pillowcase dresses with their Girl Scouts troop for [Little Dresses for Africa](#). They are working toward earning their Silver Award with their troop and have made 50 dresses in the last two years.

Students showcased their designs on the final day of camp and shared in ideas.

UW-Stout’s STEAM camps, which attract students from around Wisconsin, are sponsored by the [Menomonie](#) and [Chippewa Falls](#) school districts, [Parker](#), [OEM Fabricators](#) and [Delta Fastener](#) in partnership with Continuing Education and Conferences, a unit of [Educational Pathways and Outreach](#).

UW-Stout Athletics is offering multiple summer [youth sports camps](#) led by university coaches, staff and student athletes. Camps include basketball, football, gymnastics, soccer, softball, track, volleyball and dance.

Stout Adventures’ [Youth Climbing League](#) offers introductory activities, designed to empower kids ages 6 to 12. Experienced instructors lead activities for all skill levels. Two sessions will be held from Tuesday, June 11, to Wednesday, July 17; and Tuesday, July 23, to Wednesday, Aug. 21.

UW-Stout, a member of the [Universities of Wisconsin](#), is [Wisconsin’s Polytechnic University](#), with a focus on applied learning, collaboration with business and industry, and career outcomes. Learn more via the [FOCUS2030](#) strategic plan.

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Photos

Alyxandria Lunemann, a Bloomer High School senior who plans to be a mutational geneticist, points to the DNA markers appearing in a gel electrophoresis experiment in a UW-Stout biology lab during the STEAM Microbiology: Genetics and DNA Analysis camp.

Maura Bright, of Chippewa Falls, and Mila Mitchell, of Stanley-Boyd, analyze DNA markers using gel electrophoresis in a UW-Stout biology lab during the STEAM Microbiology: Genetics and DNA Analysis camp.

Menomonie High School student Samantha Anderson drapes fabric on a 3D dress form in UW-Stout's Maker's Lab in the STEAM Fashion Drawing and Draping camp.

Menomonie High School student Annella Wolbert drapes fabric on a 3D dress form in UW-Stout's Maker's Lab in the STEAM Fashion Drawing and Draping camp.

Menomonie High School student Addison Bauste sketches fashions inspired by book series she recently read.