



NEWSLETTER

September 2022

Chemistry and Physics Department, Oxendine Science Building – Room 3101, Pembroke, NC 28372
chem_phy@uncp.edu 910/521-6247

Correction from August 2022 Newsletter

Tiffany Simpson, UNCP Chemistry Graduate (2021)

Tiffany Bramblett Simpson is a Chemistry Graduate Student at Florida State University. She will be graduating with her Master of Science Chemistry degree in December 2022.

(Sincere apologies for the mistake, Tiffany.)

UNCP Foundation Board of Directors Awards

The Foundation Board meeting was held on May 5, 2022. Chancellor Robin Cummings presented the Board of Directors Award to Dr. Sivanadane Mandjiny, Chair of Chemistry & Physics Department. Congratulations, Dr. Mandjiny.



GSE Chemistry Honor Society

The officers for the 2022-2023 academic year for the Chemistry Honor Society has been announced:

Grand Alchemist (President) - **Haleigh Grace**
Alchemist Apprentice (Vice-President) - **Blossom Edoh**
Keeper of the Formulas (Secretary) - **Jennifer Valladarez Castrejon**
Keeper of the Solvents (Treasurer) - **Kathryn Durden**
Sergeant-at-Arms - **Trey McDonald**
Faculty Co-Advisors - **Dr. Meredith Storms** and **Mrs. Felicia Scott**

Haleigh Grace

ALPHA ZETA CHAPTER
Gamma Sigma Epsilon Chemistry Honor Society
Grand Alchemist (President)
2022-2023 Academic Year

Blossom Edoh

Alchemist's Apprentice
(Vice-President)
2022-2023 Academic Year

GAMMA SIGMA EPSILON
CHEMISTRY HONOR SOCIETY

ALPHA ZETA CHAPTER

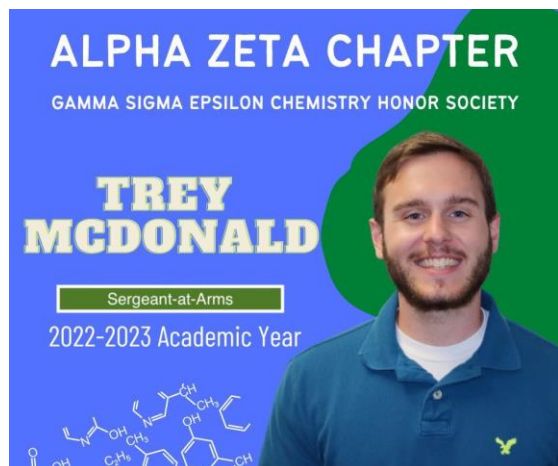
ALPHA ZETA CHAPTER

JENNIFER VALLADAREZ CASTREJON

Gamma Sigma Epsilon Chemistry Honor Society
Keeper of the Formulas (Secretary)
2022-2023 Academic Year

KATHRYN DURDEN

ALPHA ZETA CHAPTER
Gamma Sigma Epsilon Chemistry Honor Society
Keeper of the Solvents (Treasurer)
2022-2023 Academic Year



Dr. Meredith Storms



Mrs. Felicia Scott

Outreach Activity

2022 American Indian Welcome Back Social

The American Indian Heritage Center host the 2022 American Indian Welcome Back Social on Thursday, September 1, from 5-8 pm at the UC Annex. This event will feature free food, music, games, and fellowship for UNCP students, faculty, and staff. Bring your friends! All are welcome!

Brandon Lowery and Mrs. Felicia Scott represented the Chemistry and Physics Department. The event was a social for all students, especially native, to engage or be introduced to the native customs in relations to social gathers, food and fellowship with other students and faculty within the various departments across campus. Brandon and I set up a table and gave out goodies to students who visited our table.

AMERICAN INDIAN WELCOME BACK SOCIAL

SEPTEMBER **01** 5-8 P.M.
2022 UNC PEMBROKE UC ANNEX

ALL ARE WELCOME



AMERICAN INDIAN HERITAGE CENTER



A great time to meet and connect with American Indian students, faculty and staff on campus!

MUSIC, GAMES, FOOD & FELLOWSHIP

This publication is available in alternative formats upon request. Please contact the Accessibility Resource Center, Oxendine Administrative Building, Room 110, or call 910.521.6695.





"First Americans' Pathway to STEM Success

(FAPSS) Scholars Onboarding Workshop"

Mrs. Felicia Scott will be helping with the "First Americans' Pathway to STEM Success (FAPSS) Scholars Onboarding Workshop" on September 8 and 15, 2022, at the Robeson Community College. The goal of the workshop is to equip first generation students with information that will enable them to become successful students. The topics that Mrs. Scott will cover within the workshop are:

Study skills

Test Taking skills

Stress Management

Building Resiliency

Time management

E-mail etiquette

Career and Major Exploration

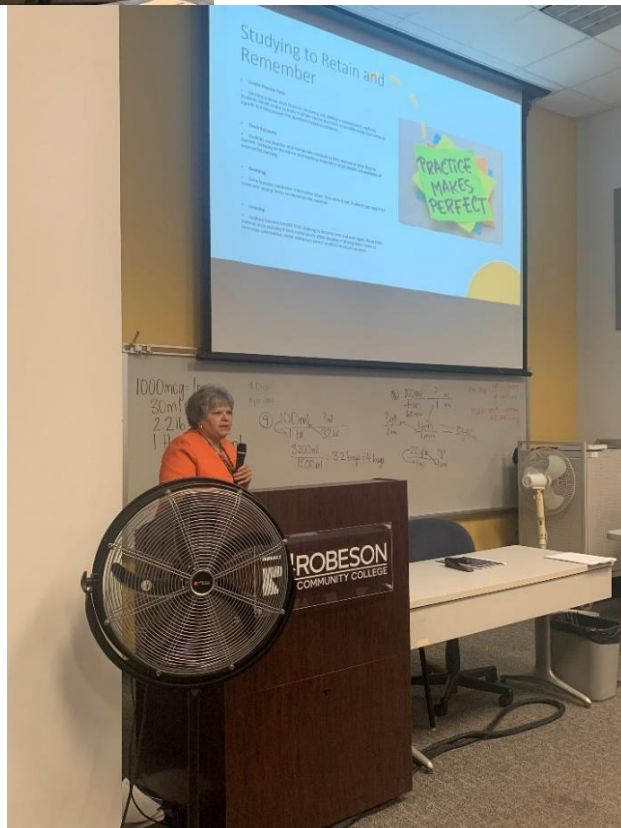
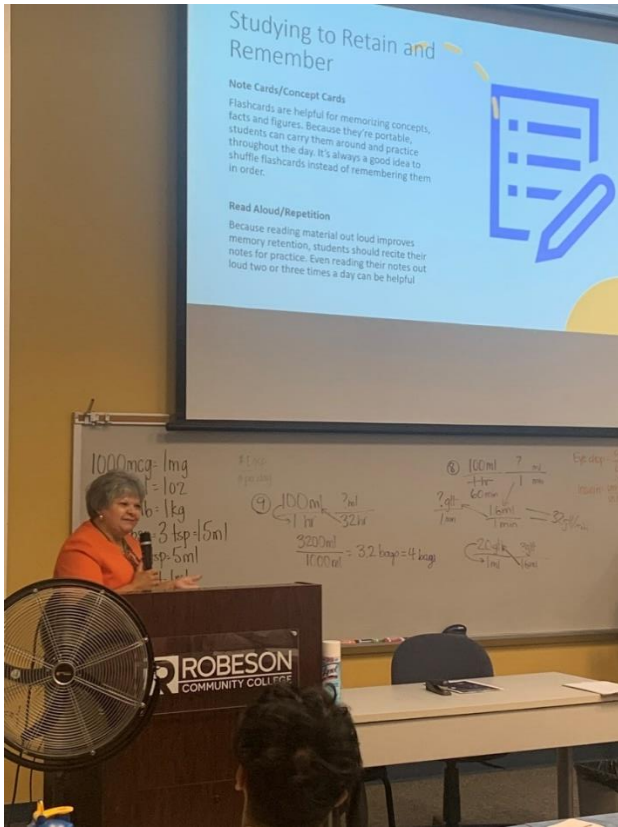
Budgeting tips

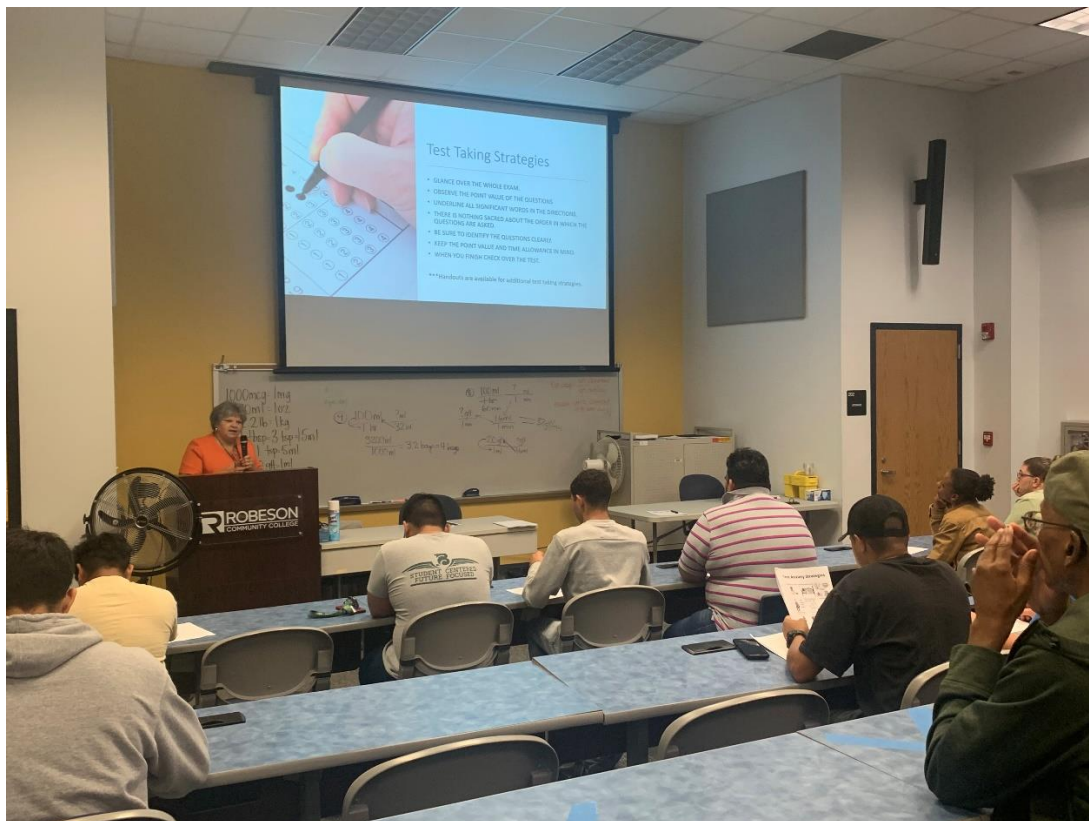
This information was presented via power point. Handouts were distributed to each student in attendance. The workshop presentation was recorded and uploaded onto RCC homesite for other students to reference and use in the future.

The workshop is also open to all students and to anyone who wants to participate.

Thank you, Felicia, for your time and effort.







School of Dental Medicine, Greenville, NC

Dr. Siva Mandjiny (Chemistry), Mrs. Natalya Freeman Locklear (HCAP), and students did a site visit at ECU – School of Dental Medicine in Greenville, NC on September 8, 2022.



Madison Oxendine and Christopher Collins



Left: Chemistry Department Chair – Dr. Andrew Moorehead



Center: CHM Graduate Studies – Dr. Eli, Director



Left: ECU Chancellor, Dr. Phillip Rogers

Center: UNCP Chemistry & Physics Chair,
Dr. Siva Mandjiny

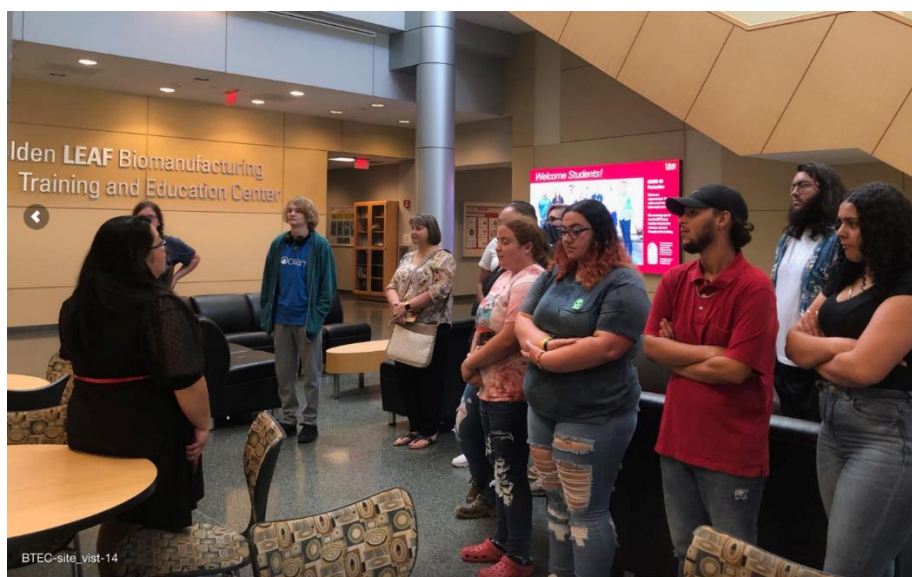
Center: Mrs. Kellie Blue

Right: UNCP HCAP, Mrs. Natalya Freeman Locklear

The Golden LEAF Biomanufacturing Training and Education Center (BTEC)

Dr. Maria Santisteban (Biology) and Dr. Meredith Storms (Chemistry) accompanied the COMPASS cohort students for a tour of the facility to BTEC at NC State University on September 9, to learn more about GMP regulations and upstream/downstream processing of biopharmaceuticals. The students were also informed about the trend of biomanufacturing in NC and given tips for writing their resume and networking. The trip ended with a tasty dinner at Morgan Street Food Hall in Raleigh.

We appreciate for all you do for our students, Dr. Storms.





American Journal of Undergraduate Research



Dr. Cornelia Tirla is one of many authors of an article that appear in the American Undergraduate Research Journal, about a research project that was completed in collaboration with the Biology Department and with the UNCW Department of Chemistry. Congratulations, Dr. Tirla. Job well done. View the article below.



AJUR_Vol_19_Issue_1_June_2022p3.pdf

UNCP Incubator 3D Printing Workshops



Dr. Steven Singletary will lead the 3D printing workshops and demonstration at the Thomas Entrepreneurship HUB in Pembroke, NC, on September 21 (*Introduction to*) and September 28, 2022 (*Beginner Level*) from 9 am to 12 noon. In the Introduction class, everyone will learn how 3D printers work, how to make prototypes and other items, and how 3D printing can support and help build your business. For the Beginner Level, Dr. Singletary will lead the 3D workshop and demonstration. Everyone will learn how to take their design from the drawing board to a finished 3D printed product. Everyone will learn what software is needed to design and print using a 3D printer, how to send files to a 3D printer, and the basics on starting the printing process.

**Intro to
3D PRINTING**

DR. STEVEN SINGLETARY, UNCP DEPT. OF CHEMISTRY AND PHYSICS, WILL LEAD THIS 3D WORKSHOP AND DEMONSTRATION. LEARN HOW 3D PRINTERS WORK, HOW YOU CAN MAKE PROTOTYPES AND OTHER ITEMS, AND HOW 3D PRINTING CAN SUPPORT AND HELP BUILD YOUR BUSINESS.

SEPT. 21ST **THOMAS ENTREPRENEURSHIP HUB**

9 A.M. - NOON

- All the information to get started.
- Basics of moving from idea to product.
- Advanced printing considerations.

25 SPOTS AVAILABLE
UNCP INCUBATOR
FOOD PROVIDED

ADDRESS: 202 MAIN STREET
PEMBROKE, NC 28372



North Tonawanda Graduate Tim Ritter Calls on Bills Fans to Launch Breakthrough to a Cure for ALS Challenge



Tim Ritter knows he's on borrowed time. How much longer he will be able to speak is uncertain, so he wants to use his voice to make an impact before it's too late.

Although he currently lives in Myrtle Beach, South Carolina, the North Tonawanda graduate still has red, white, and blue pumping through his veins. Whether it's as a proud U.S. Navy veteran or as a Buffalo Bills fan, Ritter wears his colors proudly.

Seven years ago, Ritter felt he had reached the apex of life. He was thriving personally, professionally, and physically. But when, at 50 years old, Ritter was diagnosed with amyotrophic lateral sclerosis, he was given a guaranteed death sentence.

The cause for ALS is unknown and there is no cure. It's among the cruelest diseases on the planet, sapping strength from a body until it cannot function. Ritter has been wheelchair-bound since 2018 and is forced to use a ventilator 20 hours per day after his breathing lowered to 35% capacity.

Ritter knows a cure for ALS likely won't come in time no matter how much effort he puts into fundraising, but he wants to help others and came up with a plan only a Bills fan could. He developed Breakthrough to a Cure for ALS and is hoping Bills fans jumping through a table or breaking some object can spread like the Ice Bucket Challenge did a few years ago.

So committed is Ritter, that he went through a table himself to jumpstart the movement. It is believed he is the first member of Bills Mafia to go through a table via Hoyer Lift.

"A lot of people at my stage, if they are even alive, do not have the ability to speak," Ritter said. "I look at as my responsibility to try to speak for all those people."

By the time Ritter's family moved to North Tonawanda in 1980, he was a sophomore in high school and late in the development of fandom. He played soccer for the Lumberjacks but quickly fell in love with the Bills.

Even as the Bills slogged through the first half of the 1980s, as work as professor at the University of North Carolina Pembroke and military service ping-ponged him around the country, Ritter remained loyal.

"That was back in the days of Joe Ferguson, Fred Smerlas, Joe Cribbs and the two-win seasons, but we became fans," Ritter said. "I've got the Bills logos all over my wheelchair. I wear a ventilator and I've got a Bills cover on my ventilator tube. We've cheered them on, even through all the lean years."

•••

Life was grand for Ritter until he went to pick up a piece of chalk while teaching at the U.S. Naval Academy in 2015 and his hand wouldn't allow it. The Navy sent him for tests and the results were crushing.

How could his body allow such a wicked disease to enter? He had just won a slew of awards for teaching, and for the first time, maxed out standards for push-ups and sit-ups for the Navy.

After graduating from the University at Buffalo — preceded by a two-year stint of active duty in the U.S. Army — Ritter enlisted in the Navy in 1998. As an NCIS agent working in Naval intelligence, he was called to active duty after the Sept. 11 attacks. He bounced around the country and then was called up again in 2009, spending a year in Iraq. His final deployment was a post teaching at the Naval Academy. But he was forced to retire upon diagnosis.

"I had just been promoted by the Navy, I had just won a prestigious state-level teaching award, I was just appointed the research director at our university and all of that kind of happened 1-2 years before I was diagnosed," Ritter said. "I was kind of on top of the world and it kind of crashed down when I got diagnosed."

Average life expectancy for ALS is two to five years, but Ritter's progression has been slower. He went three years before needing a wheelchair and can still speak clearly despite the average length of voice loss being between seven months and two years.

Ritter is now using his voice to help raise \$25,000 to find a cure or find a remedy to slow the progression of ALS. He decided on the Ice Bucket Challenge with a Bills twist.

The plan is for people to grab a piece wood or stick or table and break it while shouting "Breakthrough to a Cure for ALS," then post to social media and challenge a friend. Ritter would like participants put Breakthrough to a Cure for ALS in the title, with a hashtag or the Facebook link <https://www.facebook.com/donate/562984425283088>.

"I'd really love to see this thing take off," Ritter said. "... Those are big dreams, but if you don't dream big, you never get them."



North Tonawanda graduate and former NCIS agent Tim Ritter was diagnosed with ALS in 2015.

Myrtle Beach Walk to Defeat ALS – September 17, 2022

Greetings my friends! As previously stated, due to Tim's unexpected, yet greatly appreciated, steady health we have put together another team for this year's Myrtle Beach Walk to Defeat ALS. This year's walk will be held **Saturday, September 17, 2022** at the Myrtle Beach Pelicans baseball stadium with the legendary post-walk party at Tim and Marie's house. The party will be much like last year's with catering by Mission BBQ, the ever-popular bouncy house, music, karaoke, and this year we hope to have a 50-50 raffle as well as gifts to raffle off! We certainly hope you can join us for this event, as we are truly blessed to be able to host this for one more year. With your help, we can make a positive impact on the lives of those living with ALS.

As you may know, in March 2015, I was diagnosed with ALS, also known as Lou Gehrig's Disease. ALS is a progressive neurodegenerative disease that affects nerve cells in the brain and the spinal cord.

Eventually, people with ALS lose the ability to initiate and control muscle movement, which often leads to total paralysis and death within 2 - 5 years of diagnosis. For unknown reasons, veterans are twice as likely to develop ALS as the general population. There is no cure and currently only two drugs approved by the FDA that modestly extends survival by a few months. So far, the disease has been progressing slowly in my case but still....it progresses each and every day and I find myself on a ventilator 18 to 20 hours per day.

It is hard to believe that this will be my 7th walk, but with friends like you it is hard not to continue to fight the fight.

ALS Walk Photos



Tim Ritter's Recruits Team







below is a link to access over 130 photos taken at the ALS walk

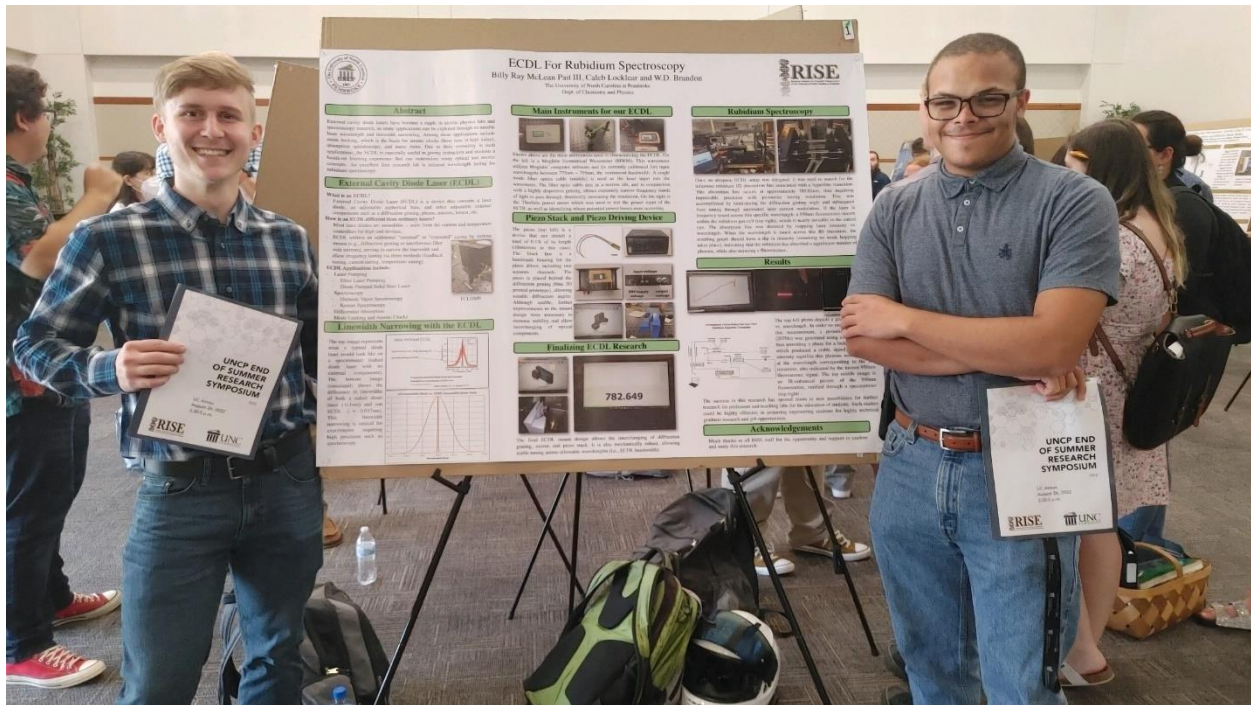
<https://www.dropbox.com/scl/fo/rlb5mpythfi5c87260vbx/h?dl=0&rlkey=0indbihp1vy9r2x49ze00i3qn>

UNC Pembroke's 3+2 Engineering Program Picking Up Steam

Since establishing a dual degree engineering program with N.C. State University, six years ago, UNC Pembroke's 3+2 program has taken off. The rigorous program allows students to spend three years at UNCP, two years at NCSU and graduate with degrees in applied physics and mechanical, electrical, or civil and environmental engineering. Dana Lambertson, the program's first graduate in 2021, is a manufacturing engineer for PCB Piezotronics, assisting in the design, production, and testing of custom high-precision sensors.

See the link below for the full story:

<https://www.uncp.edu/news/unc-pembrokes-32-engineering-program-picking-steam>



McLean Pait III (left) and Caleb Locklear, members of the 3+2 dual engineering degree program, pictured at the End-of-Summer RISE Symposium.



Dana Lamberton, the first graduate of the '3+2' program, earn a dual degree from UNCP and NCSU in 2021.

Terry Chavez, fourth year student in the '3+2' program at NCSU



Caleb Locklear (left) and McLean Pait III (far right) at the End-of-Summer RISE Symposium



Student News

Tiffani Roberts

ToxMSDT is a program based out of The University of California, Davis, that focuses on educating underrepresented students about the field of toxicology. As a student who is aiming to potentially enter the field of forensics one day, I have recently begun to become interested in toxicology. I feel as though this will be an amazing opportunity not just to learn about toxicology but to expand my knowledge of chemistry as a whole and I know that I will make connections that will last a lifetime.

Great news, Tiffani! We're so proud of you.

