

Life in Plastic is Fantastic: Pursuing a PhD in Polymer Science to Combat Plastic Waste

2:00 Room 245

Undergraduate Research Panel Discussion

3:00 Media Center

Em Ambrosius

Polymer Science and Engineering Graduate Student at the University of Massachusetts Amherst, Amherst, MA

ABSTRACT

I will talk about how I found my niche in polymer science through research during my undergraduate years and now in graduate school. I will touch on the highs and lows, how I have learned to pick myself up from failures, and how saying yes to new challenges has served me well.

BIO

Em Ambrosius (they/them) graduated from Atkins High School in 2020 after majoring in biotechnology. For college, Em attended Johns Hopkins University, where they double-majored in chemistry and applied mathematics and statistics. They conducted synthetic polymer chemistry research with Dr. Rebekka Klausen (JHU) and Dr. Stephen Boyes (GWU) and, through this, fell in love with the versatility of polymers and with solving the problem of plastic pollution. From there, they began pursuing a PhD in the Department of Polymer Science and Engineering from the University of Massachusetts Amherst in 2024. At UMass, they joined a young research group led by Dr. Melody Morris, where they have been developing methods to measure the enzymatic degradation of polymers. Their research leverages liquid-handling robots to enable the collection of more data in a similar amount of time, thereby accelerating understanding.

Ribbit-ing Research: How I Use Frogs to Study Cancer

2:30 Room 215

Elizabeth Ampolini

PhD Candidate, Medical University of South Carolina, Charleston, SC

ABSTRACT

Model organisms are an essential part of biomedical research, but not all of them are as conventional as you might think! In my lab at MUSC, I use frogs to study the many processes that occur on DNA. By making a “cell soup” from frog eggs, I explore how proteins are regulated to balance these processes and how disrupting that balance can contribute to cancer.

BIO

Elizabeth graduated from R.J. Reynolds High School in 2018 and earned a BS in biochemistry and molecular biology with a minor in genetics from North Carolina State University in 2022. As an undergraduate, Elizabeth gained research experience in two plant biology laboratories and participated in MUSC’s Summer Undergraduate Research Program in 2021. She began the PhD in Biomedical Sciences program at MUSC in 2022 and is currently working toward completing a dissertation.

The Business of Health: Exploring Careers Beyond Clinical Care

3:30 Room 234

Macy Blake

Associate, Strategy & Business Development at Atrium Health Wake Forest Baptist, Winston-Salem, NC

ABSTRACT

Many students interested in science and healthcare assume their career options begin and end with clinical professions. As a college student, I was focused on pursuing a career in medicine. However, exposure to public health and healthcare systems introduced me to a different side of healthcare: one focused on strategy, operations, leadership, and improving care at a larger scale. In this session, I'll share my journey from a pre-med biology major to healthcare administrator, while highlighting the many career opportunities available at the intersection of business and health.

BIO

Macy graduated from R.J. Reynolds High School in 2018. Macy attended the University of North Carolina at Chapel Hill, where she earned a Bachelor of Science in biology with minors in chemistry and health & society in 2022. She went on to earn her Master's in healthcare administration from UNC Gillings School of Global Public Health in 2024 and then completed a yearlong administrative fellowship with Advocate Health in Winston-Salem, NC at Atrium Health Wake Forest Baptist. Following her fellowship, she transitioned into her current role.

Finding My Way to Geology

4:00 Room 246

Helen Crowley

Geologist at Campos EPC, Philadelphia, PA

ABSTRACT

In my presentation, I will summarize my experience exploring the earth science/geology field in high school and ultimately pursuing it in college. I will talk about the unique experiences I had in college, such as field camp and summer internships. I will then talk about working in the geotechnical industry and the paths available for geology graduates.

BIO

Helen graduated from R.J. Reynolds High School and the Career Center in 2022. After high school, she attended the University of Delaware, where she was a third-generation Blue Hen. She graduated from UD with Honors in 2026 with a BS in geological sciences and a BA in art conservation. Helen currently works as a Geologist at Campos EPC, a geotechnical engineering firm.

From Lab Coats to Scrubs: My Journey to Medicine

4:30 Room 215

Medical School Panel Discussion

2:00 Media Center

Alexa Dameron

Student, Wake Forest University School of Medicine, Winston-Salem, NC

ABSTRACT

From four years of chemistry research on catalysts of lithium air batteries to emergency medicine research that informs current ED protocols nationwide, each project helped guide me toward a career in family medicine. I will share pieces of these projects and demonstrate how seemingly unrelated experiences all led me to return as a future physician back in my hometown.

BIO

Alexa graduated from Reagan High School in 2018 and then attended Davidson College, where she graduated in 2022 with a BS in chemistry and a minor in health and human values. After college, she worked at Brenner Children's Hospital prior to attending Wake Forest School of Medicine. She will graduate from medical school in May 2027 and is pursuing a career in family medicine.

Geology Rocks: Unconventional Paths to a Career in Geoscience

3:00 Room 245

Laura Doughton

Geologist at the South Carolina Department of Environmental Services, Columbia, SC

ABSTRACT

Taking an intro to geology class my sophomore year of college completely changed how I envisioned my future. I dedicated myself to geology. Over the next three years, I completed undergraduate research, attended a 6-week field course, interned with a consulting firm, and graduated with a degree in geology. In my talk, I will share my unconventional path to a career as a geologist.

BIO

Laura Doughton graduated from R.J. Reynolds High School in 2021 and attended the University of South Carolina. She graduated in 2025 from the SC Honors College with a dual degree in geological sciences and political science and began her career with the SC Department of Environmental Services. As a geologist, Laura works with contractors to protect people and the environment from risks related to underground releases from gasoline storage tanks.

My Path of Pivoting Career Plans and Navigating Law School

2:30 Room 234

Alison Eppley

JD Candidate (May 2027) at Washington and Lee University School of Law, Lexington, Virginia

ABSTRACT

I will discuss how I decided to switch career plans after evaluating my personal strengths and values. I will also talk about my experiences navigating law school admissions and job applications as a student with a less traditional pathway.

BIO

Alison graduated from R.J. Reynolds High School in 2018. She graduated from North Carolina State University in May 2023 with a BS in horticultural Science. Alison is a third-year law student at Washington and Lee University School of Law, and will earn a JD in May 2027. After her first year of law school, Alison was a judicial intern at the North Carolina Court of Appeals in Raleigh, North Carolina. After her second year of law school, Alison was a summer associate at Moore & Van Allen in Charlotte, North Carolina, where she will return as a litigation associate after graduation.

Exploring Careers in Pharmacy

1:30 Room 234

Sophia Fitzgerald, PharmD

Ambulatory Care Pharmacy Resident (PGY-2) at Novant Health, Charlotte, NC

ABSTRACT

This talk will introduce students to the many career paths available in pharmacy. Pharmacists work in a variety of settings beyond the traditional community pharmacy. We will explore career opportunities in traditional retail pharmacy, clinical pharmacy, and the pharmaceutical industry. Students will learn about the different roles, opportunities, and ways pharmacists can make a meaningful impact on patients and communities.

BIO

Sophia graduated from R.J. Reynolds High School in 2018 and went on to attend UNC Chapel Hill. She completed the undergraduate and pre-pharmacy coursework in three years before entering the UNC Eshelman School of Pharmacy, and graduated with a Doctor of Pharmacy degree in 2025. During her undergraduate and pharmacy education, Sophia gained experience working as a pharmacy technician/intern at Walgreens for four years and completed a three-year pharmacy internship at Atrium Health Wake Forest Baptist Hospital in Winston-Salem. Following graduation, she completed her first year of residency at Novant Health New Hanover Regional Medical Center in Wilmington, focusing on inpatient medicine. Currently, Sophia is completing the second and final year of residency at Novant Health Presbyterian Medical Center, focusing on ambulatory care.

How Do You Choose What Comes Next?

3:00 Room 214

Engineering Panel Discussion

4:00 Media Center

Ashley Gates

Process Engineer - Rotational Program at Amgen, Holly Springs, NC

ABSTRACT

How do you choose a career when you don't know exactly what you want to do? I will share how exploring different interests and opportunities throughout high school, college, and my early career helped me determine what I enjoyed. Ultimately this exploration led to process development engineering.

BIO

Ashley graduated from Reagan High School and the Career Center in 2020 before attending NC State University. There, she majored in chemical engineering, biochemistry, and biological sciences with minors in biotechnology and microbiology before graduating in 2024. After graduating, she joined the early career rotational program at Amgen, where she is gaining experience across various areas of pharmaceutical manufacturing. She currently works as a process development engineer and will continue in that role after completing the rotational program.

Finding My Path to Medicine Through Research

4:00 Room 215

Medical School Panel Discussion

2:00 Media Center

Abra Granger

MD/PhD Student, Duke University School of Medicine, Durham, NC

ABSTRACT

I will be sharing my path from college to an National Institutes of Health (NIH) research postbaccalaureate position (post-bacc) and ultimately to an MD/PhD program. I will talk about how a post-bacc experience can shape scientific interests and the decision to pursue medicine. I will also cover what post-bacc programs are, what students can gain from them, and why taking an extra step before medical school can be a valuable part of the journey.

BIO

Abra graduated from R.J. Reynolds High School in 2017. Abra attended the University of Richmond, where she earned a BS in biochemistry and molecular biology with a minor in Latin American and Iberian studies in 2021. After college, she completed a three-year NIH Intramural Research Training Award (IRTA) postbaccalaureate fellowship at the National Institute of Environmental Health Sciences, conducting research in molecular biology and biochemistry. She is now an MD/PhD student at Duke University School of Medicine and is in her first year of graduate school after having completed her first two years of medical school.

My Journey to Being a Biostatistician

4:00 Room 234

Amy Zinnia Heney

Biostatistician II, Department of Biostatistics and Data Science, Division of Public Health Sciences at Wake Forest School of Medicine, Winston-Salem, NC

ABSTRACT

This talk outlines my educational path, from attending school in Indonesia and then in the United States. I will share how my love for mathematics evolved into a passion for statistics. Finally, I will discuss how I navigate my current role and discuss a few projects that I work on (genomics, AI, non-human primate).

BIO

Amy graduated from R.J. Reynolds High School in 2018. During her junior year of high school, she started taking classes at the Career Center: AP Chemistry, AP Environmental Science, and AP Statistics. Driven by her love for mathematics, Amy began her college journey at UNC Greensboro as an applied mathematics major before transferring to Wake Forest University where she initially chose mathematics as my major. A required statistics course shifted my interest toward practical data-driven problem solving, leading me to major in mathematical statistics—a perfect blend of both fields. Amy graduated from Wake Forest University in 2022 and immediately landed a role with the Department of Biostatistics and Data Science at Wake Forest School of Medicine (WFUSM). Amy is currently pursuing an online master's degree in biostatistics while still working at WFUSM.

It's Ok to Change Your Mind

1:30 Room 246

Jay Keeley

Master's in Accounting Student at Wake Forest University, Winston-Salem, NC

ABSTRACT

I originally came to college and did what everyone tells you to do: just study what you're interested in and hopefully you can find a job in that area. That led to me studying mathematical economics, but I eventually realized the research intensive or data science heavy jobs that would result from that were not what I wanted to do. During my junior and senior years, though, I became more interested in accounting and decided to try it out through an internship. That experience helped me realize that accounting and audit were something I could see myself doing long term.

I will talk about what I learned from rethinking my plans fairly late in college, how I made that transition, finding an accounting internship, deciding to pursue a master's degree in accounting, and eventually accepting a full-time position with Deloitte in Audit & Assurance. I'll also talk about how my background in math, economics, and data science has carried over into accounting.

BIO

I graduated from Reagan High School in 2022 and went to the University of Richmond, where I majored in mathematical economics. While I did not have an internship during my time in school, I interned at Deloitte in Los Angeles, CA this past summer. Currently, I am pursuing a master's of accounting at Wake Forest and will return to Deloitte after graduation.

Crystallization as Purification using Chiral Molecules

4:00 Room 214

Catherine Kim

Senior at the University of North Carolina at Chapel Hill, Chapel Hill, NC

ABSTRACT

This talk will reflect on my time as an undergraduate researcher in a chemistry lab that studies using crystallization to purify molecules that are mirror images of each other and can be difficult to separate. It will focus on the process of developing and optimizing the purification process and my time working as part of broader lab group.

BIO

Catherine graduated from R.J. Reynolds High School in 2023 and is currently a senior at UNC Chapel Hill in the Honors Carolina program, where she is pursuing her BS in chemistry and BA in mathematics. Catherine has worked in the Jeffrey Johnson Lab at UNC since the fall of 2025. After graduation, she plans to pursue her PhD in organic chemistry.

Battery Powered Careers: Building the Energy Grid of Our Future

3:30 Room 245

Katherine Luke

Senior Development Manager at Elevate Infrastructure, Morris, IL

ABSTRACT

Large scale energy development projects don't happen overnight. It takes years of planning, coordination, and risk management to be able to bring these projects online and requires workers from all different backgrounds, interests, and specialties. I will talk about how the company I work for, Elevate Infrastructure, is changing the energy landscape through responsible project siting and thoughtful redevelopment to benefit our grid and rate payers.

BIO

Katherine Luke (formerly Bell) attended R.J. Reynolds High School as well as the WSFCS Career Center for high school, after which she attended the University of North Carolina at Chapel Hill with a major in environmental studies concentrating in data science and two minors in German and Chinese Languages. Following her undergraduate education, Katherine attended Duke University's Fuqua School of Business Master of Management Studies program in partnership with Duke Kunshan University in China. After graduation, Katherine completed a fellowship program in Juneau, Alaska through the Alaska Fellows program that focused on economic development and recovery efforts in the wake of COVID-19 and had her first introduction to energy development through her host nonprofit's biomass combustion projects. Katherine then spent two years at Cypress Creek Renewables working on large scale solar projects in New York, and for three years now has focused on brownfield redevelopment projects for battery energy storage systems in the Northeast at Elevate Infrastructure.

What is a Clinical Research Analyst?

3:00 Room 215

Nikita Makwana

Burke County Public Health Department

ABSTRACT

In my session, I will discuss how I decided to pursue a career in public health. I will include my career plans before college, during college, after college, and ultimately my decision to pursue a master's degree in public health. I will also explain what I currently do in my profession and discuss my role as a clinical research analyst.

BIO

Nikita graduated from R.J. Reynolds High School, and took some AP classes through the Career Center. I attended UNC Charlotte for my undergraduate degree. At UNC Charlotte, I double majored in health systems management and public health with a minor in biology. After graduating from UNC Charlotte, I worked for two years as a data collector at Atrium Wake Health in the Wake Forest School of Medicine's Department of Public Health. I then returned to school at UNC Chapel Hill's Gillings School of Global Public Health to pursue a master's of public health with a concentration in global health. During my MPH, I completed my practicum with the Burke County Public Health Department, which turned into a part-time position during my final year of the program, and then eventually into my current full-time position.

Becoming a Physician Associate

4:30 Room 246

Ema McCool

Physician Associate

ABSTRACT

I will talk about my journey in choosing the physician associate (PA) route. I'll detail the application process and interview process. I will also discuss what PA school is like and how it differs from other medical career options.

BIO

I graduated from Reagan High School in 2018. I then attended NC State University where I majored in applied nutrition with a minor in psychology. I graduated in May of 2022 and began applying for PA school. Starting during my junior year and through my application cycle period, I worked as a Nursing Assistant in the Surgical Trauma ICU at Duke. I was accepted into PA school at University of Alabama at Birmingham. I began PA school in August of 2023. I graduated in December of 2025. I began working as a critical care PA in April of 2026.

More than Sweet: Using Sugar Biomass to Make Pharmaceuticals

1:30 Room 215

Undergraduate Research Panel Discussion

3:00 Media Center

Ian Mou

Graduate of the University of North Carolina at Chapel Hill, Chapel Hill, NC

ABSTRACT

I will talk about how I became active in research at UNC and how my experience in the lab made me love science. I will give a brief introduction to how we can convert things like sugar into pharmaceuticals. I will also talk about the papers that I have published and what I'm up to now as a recent graduate.

BIO

I went to RJ Reynolds high school all 4 years. I attended UNC Chapel Hill from 2022-2026 as a chemistry major. I did research in the Gagne lab for 2 years. I recently graduated this past spring, and am currently taking a gap year to study for the MCAT.

Rangering Around: Careers and Trajectories in the National Park Service

1:30 Room 245

Cameron Munley-Connolly

*Chief of Interdisciplinary Resource Management/Archaeologist at the National Park Service,
Guilford Courthouse National Military Park, Greensboro, NC*

ABSTRACT

In my presentation, I will overview my path from school through my current position as a National Park Ranger. I will talk about my background, career path, the importance of interdisciplinary approaches in science, and how career paths and goals can change.

BIO

I graduated from Mount Tabor High School (and the Career Center) in 2017. Upon graduating, I attended Wake Forest University where I double majored in anthropology and environmental science, with a minor in biology. I graduated from Wake in 2021. I then went to the University of Florida for graduate school and hold a master's degree in anthropology with a concentration in zooarchaeology. I currently work for the National Park Service at Guilford Courthouse National Military Park in Greensboro, NC. I am the Chief of Resource Management, broadly meaning I lead our park's cultural and natural resources protection and preservation initiatives.

When Things Don't Go According to Plan

2:30 Room 246

Elizabeth Norman

Chemistry Teacher at The Founders Academy of New Hampshire, Manchester, NH

ABSTRACT

You don't need to have everything figured out and changing course doesn't need to be scary. I started out studying anthropology, then switched to chemistry, then switched back, and finally ended up doing both. I started out in a PhD program, then switched to a master's degree, and now I'm teaching chemistry. I will talk about why it's important to learn to roll with the punches.

BIO

Elizabeth attended R.J. Reynolds for high school where she took AP Chemistry (on accident) her junior year. After falling in love with the subject she decided to study it at Appalachian State University along with anthropology. After a lot of back and forth at AppState she attended graduate school at University of Connecticut for organic chemistry. Since then she's fallen in love with teaching the subject and, after collecting her master's degree, began teaching high school.

From Career Center to the Coral Reef

2:00 Room 246

Jaden Orli

Staff Research Associate, Ocean Recoveries Lab, University of California at Santa Barbara (Marine Science Institute), Santa Barbara, CA

ABSTRACT

I graduated high school in 2020 with a common childhood dream: to become a marine biologist. What I didn't have was any real sense of what a research career outside of medicine actually looked like, or who pays for it. Six years later, I am paid to model a lobster fishery, dive kelp forests, and help describe a species that nobody has named, and almost none of that was planned. This talk traces the route between those two points, and a few things I wish someone had spelled out for me before I graduated.

BIO

Jaden graduated from Reagan High School in 2020, then spent a year as a lab technician at Novex Innovations in Winston-Salem before entering the College of Creative Studies at the University of California, Santa Barbara. She earned a Bachelor of Arts in biology in 2025 with high honors, having led an undergraduate research team for four years and published her first paper as first author in the journal *Ecology*. She is a certified scientific diver with roughly 450 logged dives and now works as a staff research associate in the Ocean Recoveries Lab at the Marine Science Institute, building population models of the California spiny lobster fishery and leading an experiment on genotyped *Porites* corals in Mo'orea, French Polynesia.

Why We Read Tree DNA - Science Careers in Agriculture

2:30 Room 245

Undergraduate Research Panel Discussion

3:00 Media Center

Kaley Patton

PhD Student in the Whitehill Christmas Tree Genetics Program at North Carolina State University, Raleigh, NC

ABSTRACT

Trees can live for hundreds to thousands of years while standing in one place. Unlike humans, who can go to the grocery store for food, trees rely on their massive stores of DNA to make everything they need from scratch. I'll talk about what we can learn from reading this DNA, and why I'm sifting through it to help Christmas tree farmers with their deer problem.

BIO

I graduated from R.J. Reynolds in 2018 and started my freshman year at NC State as an undecided major. Through my courses in undergrad, I became interested in plant genetics. Specifically, how understanding the DNA of plants can help us grow crops that are more productive, resilient to disease, or hardy to extreme growing conditions. I ended up double majoring in molecular biology and environmental sciences and graduating in 2022. My first job out of college was as a research associate at a plant biotechnology startup. In 2025, I returned to NC State to pursue a PhD in genetics and genomics. I am currently studying defensive molecules in Fraser fir (Christmas trees!) as a student in the Whitehill lab.

Engineering a Few Different Ways

2:30 Room 214

Engineering Panel Discussion

4:00 Media Center

Jack Pearsall

Project Manager at Lumentum, Greensboro, NC

ABSTRACT

There are many different flavors of engineering, and even more career paths that each one can lead to. My chemical engineering degree has afforded me the opportunity to try out a few very different jobs in the first few years of my career, from scientific research to code compliance and project management. I'll talk about the valuable lessons I've learned from each of them and demonstrate the versatility of the degree.

BIO

Jack attended R.J. Reynolds High School from 2014-2018 and the Career Center from 2016-2018. His enjoyment of learning about the life sciences and math led NC State where he earned a Bachelor's degree in chemical engineering and a minor in biomanufacturing in 2023. During school, Jack completed a co-op with GlaxoSmithKline where he aided in drug development research in the analytical chemistry department. After graduation, Jack started a job with Sequence, Inc. in RTP where he did commissioning, qualification, and validation of pharmaceutical equipment and processes for drug manufacturing companies building new facilities. In 2025, Jack moved back to Winston Salem and got a job at Qorvo, Inc. as a facilities engineering project manager in the semiconductor industry. Lumentum purchased the wafer factory from Qorvo in 2026. Jack's current project is working to start-up a pilot-scale manufacturing line for optical technologies that can be used to retrofit existing data centers for higher efficiency.

The Ethics of Judging

2:00 Room 234

Elizabeth Wallace Perry

Law Clerk, U.S. Court of Appeals for the Fourth Circuit

ABSTRACT

Having worked for three different federal judges, there have been many moments in my law career so far when I ran into moral conundrums. When the law and our morals conflict, what do you do? This talk will explore the ethical dilemmas working in the judiciary system, and explore the relationship between law and morality.

BIO

Elizabeth graduated from R.J. Reynolds High School in 2014, having spent most of her junior and senior years at the Career Center. Elizabeth attended Stanford University, where she graduated in 2018 with a BA in English and French Literature. She spent a year teaching English in Gresik, Indonesia through the Fulbright Program before landing in Washington, D.C. and working for an election law nonprofit. From there, Elizabeth attended Harvard Law School where she served as the Editor-in-Chief of the Civil Rights-Civil Liberties Law Review and conducted research on judicial supremacy and state constitutional law. After graduation, Elizabeth clerked for Judge J. Paul Oetken on the Southern District of New York, Judge Patricia Millett on the D.C. Circuit, and Judge Pam Harris on the Fourth Circuit. Elizabeth hopes to pursue a career in North Carolina state government once she finally has to get a "real job."

How Neuroscience Travels from the Bench to the Bedside

2:00 Room 215

Shamyaa Anchana Rajagopal

Clinical Research Associate, University of North Carolina School of Medicine, Chapel Hill, NC

ABSTRACT

How does a discovery in a lab become something that helps a person? I'll walk through translational neuroscience using my own path: from helping in a lab developing PET imaging agents for Alzheimer's disease to supporting clinical research at UNC today, and the experiences in between that led me here. I'll share what I learned about getting started in research when you're new, shy, and unsure. You'll leave with a clearer picture of what "bench to bedside" means and a few ideas for finding research opportunities of your own.

BIO

Shamyaa graduated from Reagan High School in 2018. She began her research career as a high school intern at Wake Forest Baptist Health, working on preclinical PET imaging of Alzheimer's disease and ALS, and contributed to a peer-reviewed paper and two conference abstracts. She earned a BS in biochemistry and molecular biology from Grand Canyon University in 2023 and an MS in neuroscience and physiology from Wright State Boonshoft School of Medicine in 2026. Her experience also includes oncology diagnostics at Caris Life Sciences, and supporting clinical trials at the UNC Blood Research Center.

How to Power Your Watch with the Tears of your Enemies: An Introduction to Organic Electronics

3:00 Room 246

Isabel Prado Ramos

Undergraduate Student at Massachusetts Institute of Technology, Cambridge, MA

ABSTRACT

Organic semiconductors are most well known for their use in OLED TVs and the Apple Duo but are perhaps even more important for their medical applications. I'll be talking about how scientists synthesize, process, and characterize new organic semiconductors for biological applications- as well as the good, bad, and ugly of wet labs.

BIO

Isabel graduated from Atkins High School in 2023 and is currently studying materials science and engineering at MIT. She interned at an injection molding company in the summer of 2025 and now researches naphthalene diimide derived polymers for uses in organic electrochemical transistors in the lab of Aristide Gumyusenge. She plans to stay in academia and obtain a PhD studying biomaterials.

Atmospheric and Environmental Chemistry Research: Modeling Reactions of Biomass-Burning Aerosols and Contaminant Degradation

4:00 Room 245

Peyton Putnam

PhD Student in Environmental Engineering, Yale University, New Haven, CT

ABSTRACT

I will begin my talk with a brief background on myself, followed by a discussion of my undergraduate research and (potentially) my early graduate-level research. I will discuss the methods I have used (UV-Vis and NMR spectroscopy and mass spectrometry) as well as an overview of important terminology such as defining biomass-burning aerosols. I will discuss my research modeling reactions of biomass-burning aerosols (with the key finding of the formation of complex mixtures of light-absorbing products) and my research on the degradation of ciprofloxacin in solutions designed to model natural waters.

BIO

Peyton began taking classes at the Career Center during her sophomore year of high school and graduated from West Forsyth High School in 2022. She received her BS and MS degrees in honors chemistry (with a minor in music) from Carnegie Mellon University in 2026, where she conducted atmospheric and environmental chemistry research with Professor Ryan Sullivan. She is currently pursuing a PhD in environmental engineering at Yale University, working in Professor Drew Gentner's lab for air quality science and engineering.

How to be a Superhero: Framing Your Goals

3:00 Room 234

Anna Ranson

Immigration Attorney at Hall Trial Lawyers, PLLC, Greenville, SC

ABSTRACT

How to be a Superhero is for anyone who has an idea of what they want to do when they grow up but aren't sure how to make that goal a reality. In this talk, I will explain how I broke down my dream job goal of working as an attorney into achievable steps and remained flexible while working through these goals. This led to my current position as an immigration attorney.

BIO

Anna Ranson attended R.J. Reynolds High School ('15) and graduated from UNC Chapel Hill ('19) with a double major in political science and peace, war and defense, and a minor in social and economic justice.. After graduating, Anna took a year off to work, study for the LSAT, and apply to law schools. Anna attended Elon University School of Law ('22), where she worked at the Humanitarian Immigration Law Clinic and developed a taste for immigration law. In 2023, after taking and passing the North Carolina Bar Exam, Anna was hired by Dummit Fradin, Attorneys at Law, where she practiced as an immigration attorney for two years. She handled family petitions, humanitarian applications, and asylum hearings in Immigration Court and with USCIS. In 2025, Anna moved to Hall Trial Lawyers, LLC, where she continues working on a variety of immigration cases.

Undecided 101: STEM, Arts, or Both?

4:30 Room 245

Ashleigh Ranson

Multi-Media Technician at the University of North Carolina at Chapel Hill, Chapel Hill, NC

ABSTRACT

Undecided 101 is a talk for anyone who feels both-brained, wants to do more than one type of career, or just isn't sure which passion to pursue. I have experience working in both STEM and Media, and am currently focusing on camera equipment and the technology behind media. We'll talk about my current media tech position, and how I'm able to still engage with biology despite having a primarily arts-focused job. This talk will be an exploration of how plans can change during college and what it looks like to pursue two different paths, both in school and after.

BIO

Ashleigh Ranson attended R.J. Reynolds High School ('17) and enrolled at UNC Chapel Hill as a biology major. Halfway through college, she picked up a marine sciences minor and a second major in communication studies. Upon graduating in 2021, Ashleigh secured a spot in the Hollywood Internship Program hosted by the UNC COMM department, and headed to Los Angeles to work at Birns & Sawyer, the oldest camera house in the business. After several months, she returned to North Carolina and found employment with Eno River State Park (naturalist), SportsMedia Technology (sports broadcasting, NHL), and Thunder Mountain Media (freelance audio engineer/editor). In the fall of 2022, Ashleigh was invited back to the UNC COMM department and was hired as a full-time multi-media technician, where she now maintains over \$1 million in camera, audio, and lighting equipment, regularly giving equipment demonstrations and trainings to the current student body. She is also enrolled in a Native Plants Certification course at the NC Botanical Gardens, and volunteers with Cape Fear Bird Observatory to capture, band, and release native songbirds in order to track their population health and migration patterns.

Your Career isn't Set in Stone: Building a Non-Linear Career

3:30 Room 246

Nupur Shah

Strategy & Operations at DoorDash, New York, NY

ABSTRACT

Throughout high school and college, it's easy to focus your energy on "setting yourself up" by getting good grades, getting into the right programs, and adding academic achievements to your resume. Once you've entered the job market, it can be surprising to realize that your career is never really "set." You will always have the flexibility to change your path by creating and embracing new opportunities for yourself based on what you learn along the way. By taking opportunities to explore different paths early, you can prepare yourself to recognize and say yes to the right opportunities and navigate your non-linear career. This talk will draw from my own experience in management consulting and my strategic and operational work in a corporate environment.

BIO

Nupur graduated from R.J. Reynolds High School in 2018. Nupur studied business administration and history at UNC Chapel Hill. She began her career in management consulting at Insight Sourcing, which later became part of Accenture. She now works in Strategy and Operations at DoorDash in New York City, where she finds ways to help small and medium-sized restaurant businesses grow and thrive.

Opportunities in Materials Science and Semiconductors

2:00 Room 214

Engineering Panel Discussion

4:00 Media Center

Ben Sheldon

Packaging Engineer, Qorvo Inc., Greensboro, NC

ABSTRACT

I will be discussing my background in materials engineering. I will define materials engineering and then describe and discuss opportunities in the semiconductor industry.

BIO

I graduated from Reagan High School in 2022, then went to North Carolina State University. There I studied materials science and engineering and received a BS in 2026. Starting after my sophomore year, I interned at Qorvo in Greensboro, NC where I now work full time.

The Journey to Graduate School

4:30 Room 214

Undergraduate Research Panel Discussion

3:00 Media Center

Maggie Taquey

PhD Student, Medical University of South Carolina, Charleston, SC

ABSTRACT

A brief description of how my academic journey progressed from WSFCS and Career Center to college and getting involved in research. I outline what my research project was in undergrad and key experimental techniques used to study it. Then, I talk about why I decided to pursue a PhD (over med school or other STEM careers), my work in cancer research, and key techniques I use to further my project.

BIO

Maggie attended Career Center from 2018-2020 and graduated from Reagan High School in 2020. From there, she attended Penn State University where she majored in biochemistry and molecular biology and graduated in 2024. Maggie started her PhD at MUSC in August 2024 and has been working towards it since!

So...What Does an Industrial Engineer Actually Do?

3:30 Room 214

Engineering Panel Discussion

4:00 Media Center

Lisa Tripathy

Associate, Operations Management Development Program at GE Vernova, Bangor, ME

ABSTRACT

I will discuss my undergraduate journey, including what led me to choose Industrial and Systems Engineering and how my experiences shaped my interests. I'll then reflect on my career journey, from my internships as a student to my transition into a young professional at GE Vernova. To conclude, I will also discuss how the experiences I've gained and lessons I've learned so far are shaping my future goals.

BIO

Lisa graduated from Mount Tabor High School in 2019 and went on to earn a BS in Industrial and Systems Engineering from the Georgia Institute of Technology in 2025. During her undergraduate career, Lisa gained work experience across a variety of industries through roles at American Airlines, GE HealthCare, Tesla, Tindall Corporation, and Gates Corporation. Her professional interests lie at the intersection of data analytics and operations research, particularly in developing data-driven solutions to address complex supply chain and operational challenges. She currently works at GE Vernova as an associate in the Operations Management Development Program.

Undergraduate Research - Perspective of a Medical Student

3:30 Room 215

Medical School Panel Discussion

2:00 Media Center

Tyler Ward

Student, Brody School of Medicine at East Carolina University, Greenville, NC

ABSTRACT

I will be primarily discussing my experience with undergraduate research in the Infra-Red Imaging & Spectroscopy (IRIS) lab at University of Alabama, a physical chemistry lab studying heterogeneities in protein structure within different disease phases and brain regions of both Alzheimer's Disease and Cerebral Amyloid Angiopathy. I will talk about how and when I got involved, what research looked like, how it mattered to my applications, and what I've heard from others who have done it.

BIO

Tyler graduated from Reagan High School in 2022 and was a chemistry major with a pre-health concentration and minors in biology and the Blount Scholars Program (liberal arts) at the University of Alabama, graduating in May 2026. Highlights of my undergraduate experiences include research at the IRIS Lab, and chemistry tutoring. I applied to medical school in the summer between my junior and senior years and matriculated at Brody (ECU) this July.

How to Stop Worrying but Still Hate the Bomb

4:30 Room 234

Owen Webster

PhD Candidate in Nuclear Engineering, North Carolina State University, Raleigh, NC

ABSTRACT

Scientific and public policy debates surrounding the very real dangers of nuclear weapons are difficult to approach for the average person, and that's unfortunately by design. This talk aims to shed light on how you should personally reclaim your agency over these issues and why they matter so much to you and everyone you know. By the end of the presentation, you should come away with an idea of how you can get involved, whether through a full-on career or simply in your role as an informed citizen in your community.

BIO

Owen Webster, an alumnus of West Forsyth High School, is a PhD candidate in nuclear engineering at North Carolina State University, where he has completed a graduate certificate in nuclear nonproliferation science and policy. In addition, he holds a BS in mechanical engineering, BS in economics, and BA in Chinese studies from the same institution, supplemented by a year as a Boren Scholar at Tsinghua University, where he studied Chinese language and culture. Owen's doctoral research involves next-generation semiconductor detector materials for nuclear nonproliferation and international safeguards applications. Owen is currently collaborating on a book entitled "Renegotiating the Nuclear Divide: Changing Strategies to Manage the Civilian/Military Dynamics of Nuclear Technologies."

Understanding the Chemical Engineering and Paper Science Engineering Dual Major Program at NC State

1:30 Room 214

Elena Zuidema

Undergraduate Student in Chemical Engineering and Paper Science Engineering at North Carolina State University, Raleigh, NC

ABSTRACT

I plan to discuss my experience as a student in the Chemical Engineering and Paper Science Engineering Department at NC State. The dual major program has provided me with scholarships, internships, and study abroad opportunities, as well as a tight-knit community and faculty support. Anyone interested in chemistry, sustainability, and engineering should definitely consider the CHE/PSE program during college application season.

BIO

Elena attended Reagan High School and is now a senior at NC State University. She will be graduating this December with degrees in chemical engineering and paper science and engineering and a minor in business administration. During college, Elena had four internships with pulp and paper companies: one with International Paper, two with Georgia-Pacific, and one with Voith Paper. She is looking forward to securing a full-time job in the next few months.