

Preston Cosby

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Education

North Carolina School of Science and Mathematics

GPA: 4.85W/3.82U

Durham, NC

August 2025 - May 2027

- Student Body President: Elected chief executive of 680+ students, **directing a 14-member executive board**, serving as **member of the NCSSM Board of Trustees**, and representing the student body within UNC System governance **affecting 250k+ students statewide through legislation** and a platform built on advocacy and accountability.
- **Relevant and Upcoming Coursework:** Multivariable Calculus, Biophysics, Linear Algebra, Organic Chemistry, Differential Equations, Biochemistry, Biomedical Engineering, AP Chemistry, AP Statistics, Immunology

Research Experience

Research in Chemistry Program

Biochemistry Researcher | Mentored by Cornell PhD

Durham, NC

January 2025 – Current

- **Designing a novel single-scaffold small molecule** that engages two Alzheimer's pathways simultaneously — addressing both disease progression and symptom alleviation — using **molecular-modeling software (Schrödinger)** to computationally design it and predict target binding, toxicity, and pharmacokinetics before synthesis.
- **Designing a *C. elegans* validation study** with a genetic knockout control to test whether the disease-modifying effect runs through the intended mechanism.

Research in the Humanities Program

Student Researcher | Mentored by Stanford PhD

Durham, NC

February 2025 – Current

- Conducting original research **examining how systemic racism shapes healthcare** access and outcomes for Black patients in America — analyzing policy, historical data, and medical literature to build an original argument.

Experience

Guardian Pharmacy

Pharmacy Assistant (Seasonal)

Charlotte, NC

June 2025 – Current

- Facilitate daily pharmacy operations, preparing and organizing medication deliveries for nursing homes and ensuring compliance with pharmacy protocols.
- Gain firsthand **exposure to pharmaceutical access gaps** serving long-term care patients, informing research on cost-effective treatment development.

Charlotte Mecklenburg Library

Teen Volunteer

Charlotte, NC

August 2022 – May 2025

- Advised customers, managed circulation, and facilitated library programs; Founded and Led 'Creating Change' initiative, **3D printing prosthetic limbs for amputees** to demonstrate cost-effective solutions to medical accessibility gaps in underserved communities.

Skills & Interests

Technical: Small Molecule Drug Design, Schrödinger Maestro, Wet Lab Synthesis, Policy/Legislation Development, Website Development

Language: English (Native), French (Conversationalist)

Interests: Health Equity, Cost-Effective Medical Innovation, Bioengineering, Human Rights, Public Policy, Social Justice