



RILEY WARFEL

CLASS OF 2023 & 2024

STUDENT PROFILE

Hometown: Yadkinville, NC

Undergraduate Major: BS Biology & BA in Chemistry with a Sociology Minor

Graduate Degree: MS Chemistry

Career Aspirations: MD in rural NC

Professional School: Wake Forest University School of Medicine

What's been your favorite part of the journey to apply to professional schools?

My favorite part of the journey of applying to professional school has been the opportunity for self-reflection and growth. As I prepared my applications, I embraced the challenge of deliberately evaluating my motivations, strengths, weaknesses, and the overall role I aspire to play in my future profession. This enduring process pushed me to survey my experiences, assess what I learned from them, and understand how they shaped my goals. It helped me develop a clearer sense of purpose and revealed opportunities for continued personal and professional development.

What were some of the challenges you came across when preparing to apply to schools (what was tougher than you expected)?

Writing secondaries was definitely more challenging than I expected. In the medical school application process, it's highly recommended to pre-write as many secondary essays as possible. While I did some prewriting before receiving my secondary invitations, I wish I had done more. Having a solid foundation for these essays makes a huge difference, as it allows you to focus more on new prompts and fine-tuning your responses instead of trying to write everything from scratch. The challenge comes when secondaries arrive all at once, often with a tight two-week turnaround deadline, making it overwhelming to keep up without sufficient preparation. So... prewrite those secondaries!!

How did you prepare yourself for the process of applying to schools?

One of the most crucial steps I took in preparing for the application process was actively seeking guidance from mentors, advisors, and students who had recently navigated the same journey. Their firsthand knowledge and honest feedback provided practical tips, realistic expectations, and encouragement that I don't believe I could have found elsewhere. Input from both seasoned advisors and recent applicants helped me understand the nuances, avoid common pitfalls, and tailor my applications more effectively. Alongside this, I established a clear and manageable timeline, which allowed me to stay organized, balance my responsibilities, and meet all deadlines without unnecessary stress. Their support, combined with a structured plan, was invaluable in building my confidence and shaping my application to be the strongest it could be.

What advice would you give to students who are interested in professional schools? What do you wish you had known earlier?

- Get organized and apply early.
- Don't hesitate to reach out to mentors, advisors, or current students for guidance!
- Start journaling about your experiences if you haven't already. This is incredibly helpful when it comes time to reflect, prepare your primary and secondary application materials, and for interview preparation—having done some reflection in advance makes a big difference.
- Really and truly ask yourself why you want to go into your chosen field, and deeply understand your “why.”
- Be intentional about the programs you apply to—don't apply to schools where you wouldn't actually see yourself attending if accepted. Research each program's mission and assess for a true fit.
- Don't be afraid to write, rewrite, and rewrite again. Choose your reviewers wisely—too many cooks can dilute your voice. I generally recommend having:
 1. Someone who knows you well personally,
 2. Someone familiar with the professional school application process and its nuances, and
 3. Someone who enjoys editing for grammar, flow, and spelling.
- Pre-write your secondary essays.
- Do your interview prep! Utilize resources to practice, while ensuring your answers are not overly rehearsed.
- Be prepared to work hard on your applications, and also be ready for the “hurry up and wait” part of the cycle.
- Remember to stay true to yourself—authenticity in your application and interviews resonates far more than trying to fit a mold.
- Take care of yourself—make sure to carve out time just for you!

What services or organizations would you recommend pre-professional students utilize?

Introduce yourself to the Pre-Professional Advising Center (PPAC)! They are incredibly friendly and well-versed in the application process. Whether it's providing access to the latest opportunities or offering application and interview preparation, they are a fantastic one-stop resource on campus dedicated to helping you succeed throughout your application cycle.

What organizations were you involved in as an undergraduate student?

- ECU Honors College
- ECU Alpha Epsilon Delta, pre-health professional honor society
- ECU Chemistry Club
- American Chemical Society
- ECU Chemistry Dept, TA and LA
- ECU Project Sunshine
- ECU SCUBA Club
- intramural sports

What type of volunteering did you do?

I engaged in both clinical and non-clinical volunteering, including hours at ECU Health outpatient rehab, ECU Health patient escort, and Joy Soup Kitchen.

How did you gain clinical experience?

I worked as a medical scribe for an adult cardiologist with NC Heart and Vascular. Being a part of patient encounters in this role helped me to truly understand the value of proper patient education, empathy, and clear communication to ensure patients feel supported and informed about their health.

What type of shadowing did you do?

Shadowing Doctors in Italy:

During my 3-week stay in Rome, I delved into the city's rich culture. I marveled at the intricate artwork in the Vatican, explored the Colosseum, and savored authentic Italian cuisine. I also took part in a shadowing program, observing various specialties at Campus Bio-Medico University Hospital and the Piazza di Spagna Clinic, including:

- *Orthopedic surgery
- *Cardiothoracic surgery
- *Plastic surgery
- *Primary care
- *OB-GYN
- *Radiology
- *Dermatology
- *Anesthesiology

Also, while in Greenville, I shadowed a local pediatric cardiologist.

Did you do research? If so what was the topic?

Yes! I participated in undergraduate research and ultimately earned my MS in Chemistry while preparing my medical school applications. My research was conducted under the guidance of Dr. Anne M. Spuches in the chemistry department. The long-term goal shared by members of Spuches' lab is to understand how proteins and peptides interact with toxic metals from fundamental thermodynamic, structural, and kinetic perspectives. Specifically, my research investigated the toxic heavy metal cadmium as an impersonator of the essential metal calcium in EF-hand proteins. These proteins are potential targets for harmful metal interactions because they are ubiquitous in nature and play critical cellular roles, from neurochemical signaling to cardiac muscle contraction. My work was part of a larger effort to fill the gap in the current literature regarding a fundamental understanding of how cadmium binds to these proteins in competition with calcium, as this underlies the potential mechanisms of cadmium toxicity.

What was your most rewarding experience at ECU?

My most rewarding experience at ECU was conducting research in Dr. Spuches' lab. It afforded me the chance to explore meaningful scientific inquiry while honing skills in experimentation and data analysis. Being part of a collaborative team, alongside a truly inspiring mentor, made this experience a deeply impactful one. I grew not only as a researcher but also as a student and individual by learning to embrace challenges and view setbacks as opportunities for growth. Additionally, I helped train new students in lab techniques, which reinforced my own understanding and leadership skills. Overall, this experience deepened my passion for learning and strengthened my resilience and curiosity.

Any other advice, recommendations, suggestions, or comments?

Stay focused, work hard, and never underestimate the power of a good break! You can do this!!