

Earning exceptional grades in all my courses is crucial to my long-term goals as a mechanical engineer, but it is also crucial to apply classroom knowledge directly to engineering projects. During my second semester of my freshman year, I founded UNH Students for the Exploration and Development of Space (SEDS). UNH SEDS is a chapter within a nationwide organization that promotes aerospace engineering projects, business competitions and community outreach/events. By being the CTO, I am responsible for managing all tech leads within projects and making sure every member, including the less experienced, are participating. This year's technical goal is to compete in the University Student Rocketry Competition which requires a multi-stage rocket with a total impulse of 640.0 newton seconds. Next year, we will be designing a hybrid rocket engine by using rubber as the fuel source. It is my goal as co-founder to foster cross-grade learning within UNH SEDS so once you are a senior, you have had 4 years of valuable hands-on experience. I am going to be participating in research over the next spring semester in UNH's material science lab and I am applying for an internship through the DAAD for the summer of 2018. I have also committed to a physics minor in addition to my major courses because of my deep interest in astronomy and aerospace engineering. During this past summer, I researched gamma-ray polarization in solar flares. This exposed me to data analysis using python and the research world. Getting acquainted with coding has been extremely beneficial to my courses this year.

I have abandoned many of my life habits to ensure that I am doing everything in my power to reach my dream, to pursue my passion. I take life as a series of steps, each step getting you closer to your final goal. I want to be on the forefront of space exploration and aerospace engineering. I want to be able to contribute to making humans a multi-planetary species and pushing the bounds of what is currently possible. The SMART program will allow me to join the aerospace industry directly after my studies at UNH and would be invaluable to my future endeavors. The Department of Defense does outstanding research in rocket propulsion, aerodynamics and spacecraft structures, all topics I am very interested in. The Air Force Flight Test Center at Edwards Air Force Base provides some of the world's top aerodynamic and propulsion wind tunnels. The opportunity to work on aerodynamic and propulsion testing is directly related to what I am interested and passionate about. The Aerospace Systems Directorate Air Force Research Lab in the Wright-Patterson Air Force Base contains fuel research and rocket testing facilities that have extreme importance to spaceflight. The reason I founded UNH SEDS and why I am leading the rocket propulsion team is because I am mesmerized by rocket engines. The Directed Energy Directorate & Space Vehicles Directorate Air Force Research Lab in the Kirtland Air Force Base provides strong research in spacecraft structures and an assortment of methods for spacecraft controls. The Kirtland Air Force Base would provide the chance for me to work on engineering projects that are fascinating and complex, engineering wise.

The DoD will provide me with a chance to get into the thick of industry research that will allow me to get hands on experience in the world of aerospace engineering. Air Force departments house the best testing facilities in the world and provide direct research correlated to my interest in rocket propulsion, aerodynamics and spacecraft structures. I will be able to learn what it truly means to be part of a high functioning engineering group and be able to contribute my skills and teamwork abilities to wherever I am assigned.