

Statement of Purpose

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Nuclear science and the complex world of atoms and its particles have intrigued me since childhood. It represents a fascinating jigsaw puzzle, one, I am determined to solve. Today, the threat of global warming is real and imminent: Nuclear science offers a solution with its clean and sustainable energy. It was my visit to the Rooppur Nuclear Power Plant site, which concretised my decision to pursue further studies in this domain. A pioneering initiative towards energy independence, it aims at providing low-cost, clean energy by harnessing atomic power. While I saw many Russian experts at the site, I was struck by the lack of our experts. This ignited a desire to attain advanced knowledge to enrich our nuclear sector and be a part of Bangladesh's Atomic History.

Exploring the mysteries of the atomic world and testing the waters for future course of action in high school, my sustained interest in Atomic Science led me to pursue a B.Sc. in Nuclear Science & Engineering from the prestigious Military Institute of Science and Technology (MIST), Bangladesh University of Professionals (BUP). This practical and research-centric Program laid a sound foundation of Material Science for Nuclear Application and Nuclear Chemical & Corrosion Engineering. I learned about the usage of different materials to reduce radioactivity while gaining insights into Nuclear Fuel Cycle, Radioactive Waste Management, Reactor Operation & Safety. To gain a deeper understanding, I immersed myself in various projects, conferences and workshops. My project on "Novel Jute Based Composite Material for radiation shielding applications" was highly appreciated. I not only secured an excellent grade but also got its research Paper published in The International Journal of Scientific & Engineering Research (IJSER), (10122642). The thesis project 'Neutronic Thermal Hydraulic of SMR cores using deterministic & subchannel codes' involved seminal research and months of hard work. I also presented a poster on "Environmental impact & radioactivity of soil at Rooppur nuclear power plant project" in ICCHE 2017. Perhaps the most rewarding and satisfying experience has been the presentation of my paper 'Burnup Benchmark Analysis of PWR spent fuel element using Deterministic code' at the 8th International Conference on Sciences, Technology & Social Sciences at KL, Malaysia (2018). My research paper 'Deterministic Analysis of Burnup Benchmark and Isotopic Prediction in Spent Fuel Pool of a PWR Pincell Using WIMSD5b Transport Lattice Code' has been published in ICIET 2019. I also bring with me a penchant for co-curricular activities. Apart from organizing and participating in various university events, I have undertaken many trainings and workshops. Noteworthy trainings include Training on Nuclear Medicine and Power plant Simulation. The workshop on Nuclear Safety & Radiation Control and Workshop on Heavy Minerals Training on 3 MW TRIGA Mark-II research reactor of Bangladesh Atomic Energy Commission (BAEC) has provided hands-on experience while enhancing my knowledge.

Taking stock of my academic journey post the completion of my B.Sc Program, I feel that I still have a lot

to learn in this vast scientific domain. I am specifically interested in furthering my erudition in Science Nuclear to become a Nuclear Scientist and Environmentalist, devising economically viable and environmentally friendly energy solutions for the planet. A Master's Program in Nuclear Science and Engineering with an International edge will empower me with the necessary skills to innovate and explore the full spectrum of immense possibilities in this realm.

_____ (Name of country) it is an undisputed leader in International education, especially in the realm of Nuclear Technology. _____ University is one of the leading _____ universities with highly modernized instruction methodology, state-of-the-art radiation laboratories and thrust on applied research. The comprehensive curriculum is structured to incorporate advances and updates in this dynamic field along with the opportunity to gain knowledge of global nuclear standards and emerging trends through the various internships under Erasmus program. The opportunity to learn under pre-eminent professors who are Nuclear Physics experts promises to be an exciting learning experience. Further, I wish to delve deeper into nuclear safety & waste management, power plant operations (add subject according to course) in a challenging and nurturing academic environment.

I particularly wish to work under Professor _____ whose research on _____ greatly aligns with my interests. The multi-faceted approach through experiential learning in the industry, exposure to radiation detectors and radioactive sources in advanced radiation labs will equip me to fulfil my country's goal of 'Affordable & clean energy' through the Rooppur Nuclear Power Plant. Furthermore, _____ is known for its cultural diversity, picturesque locations and immense opportunities. The progressive culture and friendly ambience ensure that international students are welcomed and are at ease. A gregarious person, I love meeting new people and exploring different cultures.

Studying at _____ will be an unparalleled opportunity to broaden my horizons by exposure to a new culture, evolving personally and professionally.

The pursuit of academics and a continuous quest for learning has been a recurrent theme in my life. Though I lost my parents at a young age, I have resolved to make this MS program the cornerstone of my career through perseverance, determination and hard work. A desire to create something of significance in the nascent field of Nuclear Science gives me the confidence to take up the challenges offered by this path-breaking program. Transcending international borders and interacting within a diverse student community, exchanging ideas and experiences with cutting-edge international education will surely ignite my metamorphosis into an industry-ready nuclear science professional!

Or

It would indeed be an honour to be a part of the _____ community, and if given a chance, I resolve to use each moment of this wonderful opportunity to chart my own path to excellence.