

# SOP FOR MASTER'S DEGREE IN CHEMICAL ENGINEERING

A world without chemicals would be like a barren desert without water. Chemical engineering, in its applied, organic and inorganic avatars, has contributed immensely in progression of human society through optimal leveraging of the potential of chemical processes. Ultra-modern chemical plants equipped with state of the art manufacturing infrastructure definitely have the potential to materialize the 'Make In India' vision of our prime minister. I would like to contribute my bit by being a chemical engineer who is well conversant with the entire gamut of chemical verticals. As a child, I could see my father work harder to fend for our family. Lack of formal education prevented his professional growth despite the fact that his knowledge of chemicals had always been exceptional. This had ignited my passion to etch a name for myself in the chemical industry by rising to the pinnacle of academic success. I aspire to pursue Master's degree in Chemical Engineering to consummate my knowledge of chemistry by imbibing contemporary perspectives.

My father has been the driving force behind my academic excellence. He had gotten me admitted in prestigious educational institutions to ensure best nurturing of my skills. Don Bosco High School was the cradle for my secondary education. After completing matriculation with 87.82% marks, I went on to join D.G. Ruparel College of Science Arts and Commerce (Junior College) for my Intermediate. My goal was set clearly out before me and this had always motivated me to chase my ambitions with steadfast attention. Consequently, I could complete my higher secondary with distinction (74% marks) and secure a seat in B.Tech (Chemical Engineering) at Dwarkadas J. Sanghvi College of Engineering. My stellar performance has continued over here and my cumulative CGPA till sixth semester has been 6.89/10.

While spending time in laboratory, I feel overwhelmed by the monumental advancements in the domain of chemical processes. Digital transformation has ushered in better and swifter ways to analyze variegated data and derive meaningful insights. There is ample scope for engaging in qualitative research in this domain using contemporary data analytics software. Masters would offer me the opportune platform to surge ahead in cutting edge research. I am presently in the final year of my graduation and wish to be part of a global institution with state of the art pedagogic infrastructure. Although a bibliophile, I have never neglected other dimensions of character strengthening as they are equally important for developing as a discerning professional. As the Co-Chairperson of TRINITY'17 college festival and also the Co-Secretary of the Indian Institute of Chemical Engineers (IICChE) student chapter of our college, I have honed my managerial, leadership and organizational skills. I was second in hierarchy in a team of 57 members with additional 200 members in the adjunct branch. In the 3rd year of college, I rose in position in the student council to become a prominent member just after General Secretary and Chairperson. My communicational skills had shone forth when I was in-charge of publicity for Creative Sports Logistics events in 2nd year of college. I had stood 1st in Inter-departmental Cricket tournament in which 28 teams had registered. My 2 years stint with the Rotaract club has brought me closer to the environmental problems in urban sector while working on various projects like usage of eco-friendly substances, and pollution free atmosphere.

Practical hands-on experience is essential for understanding the grasp on concepts learnt. With this in perspective, I have always sought pragmatic exposure to test the profundity of my knowledge. I have participated in 3 internships of approximately one month each. I am presently focusing on my final year project which deals with manufacturing of sunscreen lotion from scratch. I have undertaken comprehensive research to choose strategic ingredients called phytoconstituents. Experiments to understand the compatibility of phytoconstituents w.r.t. SPF (Sun Protection Factor) value are underway. I would soon publish a research paper documenting the processes through which solvents, ingredients and other developments would occur for getting the lotion. The end product would be purely herbal. I have always believed in protecting our environment from degrading impacts and all my endeavors are directed to accomplish the same. I have also prepared a seminar report on food packaging which would focus on selection of materials for sunscreen manufacturing.

The internship that I would cherish for a long was at J B industries' copper sulfate plant. Studying and analyzing the processes over here helped me link the theoretical knowledge with real life functions more convincingly. Closer look at the manipulation of process variables and controlling of stated design values had been very enriching. I also had my awareness levels raised about adherence to stringent governmental regulations related to maintaining of sterile and hygienic conditions at the plant. Another area which caught my attention was the proper disposal of effluents to keep the environment safeguarded from adversarial impact of toxic chemicals. I also had the opportunity to intern at Mumbai based U.S. Steriles that engages in manufacturing of detergents and disinfectants. Over here, I had exposure to processes like reverse osmosis and usage of fuel additives including the use of cooling towers during the process. The venue of my third internship was the Zinc Sulphate Plant at Vashi's Hardik Industries. I could gain valuable insights into conventional methods of manufacturing and analyzing chemical components. This was the most significant part of my work since it began with the manipulation of the variables and ended with perfect measures adopted to maintain hygienic conditions with sterilization. This in way was very challenging for me since the basic concept of chemical engineering is based on the factors mentioned above.

I am very much confident that I will be able to make substantial contribution to the university intellectually. If my candidature is considered in positive light, my ambitions would be materialized fully. I would evolve as a learned human being who can contribute optimally for the betterment of society. After serving chemical industry for a span of 2-3 years, I plan to pursue MBA to be a prescient manager with incisive outlook.