

Study Plan

Introduction and Intention to Study in China:

My name is _____ and I belong from Pakistan. I recently completed **Master Degree** in **Environmental Engineering** from **Jiangsu University** situated in Jiangsu province of China. During my stay at Jiangsu University, I was successful in publishing my research on **CuS-Functionalized Cellulose Based Aerogel for removal of organic dyes** in an SCI journal named as **Journal of Applied Polymer Science**. With that, I participated in various academic conferences and won awards such as best presenter and best paper. I also took part in extra-curricular activities and won Jiangsu University Badminton Championship three times in a row. My stay in Jiangsu University was full of success stories and that is the basic reason that I wish to further pursue my doctoral degree in Jiangsu University, China. With strong knowledge of chemical process engineering, I would like to further extend my studies and research in process engineering & modeling niche.

Talking about my previous academic background, it was my intense enthusiasm and deep interest in studies which awarded me with Bachelor in Chemical Process Engineering Degree from Dawood University of Engineering & Technology, Karachi. I scored 80% marks back in March 2014 in Chemical Engineering. It came into my knowledge that I scored overall 1st position in semester 7th and secured 3rd position in semester 5th, later on as per overall score in this degree; I managed to rank myself among top 5 students in Chemical Engineering Department. Professors highly appreciated my success and recognized me as 'Best Presenter' in whole university as I acquired expert level skills in developing & delivering academic presentations or seminars in international events organized by university and department. Due to my fluent English language i actually impressed and engrossed faculty members of Chemical Engineering Department, because of which they appointed me as an 'Ambassador of English Literary Society' in University.

I am eager to apply for P.h.D. degree in Jiangsu University, China on CSC Scholarship. This zealous desire aroused in me because of my strong academic background like research projects I completed, jobs I did so far in relevant industries, studied related subjects and

experiments conducted under supervision of respected Professors. It is now my utmost desire to pursue my career path to become a good researcher for my country.

Reasons to Study in China:

Research is the hallmark of innovations we see in this century. Such global innovations are result of foundational facilities provided by country under supervision of highly experienced people and China is providing these all facilities. I published my research paper in an SCI journal recently during my stay in Jiangsu University and that happened only because the Chinese Universities have the facility for international students to conduct the proper research. This is the major reason that I wish to study further in a Chinese University this year. It must also be noted that now I can speak Chinese language and have got 180 marks out of 200 in HSK 2 Chinese language examination. Which means now I can speak basic Chinese language and I am eager to learn more of it. China is ranked among top advanced countries because of highly advanced facilities, dedicated researchers, intelligent minds and facilities government provide to conduct such studies. So this is why every research journal and magazine feature success stories of Chinese people in every field. As per these grounds i cannot find any better place than China to proceed in research field of Process Engineering Modeling and theory. I read about various Chinese Thermodynamic and Process engineering professors in magazines of Icheme, London & heard from fellows and my teachers in seminars that Chinese professors are the most advanced persons in process engineering and modeling research niche under Research Center of Fluid Machinery Engineering and Technology, Power Engineering & Engineering Thermophysics department. Not only this but also it is a matter of fact that China is most secure country having nice environment feasible for us to study. With that Pakistan-China friendship compelled me to move ahead and it feels like China is our most friendly country where people are so humble and friendly. My parents feel comfortable to allow me to proceed China because China is safest country & strong emerging largest economy of the world. Chinese universities are Top ranked and recognized as prestigious research institutes around globe. So these are the reasons that compelled me to choose China again for my Doctoral degree Research.

Research Field Direction and Plans:

I am aware of Industrial and domestic process engineering challenges as I have been internee in two of the top most Oil Refineries of Pakistan. There I was able to polish my process engineering and modeling skills by using software's such as Aspen HYSYS, KORF Hydraulics and other listed below. I recently carried out practical research in Environmental department of Jiangsu University on waste water treatment and it was accepted for publication in SCI journal. My research was accepted for publication in journal of applied polymer science (DOI: 10.1002/app.47404) and now I wish to further extend my research to synthesize similar but more innovative catalysts materials. I would like to work on a project assigned on process engineering so I can further extend my research work. I am open to the ideas of working on development or improvement of pumps, heat exchangers or other process engineering equipments to provide better performance.

I am also interested to develop a modeling system capable to detect certain pollutants in waste water via computerized simulation monitoring system just like Aspen HYSYS capable of showing virtual process industry calculations about pollutant type and quantity analysis using magnetic components.

Once I'll be able to classify and quantify the pollutants from sample of Textile & Refinery Waster water then a thorough research to eradicate these pollutants can be performed with help of bio-organic catalysts. Moreover, I am highly interested to initiate pre-research on pumps, valves and other hydraulic equipment's so their work efficiency can be further improved under harsh or challenging conditions.

I am excited to start my doctoral degree in China this year and this degree & research in China will be helpful for me when I'll come back to Pakistan and implement my experiences to elevate quality standards in Pakistani industries.

Awards I won in Jiangsu University:

- Winner of best presenter award at SINO-Postgraduate Conference held by Jiangsu University
- Winner of best research publication award at SINO-Postgraduate Conference held by Jiangsu University

- Winner of best overall presenter award at School of Environment conference of Jiangsu University
- Winner of Badminton Championship in 2017 in Jiangsu University
- Winner of Badminton Championship in 2018 in Jiangsu University
- Winner of Badminton Championship in 2019 in Jiangsu University

Seminars I Delivered in Pakistan and Other Activities:

I was recognized as ‘Ambassador of English Literary Society’ by my professors. So I delivered majority of presentations in University as well as at Social platforms. My academic seminars includes:

- Organic Waste Consequences on Aquatic Life [Eutrophication]
- Corrosion Protection Methodologies Adopted in Industrial Units in Asia
- NO_x, SO_x & VOC and other secondary pollutants distinction from primary pollutants
- Seminar on Sugar Industry Operation & essential Crystal Growth of massecuite
- Presentation on Literature Survey on Thermodynamic Properties of Fluids
- Oil Refinery Operation [Reformer and Hydrocracking Unit with majors in Fluid Cracking Unit]
- Bubble and Dew Point Calculations and Flash Drum Design
- Industrial Waste Management Resources and Problems
- Domestic Water Pollutant Sample Analysis Techniques

Professional Experience, Memberships & Awards:

In Jiangsu University, I was able to work on the synthesis of Metal Chalcogenide functionalized on the surface of an aerogel prepared by cellulose and this research was helpful in degradation of organic dyes from waste water. This work was published in an SCI journal as stated above. During my bachelor degree, my research project “Troubleshooting of industrial Binary Component Distillation Rectification Pilot Plant” in graduation was actually sponsored by National Oil Refinery and co-supervised by their engineering services managing director with my university supervisor Professor Ghulam Ullah. The notion of our project commenced with the literature survey and problems that caught our attention in pilot plant’s chiller in early stage and experimented solution to resolve this issue was proposed using Aspen HYSYS Simulation software and Korf Hydraulics which lead us to find out the root cause of the issue and it was proposed successfully to the laboratory which later on they adapted and the pilot plant came back into life once again. It was a successful project indeed in which I got extensive industrial knowledge because of the industrial tours and got a chance to work with extremely professional and highly experienced production engineers in both Attock & BYCO oil Refineries. In the end, I was awarded with appreciation certificate from University Chemical Engineering Department and Professional Experience Certificate from BYCO Oil Refinery.

Another final year project I was co-engaged in was about Industrial Waste Water treatment & Carbon Dioxide Reduction in flue gases for which we conducted literature survey.

Moreover, I am qualified member of Icheme, London. [Institute of Chemical Engineers Society, London]

Beside this, I also have Pakistan Engineering Council's membership which is only awarded to those successful industrial engineers who completed degrees and have successful research projects.