

# *Study Plan*

Dear respected sir, I am applying for a ICCR (Indian Council For Cultural Relationship) scholarship to study Masters in Electrical engineering. One of the requirements to submit a study plan essay, please help me to make the essay hit the nail on the head and get me that interview!! Thank you in advance.

## **ACADEMIC BACKGROUND:**

My name is Manobesh Biswas, a 25 years old boy from Bangladesh. I hold a Bachelor of Science degree with a major in Electrical and Electronic Engineering. I successfully completed my undergraduate studies in January 2019 from the North Western University, Bangladesh. I graduated with a CGPA of 3.87 out of 4.0. Moreover I have an IELTS score and the overall score is 6.00. My interest in Electrical and Electronic Engineering was ignited in 2014 during completed my Higher Secondary Examination. Immediately I realized how crucial the field is to developing countries like Bangladesh. Among many issues, it is stipulated that most Bengali economies are underdeveloped because lack of enough energy. For this reason my main goal is to deepen my understanding and knowledge in Electrical and Electronic Engineering which will build a solid foundation for me to partake in ground breaking research that will have significant policy implications to the Bangladeshi economy. In my pursuit of my undergraduate degree I studied various courses of Electrical and Electronic Engineering, the main courses include Electrical Circuits-1, Engineering Mathematics-1, Physics-1, Computer Programming, Electrical Circuits-ll, Functional English & English Skills Laboratory, Engineering Mathematics-ll, Chemistry-1, Basic Electrical & Electronic Filter design Engineering, Engineering Mathematics-lll, Basic Mechanical Engineering, Chemistry-ll, Electrical Machines-1, Engineering Mathematics-1v, Physics-ll, Electrical Machines-ll, Engineering Mathematics-v, Physics-lll, Mechanics of Solids, Electronics devices and Circuits-1, Transmission and Distribution of Electrical Power, Numerical Analysis, Programming Techniques & Numerical Analysis, Electronics devices and Circuits-ll, Electrical & Electronic Measurements, Telecommunications-1, Electronics devices and Circuits-lll, Digital Electronics, Industrial Management, Microprocessor & Peripherals, Telecommunications-ll, Electromagnetic Waves and Field, Socioeconomic and Environmental Aspects of Engineering Projects, Microwave Engineering, Integrated Circuits

and Industrial Electronics, Control System, Material Science, Power System, Power Station, Digital System design, Digital Signal Processing, VLSI Circuits, Switch Gear & Protection, Radar and Satellite Communications, High Voltage Engineering. In my final year I conducted Thesis on the Modeling & Characterization of Graphene Field Effect Transistor. The study revealed that today, transistors with 20 nanometer (nm) channel length are in mass production and many researchers believe that we are reaching a limit with downsizing conventionally used silicon metal-oxide semiconductor field-effect transistors(MOSFETs).To keep up with the trend of making the transistor smaller, new channel materials are studied, and graphene has come into the spotlight. Graphene became a serious contender mostly due to its high mobility, but other properties such as high velocity saturation and the two-dimensional (2D) nature of the material have gained more attention in recent years. The first graphene fieldeffect transistor (GFET) was reported in 2004, since many transistors with graphene as a channel material have been successfully fabricated. It is important to have accurate simulation models that showcase all the peculiar behaviors of GFETs. Even though several new models with high accuracy have been presented in recent years, few theoretical explanations exist. This thesis work focuses greatly on the theory behind three different simulation models for GFETs. Several parameter approximations are investigated, with focus on the possibility of showcasing negative differential resistance (NDR).

In addition as a student, I loved to step out of my studies by joining the boy's cricket team and learning the tennis as a form of entertainment. I also took up leadership roles in small organizations on campus in order to polish my leadership skills but it is not enough that is why I am constantly seeking opportunities that will prepare me for influential leadership roles in the near future. Personally I am an adventurous person who loves visiting and fitting into new environments. I enjoy meeting new people of diverse cultures because the experiences polish my interpersonal and communication skills which I believe are the main things that contribute to my growth as a social person. After graduation I practiced English well to increased my communication skills because its help me to communicate with overseas people. I have an IELTS score and the overall score is 6.00 and no band less than 5.5.

### **STUDY PLAN IN INDIA:**

After completion of my master's studies I hope to be able to take part in maximizing my country's power research in such fields to benefit its policy formulation and adjustments. This will contribute to a sound economy that will in turn improve the poor energy source of the

Bengali people. I believe that this Master's Program will provide me with a solid understanding of the fundamental tools of Electrical analysis that are employed to conduct rigorous research of Electrical issues and Electrical policies. I hope that I can gain more experience in dealing with situations, people, and demands which will be of a great help in my future career.

### **REASONS TO STUDY IN INDIA:**

India's heavy investment in education has resulted in provision of high quality education and its universities have high reputation which makes a great aspiration to the students and professionals for the better career perspectives. As someone whose sole interest lies in Electrical Engineering, India being an economic powerhouse provides the perfect environment for the study and research in Electrical Engineering. India will provide me an opportunity to meet imminent researchers in this field and to be part of its research community will allow me to acquire invaluable transferable skills which I can tailor and apply in my country. India as a country is also iconic to me due to the bilateral relations it has with Bangladesh. The fact that India is promoting trade and peace with Bangladesh makes it a comfortable destination to pursue a Master's degree in Electrical Engineering. In addition, of great interest to me is India's diverse, vibrant and well preserved culture. It would be honorable to learn and live the norms and values of the Indian people as well as appreciate the great cuisines of India.

In conclusion, I am looking forward to your favorable consideration and I look forward to your reply.

Regards,

Manobesh Biswas