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## Applying for Studying Abroad

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### Outline

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- q Eligibility
- q Selecting location
- q Selecting programs
- q Standardized tests
- q Selecting schools
- q Writing SOP
- q Requesting for LOR
- q Other tips



## Eligibility

- q Eligibility varies from school-to-school
  - CGPA not the sole criteria
  - Other important things
    - § Standardized tests: IELTS, TOEFL, GRE
      - GRE subject tests
    - § Letter of recommendations (LOR)
    - § Statement of purpose (SOP)
      - Match with research group/ school
    - § Portfolio
      - Experience (Full-time / part-time, software development)
      - Papers (Journal->Conference)
      - Awards related to your field of study
        - Programming and software development contests, design contests (e.g. architectural, robotics, bridge design), math/ physics olympiads, etc.
      - Other awards (e.g. sports, debate, cultural, etc.)
      - Leadership skills (e.g. executive positions, voluntary works, etc.)

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## Example 1

q Class Rank 3/76, CGPA 9.2/10.0, GRE 540+790+3.5

**Your honors, prizes, or major publications:**

[National Talent Search Scholarship receiver, Tata Steel Scholarship receiver,]

[National Astronomy Olympiad]

**Your extracurricular activities and accomplishments:**

[Secured "A" grade in Basic Mountaineering Course scaling 17000 ft in Himalayas,]

[Co-founder of department newsletter, Cricket and kho kho team member,]

**Your teaching or professional experience including summer and term-time work. Give name of employer, dates, and nature of work:**

[Research Internship, Transportation Research Group, Wayne State University,]

[Dr. Tapan K Datta, May-July 2008, traffic safety projects for State of Michigan]

**Other experience, including military, volunteer work, travel. Give dates and nature of work:**

[Participated in Indian leg of International Coastal Cleanup programme,]

[raised awareness about environmental issues among local people]

## Example 2



q CGPA 93/100, GRE 560+800+5(500+800+3)

**Your honors, prizes, or major publications:**

[23rd National Physics Competition (Class A), Rank 1st over all the students]

[Certificate for the outstanding participation in the USC-Tsinghua Research]

**Your extracurricular activities and accomplishments:**

[Best award on DV processing, Tsinghua University.]

[Member of Tsinghua Guitar Amateur Club.]

**Your teaching or professional experience including summer and term-time work. Give name of employer, dates, and nature of work:**

[Research Intern, 7/2008-8/2008, Prof. Petros Ioannou, Dept. of EE, USC]

[Research Assistant, 2006-present, ITS lab, Prof. Jianming Hu, UIJ]

**Other experience, including military, volunteer work, travel. Give dates and nature of work:**

[Beijing International Marathon (21 km), 2005.10]

[Ac commissary in charge of studies of Class DA 52, 2006.9-2007.9]

## Eligibility



q Summary

- Make a conscious effort to enrich your portfolio
- Plan-ahead and don't leave the tests for the last minute
- Spend a good amount of time to prepare your SOP and application

q Word of caution

- For getting funding, you need to have much better credentials than the specified minimum requirements



## Selecting location

- q Points to consider
  - Probability of getting funds
  - Job opportunities/ value of the degree internationally
  - Time requirement
  - Life in general
- q Typical options
  - USA, UK, Canada, Australia, Germany, Sweden, Singapore, Japan, Korea
- q See comments from 'veterans' (uploaded as a separate document)

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## Selecting programs

- q MS/PhD
  - Funding options vary
    - § 2009: applications downgraded to MS from PhD
  - PhD will require additional 3-5yrs
    - § Do you like research work?
  - Useful primarily if you want a faculty or research position
  - Better strategy may be to apply for an MS but clearly mention in your SOP that your ultimate aim is to do PhD
- q Field
  - PhD applicants: don't choose a field that you don't like only for the sake of funding
  - Funding (and job) opportunities vary over time: BUET alumni can be a good resource for the latest status

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## Standardized tests

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- q What tests do you need
    - Varies depending on location
    - IELTS vs. TOEFL
    - GRE general tests
      - § **\*\*\*Quantitative\*\*\***
    - GRE subject tests
  - q When to schedule the tests
    - After L3T1 / after L3T2 is the best time
      - § Leaves you time to retake if required
  - q When to start preparing
    - Start increasing your vocabulary TODAY
    - Quantitative: 1 or 2 months should be enough
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## Selecting schools

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- q Rankings
    - <http://www.usnews.com/sections/education/worlds-best-universities/index.html>
    - <http://www.timeshighereducation.co.uk/>
  - q General vs. subject specific rankings
  - q Supervisor is very important !
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1	<b>Massachusetts Institute of Technology (MIT)</b> <i>United States</i>	100.0
2	<b>Stanford University</b> <i>United States</i>	83.3
3	<b>University of California, Berkeley (UCB)</b> <i>United States</i>	82.7
4	<b>University of Cambridge</b> <i>United Kingdom</i>	72.5
5	<b>California Institute of Technology (Caltech)</b> <i>United States</i>	68.3
6	<b>Imperial College London</b> <i>United Kingdom</i>	67.1
7	<b>The University of Tokyo</b> <i>Japan</i>	64.4
8	<b>ETH Zurich (Swiss Federal Institute of Technology)</b> <i>Switzerland</i>	61.8
9	<b>University of Oxford</b> <i>United Kingdom</i>	58.7
9	<b>National University of Singapore (NUS)</b> <i>Singapore</i>	58.7
11	<b>Tsinghua University</b> <i>China</i>	58.4
12	<b>Carnegie Mellon University (CMU)</b> <i>United States</i>	55.1
13	<b>Georgia Institute of Technology</b> <i>United States</i>	54.4
14	<b>University of Toronto</b> <i>Canada</i>	54.1
15	<b>University of California, Los Angeles (UCLA)</b>	53.4

US News  
Ranking of  
Engineering  
Schools

TOP 50 ENGINEERING AND TECHNOLOGY UNIVERSITIES 2010			
SUBJECT RANK	INSTITUTION	COUNTRY	Engineering and Technology OVERALL SCORE <small>Change</small>
1	<u>California Institute of Technology</u>	United States	95.9
2	<u>Massachusetts Institute of Technology</u>	United States	94.7
3	<u>Stanford University</u>	United States	93
4	<u>Princeton University</u>	United States	91.3
5	<u>University of California Berkeley</u>	United States	90.5
6	<u>University of Cambridge</u>	United Kingdom	87.8
7	<u>Swiss Federal Institute of Technology Zurich</u>	Switzerland	87.2
8	<u>University of Oxford</u>	United Kingdom	85.9
9	<u>Imperial College London</u>	United Kingdom	85.8
10	<u>Georgia Institute of Technology</u>	United States	83.2
11	<u>Carnegie Mellon University</u>	United States	82.3
12	<u>Cornell University</u>	United States	80.9
13	<u>University of Toronto</u>	Canada	80.1
14	<u>University of Michigan</u>	United States	79.5
15	<u>University of Illinois - Urbana</u>	United States	77.8

Times Higher  
Education  
Ranking

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## Selecting schools

- q Application is expensive, so choose carefully !
- q My suggestion:
  - Choose a ‘well-graded’ mix
    - § 1 or 2 ‘high-end’ universities that ‘may’ fund you
    - § 2 or 3 ‘medium range’ universities where you are likely to get in (BUET alumni with similar background have got in over the last couple of years)
    - § 1 were you are quite sure you will get in (BUET alumni with worse background have got in over the last couple of years)

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## Writing SOP

- q Typical organization
  - Who you are?
  - Why this field (e.g. Transportation)?
  - What specifically interests you?
    - § Match with university and faculty strengths
  - Why this university?
  - Why should this university admit and fund you?
  - What is your career goal and how an MS/PhD in field X of university Y can help you to achieve what you want?

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## Example



### Who you are

I am a senior undergraduate student of Civil Engineering at xxx. My fascination for Transportation Engineering, and desire to contribute towards it through meaningful research, has been the driving force in my decision to pursue graduate studies. For this purpose, I am applying for a Master of Science in Transportation program at Y.

### Why this field

This decision is not the outcome of a single event or but an eventual realization that this would be the most suitable, challenging and exciting career choice for me. A strong urge for academic excellence was instilled in me during my school days themselves. I realized that I have an interest and innovative aptitude in diverse fields of science. My inherent inquisitiveness to explore along with my natural aptitude for mathematics and science strengthened my decision to take up engineering. With persistent efforts and relentless hard work, I reached xxx, one of the premier engineering schools in xxx.

### Why should the university fund you...what are your experiences, strengths etc.

An excellent course structure, interaction with world-class faculty and exposure to a wide variety of fields and activities during my four years at IIT have given me a strong platform from where I am able to set really high goals for myself. I was awarded the Tata Industry Scholarship, awarded to the top 3 students from rankers of all departments by the Tata Industries. Enthusiastic for getting started with research, I did a **voluntary** project as an Undergraduate Research Opportunity Programme (UROP) on "Evaluation of necessity of dedicated Freight Corridor" under Prof. Z. This project aimed at reviewing a concept paper on the Delhi-Mumbai (Western) and Delhi-Howrah (Eastern) dedicated freight corridors to understand the new organisational structure for planning, financing, construction and operation of these corridors. I was massively inspired by the detailed thought process that goes behind such large development and planning projects. I found the chance of exploring beyond the predefined confines of a course on my own initiative very exciting.

**Etc. etc.**



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### **What specifically interests you..**

I am keenly interested in the areas of logistics and traffic engineering. The wide spectrum of potential applications of these research areas has immensely motivated me for further research. My previous research experience has made me dedicated and commitment that research calls for. I strongly believe that through a balance of courses, laboratory work and projects, I have acquired the requisite experience, expertise, and mindset to carry out research in a structured and effective manner.

**Etc. etc.**

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### **q Why this university ..**

My interest in xx stems from a strong desire to be a part of the intellectually stimulating and challenging environment at one of the world's premier universities and its reputation for attracting the best students, bringing them together with the best faculty and providing them the best possible facilities for learning and research. I believe that the distinguished environs of xx will help me realize my professional goals successfully.

### **q What is your career goal and how an MS/PhD in field X of university Y can help you to achieve what you want?**

In conclusion, I believe I have the motivation and drive to give my best and feel that xxx can bring out the finest in me. I sincerely hope that you will find me a worthy candidate and provide me an opportunity to contribute to your research endeavours.

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## Requesting LOR

- q Plan-ahead
- q Select referees
  - An LOR from your thesis supervisor is a must
  - Your Advisor is also a critical candidate
  - Select teachers who have something special to say about you
    - § Make an effort that the teacher remembers you after class !
    - § Level of acquaintance of the teacher is more important than the designation of the teacher or his/her credentials
  - Request your teachers well-ahead of time
  - Provide a list of the schools who will contact him/her
  - Ask your referee if you should provide a copy of your script or your SOP
  - If you are asked to provide a draft to your referee make it as personalized as possible (and DON'T COPY-PASTE !)

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## Other tips

- q If your undergrad CGPA is not so good and you do not have a good portfolio
  - Do an MSc and try to score better CGPA
  - Try to publish
  - Work in a relevant field
    - § Research experience may be better as it can lead to publications
- q Contacting alumni
  - BUET alumni studying in the potential school may be able to provide inside info on funding scenario
- q Contacting professors
  - Contact a selected one (max two from a department)
  - Do not pester him till he gets annoyed !
- q Ethical issues
  - **DO NOT go to a lower ranked school and transfer to another school when you get a better offer before completing your degree in the first school. This is not only highly unethical, it closes the door to that school or country for many future BUET alumni**

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# USA



## Shubharthi Barua, CHE 03

### 1. What are the scholarship opportunities in USA?

In USA, normally universities give Teaching Assistantship (TA) or Research Assistantship (RA) or Fellowship or Graduate Assistantship (GA). GA is a temporary condition, when a student will be enrolled in the program as GA, he will be later given responsibility of TA or RA. Normally if anyone receives assistantship, then tuition fees also covers by the university or department. So if anyone receives assistantship, he will a monthly stipend and tuition fees waiver. In most cases, student has to pay some semester fees. Monthly stipend varies from university to university depending on available department funds or supervisor fund and in which program student enrolled (MS or PhD program). For MS in Chemical Engineering monthly stipend is between (\$1000 to \$1300) and for PhD in chemical Engineering it is around (\$1500 to \$2000). It should be noted that for any department and for any university, it is very much difficult to get assistantship or fellowship in MS Program.

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# Example



Dear Prof x,

I am Y, a Civil Engineering Senior studying in Z. I am considering to pursue my graduate studies in Travel Demand Modeling and was excited to see the ongoing research projects in your lab.

Write about your research experience and related it with Prof X's expertise.. write about your papers (if any) etc. etc. The details of my educational background and experiences are attached with this mail

I am considering to apply to Q and would like to work under your supervision. If you have any Research Assistantship positions available, please let me know. If you prefer, I can call you over skype/ phone to further discuss my research experience and interests.

Best regards

xx

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# Singapore

Mithun Kumar Shaha, CE 95

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## 7. Any special advice?

[MS] If you prefer Singapore for higher education, come only if you do NOT have any hesitation.

**(DO NOT go to Singapore and transfer to another school when you get a better offer. This is not only highly unethical, it closes the door to that school or country for many future BUET alumni)**