

Panel Discussion

Application and Academic Processes for Graduate School Studies in the Sciences in the US

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Getting a graduate degree

- Ability to carry ***creative*** independent research and generate new knowledge
- Ability to think independently about hypotheses in Science and Technology (S&T)
- Ability to come up with new methodologies, new processes, new discoveries that hopefully will benefit mankind

- *No memorization and regurgitation*
- Decreased emphasis on grades and coursework in advanced stages.

Requirements?

- ***Demonstrated fluency in English***: Real-time communication with advisor, co-workers, and students. Excellent writing ability, not translation. Good conversational skills
- Mastery of basic ***Fundamental knowledge*** in your fields. Being able to apply those knowledge to problem solving
- ***Passion*** at what you want to do. A will to make a difference
- Sincerity and honesty. Ethical behavior
- Research aptitude

What do VEF interviewers look for?

- Ability to communicate in English
- Mastery of fundamental knowledge in the chosen field + the chosen field for graduate studies
- Passion to make a difference in Vietnam S&T
- Research aptitude and sincerity
- ***Realistic plan and dreams.*** A global view of the S&T situation in Vietnam and how the student's chosen area of expertise can help to move Vietnam into the future after their VEF fellowship

What do graduate schools look for?

- Demonstrated ability do research (undergraduate or master). Best student in academic is not necessary the best for Ph.D. research
- Demonstrated curiosity
- Passion for making a difference through research
- Mastery of basic fundamental knowledge (scores on the GRE general and subject tests)
- Ability to communicate in English (TOEFL)
- Good letter of reference

Cost

- Application: application fee (US \$50 to >100 per school) can be high so apply selectively. Some schools are still free.
- May be able to ask for a waiver of fee or to postpone payment of fee to after attending graduate school.
- Pursuing a Ph.D. degree in the US: US \$0.00. Research grants of advisor will pay for the cost of research. Teaching assistantship will pay for stipend and tuition.
- The VEF will provide 30-40 2-yr scholarships to the best students for studying in the US. Payment for application fee for up to 5 schools. ***Most importantly, students can receive a letter of recommendation from US faculty members from top research schools.***

What kind of schools?

- The best program in the area that you want to study. Not necessary a “household-name” school or the most famous school
- A program that has 2-3 faculty members that you can consider working with as their advisee.
- Visit department website for information
- Visit professional societies’ websites for recommendations and referrals
- www.phds.org/rankings
- Do not be afraid of going outside of your undergraduate study major. Modern graduate students are encouraged to do so. Those in biology can have undergraduate degrees in chemistry or physics and vice versa.

When to apply? *Prepare early*

- Several years in English training
- Cultivate research experience
- Write a convincing graduate school essay on why you want to go to graduate school, demonstrate passion
- Cultivate good letters of recommendation early

- Application seasons: late September to mid-December.
- Test dates (GRE and TOEFL): Often 6 months to a year before application date

What to do?

- Write a good essay in accurate and readable English
- Demonstrate sincerity and passion
- Qualify judgmental/quality statements with anecdotal evidence.
- Provide explanatory statement about the Vietnamese education system. However, do not repeat information that can be found on transcript.
- Obtain personalized recommendation letters that can give insights to what kind of person you are and show that the recommenders believe in your potential. Do not repeat information that can be found on transcript.

What NOT to do: showing bad judgments, inability to communicate, and mental “laziness”

- Contacting individual faculty members at school directly for help with application process. (Getting reprints and information of their research is alright)
- Sending out mass-emails to many people asking for the same information or information that is available on the internet
- Asking for information from the wrong person

Decision Process

- Admission decision: Dec 15 to early March.
 - Visiting school: January 15-March 15
 - Deadline for reply: April 15
 - Waiting list: After April 15
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- School starts: early August to early September.
 - Graduate schools usually has no summer.
Research requires full-time commitment

Time for degree

- Coursework-based master: 1-2 yrs. Not the most valuable if eventually want to go into research
- Research-based master: 2-3 yrs
- Ph.D.: primarily a research degree: 4-6 yrs

- Teaching: laboratory course, recitation for undergrad students. Senior Ph.D. students may be asked to lecture for a few classes.
- Research: Varies from disciplines to disciplines. For chemistry: 3-4 independent publications in peer-review journals.

Stages of Ph.D. degree

- Entrance exam (before yr 1): Evaluation of preparedness for graduate school
- Cumulative exam (yrs 1-2): Demonstration of mastery of modern research literature
- Qualifying exam (yr 2): Demonstration of proficiency in coursework, some research promise, a plan for completion of the Ph.D. dissertation
- Seminar requirement (year 3): Demonstration of mastery of literature and research aptitude
- Ph.D. Thesis defense (year 4-6): A formal thesis defense and a lecture

After the Defense

- Postdoctoral training (2 – 3 yrs)
- Hopefully obtain top positions in Vietnamese industries and universities to help move Vietnam into the future

Additional information

- http://www.vietnamnet.vn/service/printversion.vnn?article_id=840600 Transcript of the Vietnamnet online interview with George Stancel and SonBinh Nguyen.
- www.vef.gov VEF scholarship funds