

## Why should you go to Graduate school

### Applying, Selecting, & Attending Graduate School

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#### **Why Should You Go to Graduate School?**

##### **Potential Motivations:**

- [Learn and contribute to the understanding of the universe.](#)
- [Pursue a career in academia.](#)
- [Perform supervisory duties in industry.](#)
- [Earn a higher salary](#)

#### **What Characteristics Do Graduate Programs Look for in the Students They Recruit?**

- [Intelligent](#)
- [Persistent](#)
- [Hard-working](#)
- [Curious](#)
- [Multi-tasking](#)
- [Creative](#)
- [Problem solver](#)

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#### **Phase 1: Soul Searching**

##### **A. Decide which field you want to study.**

###### Programs of Study

- [Chemistry](#)
  - [Analytical](#)
  - [Inorganic](#)
  - [Medicinal](#)
  - [Organic](#)
  - [Physical](#)
  - [Polymer](#)
- [Biochemistry](#)
- [Molecular Biology](#)
- [Material Science](#)
- [Pharmacology](#)

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- Bioengineering

### **B. Collect information about graduate programs.**

#### Resources

- Your faculty advisors and other professors
- Seminar speakers on your campus
- Local ACS section
- College guides
- Internet

### **C. You may choose from programs located either within the United States or from around the world. DO NOT LIMIT YOURSELF GEOGRAPHICALLY!**

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## **Phase 2: Information Mining**

### **A. Contact graduate coordinators.**

- Letter, e-mail, phone, in person

### **B. Request application and a departmental brochure.**

- Do not be afraid to ask questions at this stage

### **C. Select schools to which you will apply based on (in no particular order).**

- University/Department/Divisional/Faculty reputation
- Research
- Spouse/Partner employment/preferences
- Financial assistance

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## **Phase 3: Apply**

### **A. Application materials**

- Application Form
- Personal Statement (1-2 Pages), typed. Have a faculty member proof read it!
  - What is your motivation for pursuing an advanced degree?
  - Why is the specific university of interest to you?
  - What are your particular research or academic strengths?
  - What experience do you have? Classes you enjoyed, research (Be specific; include a brief description), teaching experience, employment in a technical field, conference presentations, publications, involvement in your department/college/ACS section
- Letters of Recommendation (three)
  - At least two from CHEMISTRY faculty (NOT part-time instructor, laboratory coordinator or graduate student)
  - The third letter should not be from high school teachers, English/history professors, non-technical employers.
- Transcripts from ALL colleges attended. Unofficial (photocopy) is probably okay initially, but the university will need original copies prior to formal admission.
- [Graduate Record Examination \(GRE\)](#)
  - Verbal. Quantitative. Analytical

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- Request that ETS send a copy to the department. You may want to send an unofficial copy initially.
- Subject GRE Scores are not always required; depends on school.
- Application fees vary from school to school. This may be an expense to take into account before seriously applying to several schools.
- Note: if possible send all of the above in a single envelope (unofficial GRE, transcripts in sealed envelopes, and letters of recommendation in sealed envelopes if writers are willing to give these to you). Receiving all the information at once makes the graduate coordinator's life simple, and will not reflect badly on applicants.

### **B. The best thing you can do to improve your application: Undergraduate Research**

#### At your Undergraduate Institution

- During the academic year
- During the summer

#### Other Research Opportunities

- Research Experiences for Undergraduates (REU) Program (10 weeks) after sophomore or junior year.
- NSF SURF Program
- Howard Hughes Program

### **C. How do admission committees review your application?**

- GPA/Transcript
- GRE Scores
- Personal Statement (Research/Work Experience)
- Letters of Recommendation

### **D. If your application is rejected:**

- Apply elsewhere if there is time.
- Contact the department again in the spring, but do not have any high expectations of admission.
- Consider taking graduate courses as a non-degree student, and then reapply.
- Look at your application for deficiencies; retake GRE?
- Work for a couple of years.
- Apply to smaller departments.

### **E. Your application is accepted and you get 10 offers!**

- How are do decide which offer to accept?
- How can you visit ten departments between January and March?

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### **Phase 4: Visiting the Campuses**

**A. If accepted:** Go on a visit to the university. The university should pay for the cost of the visit. They may ask you to coordinate your trip with a nearby institution to which you are applying (and split the cost).

### **B. During the campus visit:**

- Ask questions about research, financial support, teaching responsibilities, scholarship

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opportunities.

- Meet faculty and current graduate students.
- Ask more questions: housing, academic requirements, qualifying exams, matriculation time, employment opportunities, etc.
- Show interest!

### **C. Follow-up the visit:**

- Contact faculty members in whose research you were interested. Request copies of their publications; ask if they are accepting new students into their group.
- Show interest!

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## **Phase 5: Making a Decision**

**A. Decide Where to Go:** This is either the easiest or the most difficult part of the whole process.

Things to Consider

- Reputation: university, department, division, faculty
- Possibility of research assistantships (usually not first year)
- Size of department: large, medium, or small?
- Size of research groups
- Track record
- Location
- Spouse partner employment/preferences
- Financial assistance/scholarships

**Suggestion:** If you are planning on attending a particular program with the aim of working with one particular faculty member: MAKE SURE THAT YOU ESTABLISH CONTACT WITH HIM/HER BEFORE YOU COMMIT! For example, are they taking new students? Do they have funding for you? Will they take YOU into the group? It is usually a better decision to attend a program where there are a number of groups in which you are interested.

**B. \$\$ MONEY! MONEY! MONEY! \$\$:** You should expect to be paid and to receive a tuition waiver while you are pursuing graduate studies in the sciences.

- Teaching assistantships
- Research assistantships
- Ask about fellowship support from the department.
- Apply for financial support from other agencies (NSF, Merck-UNCF, DoD, Hertz Foundation, GEM Foundation). Do this often done in conjunction with the department.

### **C. Inform Schools (Graduate Coordinators) of Your Decisions**

- "I am delighted to accept your offer of a position in your Graduate Program..."
- "I regret that I am unable to accept your offer of a position in your Graduate Program..."

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## **Timeline**

### **A. Things you should be doing now:**

- Undergraduate research

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- Get involved in your department
- Talk to faculty (helps in writing letter of recommendation)
- Begin soul searching and investigation of graduate schools

### **B. Spring of junior year/Fall of senior year:**

- Take GRE (General and Subject). Remember: It takes 6-8 weeks for the official score to be forwarded.
- Apply for fellowships (NSF, DoD, Ford, etc.).
- Request letters of recommendation. Your letter writers will appreciate a 2-3 weeks to get these letters out! Your statement of purpose, unofficial transcript, resume, and an electronic mailing list with due dates are helpful items. Some faculty may have specific items that they require.
- November/December or no later than early January of Senior Year
  - Submit as complete an application as possible.
  - Some universities only accept complete applications. This will be difficult for you unless you have taken GREs early.

### **C. Late Fall/Early Spring of Senior Year :**

- Receive offers or invitations to interview.
- Visit Departments (request travel expenses!!)
- This is a VERY busy time. Trips take 1-2 days, while you are still in school! May schedule visits during Spring Break.

### **D. APRIL 15**

- Normal deadline for acceptance of an offer.
- You have finished the process!

### **E. After APRIL 15**

- Some late applications, visits, offers, acceptances... but don't bet on it!!

### **F. GO TO GRADUATE SCHOOL**

- Do not look back. Do not second guess.
- Immerse yourself in your studies and new environment.

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### **Useful Links**

- [Graduate Record Exam \(GRE\)](#)
- [American Chemical Society](#)
- [GradSchools.com](#)
- [US News & World Report Graduate School Rankings](#)

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