The What, When, Where, Why & How of Graduate School

A Panel Discussion

**Moderator**
Prof. Steven Emory

**Panelists**
Prof. Spencer Anthony-Cahill
Prof. Marc Muniz
Prof. Greg O’Neil
Prof. Margaret Scheuermann
Keys to Success

1. Be informed.
   http://www.acs.org/content/acs/en/education/students/graduate/gradschool.html

2. Do **not** self select.

3. Find something that interests *you* . . . . . . have FUN, but *do not limit* yourself.
Why Go to Graduate School?

Consider your **professional goals:**

- Industry, academics, government.
- Where do you want to be on the food chain?
- Do you want a job or a career?

Consider your **life goals:**

- Family / personal issues.

Consider your **talents & abilities:**

- Do you like lab work and research?
- Management, organizational skills.
- Personal interactions.
Career Paths in Chemistry

Industry

Academics

Government Labs

Other Careers
- Law (often patent law)
- Consulting
- Science Writing
- Policy
- Forensics
- Art Conservation

http://www.acs.org/content/acs/en/careers/college-to-career.html
Bachelor’s Degree (B.A., B.S.)
- Chemistry technician positions.
- Customer service.
- K-12 teacher w/ certificate.

Master’s Degree (M.S.)
- Chemistry technician positions.
- Customer service.
- K-12 teacher w/ certificate.
- Community college instructor.

Doctorate Degree (Ph.D.)
- Scientist positions.
- College professor.
What is Graduate School Like?

Financial support—yea!

- Teaching Assistantships (TA)
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- Research Assistantships (RA)
Financial support—yea!

- Teaching Assistantships (TA)
- Research Assistantships (RA)
- Graduate Fellowships
  - Federal
  - Private Organizations (portable)
  - Institutional

[Link to article]

http://www.gradschools.com/article-detail/types-of-graduate-fellowships-1676
What is Graduate School Like?

After you get there . . .

Year 1: Take courses.
   TA classes.
   Pick an advisor or do a rotation.
   Start research.

Year 2: Research.
   Complete coursework.
   Preliminary/qualifying exam (may occur in fall of Year 3)

Year 3 – n: Research, Research, Research, . . . .

Year n: Write thesis (3—6 months) and final thesis defense.

Average time is ~5 years, but varies by specialty.
What is Important for Admission?

- Grades (3.0 minimum)
- Research Experience
- Letters of Recommendation
- Statement of Purpose
- GRE General Test (www.ets.org)
  - Verbal, quantitative, *analytical writing* sections.
  - Computer-based; make appointment.
  - Available *on campus* through the Testing Center.

“You, Me, & the GRE” — Practice exams during the summer.
**GRE Subject Tests**

170 minutes

Chemistry: 130-140 questions  
Biochemistry: ~175 questions

$150 (financial aid is available from ETS)

**Given 3 Times per Year:**

<table>
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<tr>
<th>Test date</th>
<th>Registration due:</th>
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<tr>
<td>9/19/2015</td>
<td>8/14/2015 (2nd week of August)</td>
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<tr>
<td>10/24/2015</td>
<td>9/18/2015 too late for this year...</td>
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<tr>
<td>4/18/2015</td>
<td>3/11/2016 (Too late for Fall ’16 admission)</td>
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All info taken from GRE website: [www.ets.org](http://www.ets.org)

- Required for many *top* schools.
- Required for many fellowship applications.

Practice Subject GRE (Chem or Biochem) is available online.
Also referred to as “personal statement” in some cases.

Statements of purpose is perhaps the most important part of the application.

It is hard do to change your GPA or your curriculum vitae (academic version of a resume), but these statements can be written in ways that emphasize different aspects of your interests, goals, personality, and style.

Statement of Purpose Workshop — TBA
How Do I Apply?

- Applications are online.
- Statement of Purpose—*get advice and feedback* from faculty.
- Solicit *at least 3* letters of recommendation (give plenty of notice).
- Submit GRE scores to institution.

Application Deadlines

Top schools as early as *December 1*st for the following fall term!
Letters of Recommendation

Who to ask for a Letter of Recommendation:
People who know you (& your skills) well.
- Research mentors.
- Faculty from courses.
- Job/internship/project supervisors.

Things you should provide your letter writers:
- School (and program) name and **deadline**.
- CV and transcript (unofficial may be fine).
- *Draft* of personal statement.
- Plenty of time (at least 2 weeks, 1 month is better).

You have the right to view your letter of recommendation. However, many writers prefer to have the information remain confidential. **You may have to waive your right** to view the letter in order to receive the letter from your intended writer.
Where Should I Apply?

Considerations:

- M.S. or Ph.D program?

- Quality of program in your chosen area.
  - *Chronicle of Higher Education* survey
  - Your professors / advisors / mentors
  - Check out websites of departments

- Geography and personal issues.
Where Should I Apply?

Go to the *best* school you can!

What makes a department/program “good”?
- Faculty
- Facilities
- *Other students!*

Am I good enough?
- *Aim high*, but be realistic.
- Get advice from faculty and advisors.
How Do I make a Final Decision?

- Ask your professors/advisor/mentors.
- Look more specifically at which faculty you really want to work with—*leave yourself choices*.
- Talk with current graduate students when you visit.

**VISIT THE SCHOOLS!**
Areas of Chemistry

Technical Disciplines:
- Analytical
- Biological/Biochemistry
- Chemical Education
- Inorganic
- Organic
- Physical
- Polymers

Other Areas:
- Biophysical
- Materials Science
- Environmental Science
- Forensics
- Toxicology
- Chemical Engineering

Discussion Panel
Prof. Steven Emory (Analytical & Materials)
Prof. Spencer Anthony-Cahill (Biochemistry)
Prof. Marc Muniz (Chemical Education)
Prof. Greg O’Neil (Organic)
Prof. Margaret Scheuermann (Inorganic)