

Announcements/Reminders

- Be sure to log time spent working on proposal activities.
- Engineering and Technology Career Fair, Tuesday, September 17, 11am-2pm, Eykamp Hall, RUC
- CECS proposals for funding due September 20; elevator pitches on September 27
- Vanderbilt School of Engineering Info Session, September 24, 4-5pm, KC-133

What is Graduate School?

- Advanced study or research in a particular area past the BS degree.
- Two main research degrees: MS/MA and PhD/SciD
- Lots of professional degrees: MBA, MEng, MFA, MD, DDS, DPT, JD, etc.

Master of Science

- Advanced study, some research
- “Industrial” masters programs often courses only; sometimes an application project. Usually 1-2 years full-time, 3-4 years part-time.
- “Research” masters programs require at least a research project; sometimes a thesis. Usually 1.5-2.5 years full-time.

Doctor of Philosophy

- Qualifying exam, usually within 1-2 years – not everyone will be allowed to finish.
 - Take courses in preparation
 - Sometimes written, sometimes oral, sometimes both
- Write and defend a dissertation as a demonstration of original research.
- 3-8 years full-time, may need to do a master's degree first

Why go to Graduate School?

- For more or difference experience than undergrad studies.
- Some fields or areas require it.
- Get a better job.
 - MS generally considered equivalent to 2-4 years of work experience: project manager, system designer, research labs.
 - PhD needed for university teaching, leading research lab groups.

What is Research?

- Study into something that hasn't been done before. I.e., it is “novel”.
 - New theoretical algorithm that is faster, smaller, more accurate, more reliable, more general, etc.
 - Applying an algorithm in a new way for a new application area.
 - Designing a new architecture or system that is faster, smaller, more accurate, more reliable, more general, etc.

Choosing a Grad School

- Need to have some idea of what field you want to study.
- Not all schools have all fields, so need to research.
 - UE Library has access to ACM Digital Library. Search for papers in field of interest. See where authors are at.
 - Google for articles on field of interest.
 - Look at University websites.
 - Ask professors.

Application Process

- On-line applications, non-trivial fees, most due in mid-December to mid-January
- Statement of objectives
- Letters of recommendation, usually 3
- GRE scores
- Transcripts
- A committee meets to decide who to admit.

Statement of Objectives

- Purpose is to sell yourself to the admissions committee. Looking for evidence of potential to do research.
 - What do you want to study in grad school?
 - Why do you want to go to grad school?
 - What have to done to prepare for grad school? Especially if this is not your undergrad field.
 - What independent projects or research have you done?

Letters of Recommendation

- Choose people who have observed significant, good work in major area.
 - For MS: faculty of upper-level courses, work supervisors, research advisors
 - For PhD: should have a PhD, so faculty of upper-level courses, research advisors
- Ask if willing to write letter now.
- Request letters (via application) at least two weeks before deadline; by Thanksgiving break even better.

GRE (Graduate Record Exam)

- Exam similar to the SAT over college material (http://www.ets.org/gre/revised_general/about)
 - Verbal Reasoning – Measures your ability to analyze and evaluate written material and synthesize information obtained from it, analyze relationships among component parts of sentences and recognize relationships among words and concepts.
 - Quantitative Reasoning – Measures problem-solving ability using basic concepts of arithmetic, algebra, geometry and data analysis.
 - Analytical Writing – Measures critical thinking and analytical writing skills, specifically your ability to articulate and support complex ideas clearly and effectively.

GRE Testing

- Administered on-line at commercial testing centers.
- In Evansville: Prometric Testing Center, 923 South Kenmore Drive, in the Hebron Office Plaza.
- Limited number of slots, so register now.

Paying for Grad School

- Good news is that most grad students in PhD programs in technical fields are not paying their own way. Most assistance come with tuition waiver and modest stipend. Student loan repayment is deferred.
 - Fellowships (i.e., graduate scholarships) – deadlines vary, some are early; some are for US citizens only; some are awarded by school.
 - Research assistantships (RAs) – usually work for research advisor, often related to dissertation
 - Teaching assistantships (TAs) – grading, tutoring, recitation sections, some lecturing

Professional Graduate Degrees

- Master of Engineering (MEng)
 - UE: <https://www.evansville.edu/majors/eecs/master-of-engineering.cfm>
- Master of Business Administration (MBA)
 - GMAT (Graduate Management Admission Test)
- Juris Doctor (JD) – law doctorate
 - LSAT (Law School Admission Test)
- Doctor of Medicine (MD)
 - MCAT (Medical College Admission Test)