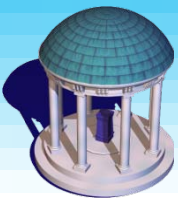


The Graduate Program

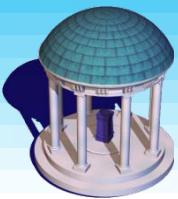
Jan Prins
Director of Graduate Studies

Aug 15, 2012



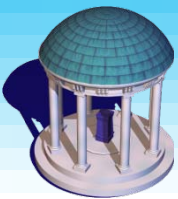
Agenda

- Objective
 - ◆ Get you started on registration, course selection, finding a research focus
- Topics
 - ◆ MS and PhD programs
 - ◆ Graduate program administration
 - ◆ Course selection
 - ◆ Reference materials and advice



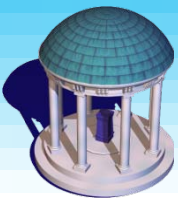
MS and PhD programs

- Entering students are enrolled in either the MS or the PhD program
 - ◆ little practical significance to this initial classification
 - ◆ both degrees possible from either starting point
- To proceed to a PhD requires formal *admission to the PhD program*
 - ◆ by vote of the faculty



Curriculum Goals

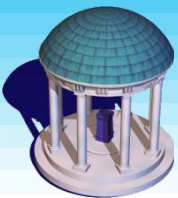
- Focus on research experiences
 - ◆ Both for MS and PhD
- Flexibility
 - ◆ Enable specialization while obtaining necessary breadth
- Accommodate diverse backgrounds



Overview of Graduate Programs

- Course requirements
- Background requirements
- Admission to PhD program

*Department rules are not absolute!
You may petition for exemptions.*



Course Requirements

M.S. Degree

- Research Topic Courses (6 hrs recommended)
- Background Courses (0 – 6 hrs)

- Breadth Courses (9 hrs)
- Other CS Courses (9 hrs)
 - Background, electives
 - Up to 6 hrs transferred from previous grad work
- Other courses (≤ 12 hrs)
 - Research topic courses
 - Courses outside dept

Total: 30 credit hours

Orientation 2004

Ph.D. Degree

- Breadth Courses (up to 18 hrs)
 - can use courses taken elsewhere
- Primary Concentration (9-12 hrs)
no fixed hour requirement



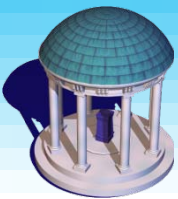
COMP 991: Research Topics

- Independent study with a faculty member
- For PhD intending
 - ◆ Show your research potential
 - ◆ Explore a research area with or without a research assistantship
- For MS students
 - ◆ Explore areas of interest in depth
 - ◆ Get research experience



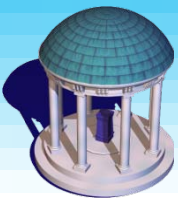
COMP 991 and Research Assistantships

- Talk to faculty about available positions and COMP 991 topics
 - ◆ You can also propose topics
- Research fair
 - ◆ Next Monday
 - ◆ Faculty present available RA positions and pitch research topics/areas for COMP 991
- COMP 991 and RA simultaneously
 - ◆ Individual objectives for each

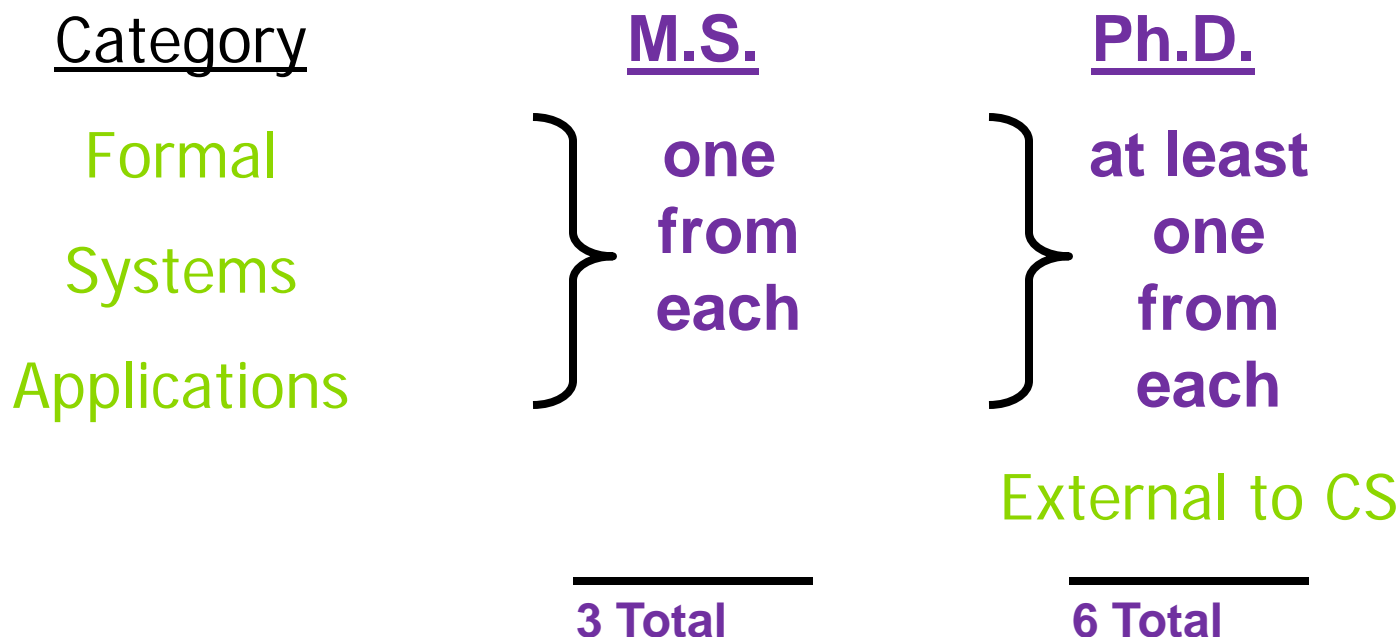


Background Requirements

- Background requirements worksheet
 - ◆ determine missing background
 - **two missing courses is typical**
 - ◆ make a plan with your adviser
- Ways to make up missing background
 - ◆ take the corresponding course
 - ◆ complete a more advanced course that subsumes the content
 - ◆ arrange an independent study
 - **variable credit graduate module course**



Breadth Requirement*



You may use grad courses taken elsewhere*

* There are additional rules. Read them!



Expectation for admission to PhD Program

- During the first two years, students should
 - ◆ Get started on research
 - ◆ Find a research adviser
 - ◆ Demonstrate ability to conduct independent research (e.g. literature survey, analytical & formal thinking, creativity, integration of concepts, etc)
 - ◆ Demonstrate writing and oral presentation skills



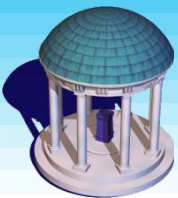
Admission to PhD program

- By vote of faculty based on consideration of
 - ◆ Research potential and accomplishments in research topic course(s)
 - ◆ Grades
 - overall average closer to “H” rather than “P” expected but not required
 - ◆ Performance on assistantships
 - ◆ **Research report and public presentation**
 - Preliminary research presentation (PRP) in department
 - OR
 - Published paper with external review and public presentation
 - May be attempted twice (3rd and 4th semester)
 - forfeit does not count as a failure



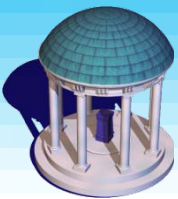
Graduate Program Administration

- Student Services Manager
 - ◆ Jodie Turnbull
 - **your friend and connection to the graduate school**
- Your adviser
 - ◆ Academic adviser initially
 - ◆ Research-area adviser or PhD adviser later
- Graduate Studies Committee
 - ◆ Jan Prins – Director of Graduate Studies
 - ◆ 5 faculty members
- Department Registrar
 - ◆ Dorothy Thorpe-Turner



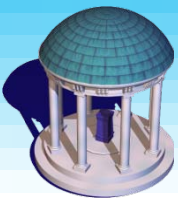
Course Selection

- Keep in mind
 - ◆ Research focus
 - ◆ Independent study for research experience & PhD admission
 - ◆ Breadth requirement
 - ◆ Background requirement
- Get advice
 - ◆ Academic advisor
 - ◆ Fellow students: incoming and returning students
 - ◆ DGS (me)
 - **Today 6-8PM: FB 334 and/or FB 331**



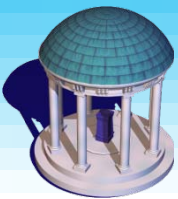
Course selection deadlines!

- Initial registration
 - ◆ By Monday Aug 20 5PM
 - **If you miss this deadline, there is a late fee**
- Adding courses
 - ◆ By Monday Aug 27 5PM
 - ◆ You can not add classes after this date!
- Dropping courses
 - ◆ By Tuesday Sep 4 **with tuition adjustment**
 - ◆ By Monday Nov 19 without tuition adjustment



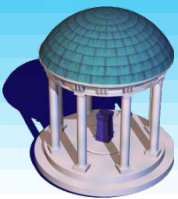
Constraints

- Full-time registration
 - ◆ 9 hours (typically 3 courses)
 - ◆ Required for RA/TA appointees
 - ◆ Required for those holding student visas
 - ◆ Serious complications if required but not met



Further Description of Graduate Programs

- General meeting open to all grad students
 - ♦ Wednesday Aug 24 3:30 PM in SN014
 - Overview of MS/PhD requirements
 - and ways to meet them
 - Questions and Answers
- There are other requirements
 - ♦ I've just covered just a few to keep in mind right now
- Online: department web site
 - ♦ Home → Academics → Graduate Programs



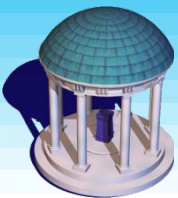
Announcements

- Blog at

<http://unc-cs-gradannouncements.blogspot.com/>

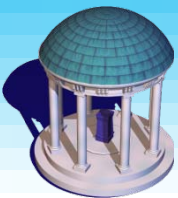
- Also jobs blog at

<http://unc-cs-gradjobs.blogspot.com/>



Advice

- Familiarize yourself with the program *requirements* and *deadlines*
 - ♦ *Print and pencil in your plans on forms CS-03 or CS-06* (in “student progress forms” on web)
- Take responsibility for tailoring the program to *your* interests and goals
 - ♦ *Start research courses early*
- Course selection
 - ♦ If unsure, register for >3 classes, attend some lectures, and drop back to final course selection
- Seek out and talk with your colleagues: fellow students, faculty, and staff of the program



Advising Sessions

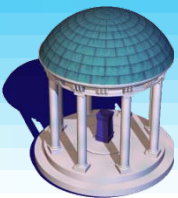
- Meet with your adviser as soon as possible
 - ◆ register (my.unc.edu) before the deadline (Mon 8/20 5PM)
- Tricky questions, second opinions, adviser unavailable, etc.
 - ◆ meet with DGS
 - **today 6-8pm in FB334/FB331**
 - other times: by appointment



Questions?



**Best wishes for your journey
through the program!**



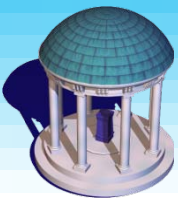
Background Courses

- *Computer Science*

- ◆ COMP 411 (120) Computer Organization
- ◆ COMP 410 (121) Data Structures
- ◆ COMP 550 (122) Algorithms and Analysis
- ◆ Any *two* of the following
 - **COMP 521 (130) Files and Databases**
 - **COMP 520 (140) Compilers**
 - **COMP 530 (142) Operating Systems**
- ◆ COMP 524 (144) Programming Language Concepts
- ◆ COMP 541 (160) Digital Logic and Computer Design
- ◆ COMP 455 (181) Models of Languages and Computation

- *Mathematics and Statistics*

- ◆ MATH 233 (33) Calculus of Functions of Several Variables
- ◆ MATH 381 (81) Discrete Mathematics
- ◆ MATH 547 (147) Linear Algebra
- ◆ MATH 661 (191) Numerical Analysis (Scientific Computing I)
- ◆ STAT 435 (126) Probability



Exam structure

M.S. Degree

M.S. Thesis Substitute

- Refereed Publication(s)
- Research Report
- Comprehensive Survey & Synthesis Paper

OR

M.S. Thesis

OR

M.S. Comprehensive Oral Exam

Ph.D. Degree

Research Report

Research Presentation

admission to Ph.D. program

(Dissertation proposal)

Doctoral oral examination

Final oral examination (“Defense”)