Computer Science Orientation

Prasad Tadepalli
Computer Science Graduate Advisor
Terminology you should know

- **Academic Advisor**: Advises on your course work
- **Major Professor**: Directs your research project and replaces the academic advisor.
- **Graduate Advisor**: Advises about general requirements and helps mediate.
- **Ph.D. Committee**: Needs 4 professors and a graduate council representative (GCR). 3 from CS.
- **M.S./M.Eng. Committee**: Needs 3 professors. GCR if thesis option.
M.S. Degree Requirements

• Undergraduate core requirement
• 45 hours of graduate level courses, with at most 6 credits of “blanket-numbered” (50X) courses
• A minimum of 2 courses each from 3 of the following areas
  - Theoretical CS, AI, Computer Systems, Programming Languages, Software Engineering, Computer Vision and Graphics, Any other area approved by the student’s committee
• Responsible Conduct of Research training
• Attendance in the weekly colloquium
• A coherent set of 3 courses in the research area
• M.S. Thesis: 9 credits. A research contribution and a publishable paper OR
• M.S. Project: 6 credits. A significant piece of software/system design/experimental work/theory/survey paper/... and a project report.
• A final oral exam on research and course work.
M.Eng. Degree Requirements

- Undergraduate core requirement
- 45 hours of graduate level courses, with at most 6 credits of “blanket-numbered” (50X) courses
- A minimum of 2 courses each from 3 of the following areas
  - Theoretical CS, AI, Computer Systems, Programming Languages, Software Engineering, Computer Vision and Graphics, Any other area approved by the student’s committee
- Attendance in the weekly colloquium
- Responsible Conduct of Research training
- A coherent set of 3 courses in the research area
- A final oral exam on some course project and course work.
Ph.D Degree Requirements

- Undergraduate core requirement
- 108 hours of graduate level courses with at most 15 hours of blanket numbered courses
- Passing Ph.D. qualifier
- CS515 (Algorithms), CS517 (Theory of Computation)
- A minimum of 4 courses in an area relevant to the thesis topic
- 2 courses each from 3 of the following areas
  - Theoretical CS, AI, Computer Systems, Programming Languages, Software Engineering, Computer Vision and Graphics, Any other area approved by the student's committee
- One year of colloquium attendance
- Responsible Conduct of Research training
- Successful completion of preliminary examination
- A Ph.D. dissertation or thesis for 36 credits (CS 603)
- Passing a final oral defense of the thesis
Ph.D. Degree Timeline

1. Qualifying exam: Written & oral assessment of:
   1. Research potential. Could be based on student’s own research or a literature survey as determined by the student’s program committee.
   2. Course work preparation. Based on written questions or topics given in advance and followed up in the oral exam.
      - When: 3rd-4th quarter of study if you have an M.S. degree
      - [If only a B.S. degree, then given an additional year]

2. Program meeting: Approval of PhD course of study
   - When: 4th quarter of study

3. Preliminary exam: Assessment of written thesis proposal and oral presentation of the proposal
   - When: 3’rd year of study

4. Final defense: Oral presentation and defense of dissertation
   - When: At completion of research and dissertation writing
Undergraduate Core

Purpose: To ensure that all students have the core background in Computer Science.

Areas:
- Automata and Formal Languages (CS321 or CS516)
- Algorithms and Data Structures (CS325 or CS519 “Master-level Algorithms”)
- Operating Systems (CS444/544) or Computer Architecture (CS472/572 or ECE472/572)
- Translators (CS480) or Programming Languages (CS381 or CS581)

Time Limit: Must complete by the first year.

Important: Fill your course equivalency forms and get them approved by your academic advisor this week or the next. Give it to Nicole Thompson.
Submitting MS/MEng or PhD Program

- **A Program of Study**: A “contract” of the courses taken/to be taken with your committee.
- **Must file by the end of 2\(^{nd}\) term of study or 18 hrs (MS/MEng) or end of 1 year (PhD).
- **Consult**:
  - Major professor/Academic advisor
  - **M.S./M.Eng./Ph.D. Program Guidelines**
    - [http://eecs.oregonstate.edu/graduate/ece/advising.html](http://eecs.oregonstate.edu/graduate/ece/advising.html)
    - On-line Forms
      - [http://oregonstate.edu/dept/grad_school/current/forms.html](http://oregonstate.edu/dept/grad_school/current/forms.html)
  - Graduate Advisor
  - Graduate School
    - [http://oregonstate.edu/dept/grad_school](http://oregonstate.edu/dept/grad_school)
CS Courses Offered in the Fall

- CS515 Algorithms and Data Structures
- CS516 Theory of Computation and Formal Languages
- CS527 Error Correcting Codes
- CS534 Machine Learning
- CS544 Operating Systems
- CS550 Introduction to Computer Graphics
- CS554 Geometric Modelling in Graphics
- CS561 Software Engineering
- CS572 Computer Architecture
- CS581 Programming Languages I
Special Topics Courses (CS 519)

- Master Level Algorithms
  http://classes.engr.oregonstate.edu/eecs/fall2016/cs519-005/
- Biological Networks
- Digital Image Processing
- GPU Architecture
- HCI Research Methods
- Advanced network security
- Numerical Modeling and Simulation
Other Relevant Courses

• ROB538 Autonomous Agents and Multiagent Systems
• ROB599 Intro to Robotics
• ST511 Methods of Data Analysis
• ST521 Introduction to Mathematical Statistics
• ST531 Sampling Methods
• ST541 Probability, Computing, and Simulation in Statistics
507 Sections

1. EECS issues in Diversity and Ethics (3 credits, Strongly Recommended)
   - Covers responsible conduct of research requirement, gender/diversity issues in EECS
   - Online CITI training on responsible conduct of research (satisfies grad school requirement)

2. Colloquium (1 credit)
   - External/internal EECS speakers
   - Required unless you take the first one.

3. Grad Intro (1 credit)
   - Grad student survival skills
Preparing to be a GRA

- Start thinking about research from day one!
- Learn about the research in the department
  - Attend reading groups and research project meetings to learn about research.
  - Get professor's permission to attend the project meetings.
- Use 501 and 505 credits to work with a professor, read papers, and work on something useful.
- **Goal:** Secure a Graduate Research Assistantship by the second year
Registration

• Registration/term
  - 9 credits - Full time w/no funding
  - 12 credits - Full time w/Scholarship or GTA/GRA
• Students must register every academic term they are students other than the summer
• Need to apply for leave and get approval if they are planning to do an internship etc. during academic year
• Hints
  - Take 2 regular courses, 507x
  - Complete web registration during 1st week
  - Avoid hidden fees: Don’t add/drop after 1st week.
Seminar, Thesis, Blanket Credits

- **CS 503/603** - Thesis, 1-16 credits
  - Register using the CRN for your major professor
  - Ungraded (R=reserved)

- **CS 501/601, 505/605, 506/606** - Blanket Credits, 1-16 cr
  - Need Instructor and Departmental Approval to register
    - [http://eecs.oregonstate.edu/graduate/forms/](http://eecs.oregonstate.edu/graduate/forms/)
    - Email approval form: blanket.txt
  - 501/601 and 505/605, Pass/No Pass
  - 506/606, graded
Academic Dishonesty

• “Presenting, as your own work, material produced by or in collaboration with others, or permitting or assisting others to present your work as their own without proper acknowledgment”
  http://eecs.oregonstate.edu/graduate/advising/dishonesty.html

• Punishments for dishonesty range from getting an F in the course to getting terminated.

• Don’t even think about it!!
Cultural Associations

- Chinese Students Association
- Indian Students Association
- ENGR mailing lists
- https://secure.engr.oregonstate.edu/mailman/listinfo
- Grad email list (unmoderated): eecs-grad-talk@engr.orst.edu
- Don’t forget the fall festival this weekend!