PhD Requirements, Milestones, and Strategies
Model Timeline

- **FY1**
  - Satisfy course requirements
  - Find advisor

- **SY1**
  - Qual exam (1st)
  - Qual exam* (2nd)

- **FY2**
  - Prelim exam

- **SY2**
  - Write dissertation

- **FY3**
  - Defend

* = if needed
Discussion

• Milestones are not easily bounded in time
  • Example: writing a paper may require multiple revisions / submissions, preparing a talk, and travelling to present the work.

• Milestones are not always mutually exclusive
  • Example: each paper may become a chapter in the dissertation.

• Must also satisfy the TA requirement
Time limits

• 7 years without M.S. degree
• 6 years with M.S. degree from outside UIUC
• 5 years with M.S. degree from UIUC
• Annual evaluations of progress
Return on investment strategies

- Select topics aligned with peers in your research group
- Synergies between research and course projects
- Only accept research-oriented internships
Milestones and Strategies
Milestone 1: Find an Advisor

• Take courses, ask peers, attend group meetings and seminars
  • prepare and make positive first impression

• Required prior to taking the qualifying exam, but recommended by the end of the first year
Milestone 2: Satisfy Course Requirements

- Required prior to graduation, but recommended by end of second or third year
<table>
<thead>
<tr>
<th>Requirements</th>
<th>Entering with approved M.S. degree</th>
<th>Entering with B.S. degree</th>
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</thead>
<tbody>
<tr>
<td><strong>Credit hours:</strong></td>
<td>Hours</td>
<td>Hours</td>
</tr>
<tr>
<td><strong>Total Credit for the Degree</strong></td>
<td>64</td>
<td>96</td>
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<tr>
<td><strong>Thesis Research – CS 599 (minimum applied toward degree)</strong></td>
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<td>32</td>
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<tr>
<td><strong>Course Work</strong></td>
<td>16</td>
<td>48</td>
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<tr>
<td><strong>500-level course work</strong></td>
<td>16 (12 must be CS courses)</td>
<td>24 (12 must be CS courses)</td>
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<td><strong>400- or 500-level course work</strong></td>
<td>16</td>
<td>24</td>
</tr>
<tr>
<td><strong>Additional graduate-level course work or thesis research credit (subject to Other Requirements and Conditions below)</strong></td>
<td>16</td>
<td>16</td>
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<tr>
<td><strong>Other Requirements and Conditions:</strong></td>
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<tr>
<td><strong>Minimum hours of CS course work</strong></td>
<td>12</td>
<td>20</td>
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Focus of program of study form
Discussion (without M.S. degree)

• Need about 12 courses in total (if each course is 4 hours)
  • Take 2 regular courses per semester for 3 years; or
  • Take 3 regular courses for 2 years (heavy load)
Program of Study Form

• List the courses you plan to take with rationale, and get three faculty to agree on the curriculum plan

• Area choice for Program of Study due November 16th

• Final Program of Study form due February 1\textsuperscript{st} to the department
  • We recommend you work on this early
Course Strategies

• First two to three years, as needed afterward

• Don’t take more than needed, use independent study (CS597)

• Take courses beneficial to your research

• Merge research and course projects
Milestone 3: Pass Qualifying Exam

• Test breadth and depth of knowledge in area

• Common format (but is area-specific)
  • Read 3 to 5 papers, in-person Q&A

• Two attempts, pass by end of third year
Prepare for the qualifying exam

• Take courses in your area
• Seek advice from students who took it
• Take paper critiques in courses seriously
• Write your own paper
Milestone 4: Pass Prelim Exam

• Consists of a document and presentation
  • document describes the plan and status
  • About 1/2 to 2/3 of the proposed work is already complete (write as if none of the work is done, then give status)

• Think of it as a contract

• Required no later than five semesters after passing qual
Form Prelim Exam Committee

• Requirements are complex, but main rules are:
  • 4 voting members
  • 3 members must belong to the graduate faculty
  • 2 members are tenured (Associate or Full professors)
  • 3 from the extended CS faculty
  • 1 member from outside the University
Example Committee

2 Associate / Full professors from CS
1 Assistant Professor from CS or is an affiliate
1 member from an industry research lab
Milestone 6: Write Dissertation

• 100+ pages of content
• Plan 4+ months for writing, including revisions
• Schedule defense once a near final draft is complete
Milestone 7: Pass Defense

• One hour presentation to the committee; open to the public
  • committee can remain the same as for the prelim

• Followed by 30 minutes of Q&A

• Followed by deliberation and a committee vote (P / F)
Final Milestone: Employment!

• Prepare research and teaching statements
• Prepare polished job talk

• Discuss career options and preparations next time
What you should be doing NOW

- Searching for advisor
- Exploring research groups
- Attending seminars in areas of interest
- Satisfying course requirements
- Reading research papers
End of Y1 milestones (lower bound)

• Have an advisor
• Have a research direction of interest
• Be an apprentice on an existing research project
• Get name on paper as non-primary author
In Conclusion

• The PhD program has many milestones to keep you on track

• Review and increase focus as they approach

• Some flexibility in individual cases, but don’t assume

• Satisfy Y1 milestones