Graduate Orientation

Ian Goldberg

Cheriton School of Computer Science
University of Waterloo

September 6, 2017
Faculty

- Mark Giesbrecht, Director of the School
- Ian Goldberg, Director of Graduate Studies
- Bernard Wong, Associate Director of Graduate Studies
- Jeff Orchard, MMath Coursework Advisor
- Richard Trefler, Nancy Day, Graduate Advocates
Staff

- Marie Kahkejian
- Paula Roser
- Denise Shantz
Math GSA

Diya Burman, CS Director
PhD students and thesis/paper MMath students

• Your supervisor...
  • admitted you to the program
  • provides your research assistantship
  • guides you in your research
  • helps you with course selection

• Contact your supervisor as soon as possible
Coursework MMath

- Jeff Orchard is your advisor. He can
  - help you with course selection
  - answer questions about your program
Course Numbering

- CS 100–400
- CS 600
- CS 700
- CS 800
100–400

- Undergraduate courses
- Not open to graduate students except as a remedial or extra
• Essentially a 400-level undergrad course

• Extra work required for grad students
• Typically fixed curriculum
• Lecture based
• Research oriented topics courses

• Reading/analysis of 20–40 research papers

• Projects

• May vary offering to offering
  May be able to count two offerings of same course
# Master’s Course Requirements

<table>
<thead>
<tr>
<th>Program</th>
<th>Total</th>
<th>600-level</th>
<th>800-level</th>
<th>per area</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMath thesis</td>
<td>4</td>
<td>≤ 1</td>
<td>≥ 1</td>
<td>≤ 2</td>
</tr>
<tr>
<td>MMath paper</td>
<td>7</td>
<td>≤ 3</td>
<td>≥ 2</td>
<td>≤ 3</td>
</tr>
<tr>
<td>MMath coursework</td>
<td>8</td>
<td>≤ 3</td>
<td>≥ 2</td>
<td>≤ 4</td>
</tr>
</tbody>
</table>

Plan to complete at least 2 courses per term (3 for MMath coursework) until course requirements are complete.

Details on the [CS Grad web pages](#).
### PhD Course Requirements

<table>
<thead>
<tr>
<th>Program</th>
<th>Total</th>
<th>600-level</th>
<th>800-level</th>
</tr>
</thead>
<tbody>
<tr>
<td>PhD (from masters)</td>
<td>4</td>
<td>≥ 1</td>
<td>≥ 1</td>
</tr>
<tr>
<td>PhD (from bachelors)</td>
<td>8</td>
<td>≤ 3</td>
<td>≥ 3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Category</th>
<th>Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computing Technology</td>
<td>Software Engineering, Programming Languages, Hardware and Software Systems</td>
</tr>
<tr>
<td>Applications</td>
<td>Artificial Intelligence, Databases, Graphics and User Interfaces, Bioinformatics, Health Informatics</td>
</tr>
</tbody>
</table>

Comp I requires coverage of **6 areas**, including at least one from each category.
Comp-I Courses

- Comp-I requirements can be satisfied using
  - graduate courses
  - advanced undergraduate courses (similar to 400-level courses at Waterloo)
- Comp-I requirements can be satisfied by
  - Waterloo courses (e.g., courses taken to satisfy the PhD course requirements)
  - courses from other Universities
    - non-UW courses will be evaluated by the Graduate Director and Graduate Committee to determine area and whether the topics covered and course depth are appropriate for the Comp-I requirement
- courses used to satisfy the Comp-I requirement must have marks of at least B+ (78% or equivalent)
Grad course offerings can be found online

- Consult your supervisor/advisor to decide which courses to take.
- Enrol in most CS grad courses online using Quest
- Drop deadline is 4 weeks into the term.
Grad Course Information Session

- Instructors give capsule summary of each course
- Friday, September 8
- Videos of many of these presentations will be available online
Non-CS Courses

- Need permission of instructor and host department, and recommendation of supervisor

- To count towards your CS degree:
  - List of approved non-CS courses online
  - Otherwise, prior approval from the Graduate Director

    Email course outline showing topics covered, reference materials, the grading basis, and supervisor recommendation

    Course should have “CS content”

- Most courses must be CS courses
  - MMath Thesis: 3 of 4
  - MMath Research Paper: 5 of 7
  - MMath Coursework: 6 of 8
  - PhD from Masters: 3 of 4
  - PhD from Bachelors: 6 of 8
Thesis Course Requirement

- 4 graduate level courses
- No more than one 600-level
- At least one 800-level
- Masters: No more than two in one area
Research Paper Course Requirement

- 7 graduate level courses
- No more than three 600-level
- At least two 800-level
- No more than three in one area
Coursework Course Requirement

- 8 graduate level courses
- No more than three 600-level
- At least two 800-level
- No more than four in one area
After Your Courses...

- Courses provide structure

- Research can lack structure, but...
  - Study a topic, previous work
  - Identify a problem/open question
  - Solve it
  - Write it up

- Don’t drift!
  Supervisor provides guidance
Teaching Assistantships

- Only guaranteed for PhD and MMath thesis students
  - Normal load is 4 units per year
  - Max 2 per term
  - Your current assignment is on Odyssey

- Duties
  - Set by instructor
  - Contact immediately

- All TAs must have attended today’s TA Orientation Session!
Do A Good Job

- Attend TA meetings
- Being a TA is both a privilege and a responsibility. Badly performing TAs will not get future TAships
- TA award ($500)
  Awarded at 4:00 pm today for last year’s TAs
Major Scholarships

- **NSERC (Natural Science and Engineering Research Council) Scholarships**
  - Available to Canadian citizens and PR only
  - Applications due in October

- **OGS (Ontario Graduate Scholarship)**
  - Open to all
  - Only small number for international students
  - Applications due in October (international) and February (Canadian/PR)

- **You are required to apply for OGS and NSERC if you hold an RA and are eligible (average over 85%)**
Cheriton Scholarships

- Open to all Ph.D. students within program limits
  - 80% average
- 3–5 awarded each term
- $10,000 per year for two years
- Call for nominations near end of each term
Running low on funds?

- Talk to your supervisor
- Some funds to help those in genuine distress
Questions?

• First, check or post to Piazza
  - https://piazza.com/uwaterloo.ca/other/scsgrad

• If Piazza doesn’t help, send email to
  - Denise Shantz denise.shantz if you are a Coursework Master’s student
  - Marie Kahkejian mkahkeji if you are a Thesis/Research Paper Master’s student
  - Paula Roser paula.roser if you are a PhD student
Still need help?

- Send email to
  - Ian Goldberg (CS Grad Director) cs-graddir if you are a non-coursework student
  - Jeff Orchard jeff.orchard if you are a coursework student

- Desperate? Go to the grad office
  - DC 2599

- Your last option...come to my office
  - DC 3518