How to Succeed in Graduate Studies at UMBC CSEE

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Adapted from presentations by Professor Marie desJardins and others

August 2020
What we’ll cover

• Graduate lifecycles
• UMBC resources
• An illustrated guide to a graduate degree
Lifecycle of an MS Student

• Take **courses**
  – Talk to your advisor (there for a purpose!) and ask other students as well
  – Take 2-3 courses/semester if supported
  – Can transfer some graduate credits, but ...

• **Internship**: apply Nov-May for summer

• **Thesis** or project research
  – Thesis: six credits, typically over two semesters
  – Project: three credits in one semester (+ one more course)
  – Thesis vs. project considerations
  – Write and publish research paper

• Apply to **Ph.D.** program or **interview** and get **job**
Lifecycle of a Ph.D. student

• Take **courses** and **find an advisor**
• **Read** papers, start thinking of a problem
• Do 699/898 for early **research experience**
• **Complete portfolios**
• Take more **courses** to support your research area
• Develop a **dissertation topic**, do preliminary research to establish feasibility, recruit a committee
• One or more research-oriented **Internships**
• Write & defend **dissertation proposal** (aka prem. exam)
• Work more, sleep less, coffee, dine at vending machine, **write papers**, present papers, **write dissertation**
• **Defend dissertation**
• **Interview** and get job
Research Advisors

• You start with a **temporary** advisor
• S/he probably won’t be your research advisor and is under no obligation to take you on as an advisee
• You’re responsible for finding an advisor who will guide your M.S. or Ph.D. research
• Ideally, do this early on in your second semester, but positively by the end of your first year
  — Renewal of support depends on it!
  — Don’t leave it to the last minute!
  — Submit the change-of-advisor form **even if your temporary advisor == research advisor!**
How to Find a Research Advisor

- Decide areas of interest; *all areas* is not a valid answer!
- Take classes in those areas; very important, even more important than taking core classes
- Talk to students in those areas; what do they do? What are their advisor’s interests?, inside scoop on lab?
- Attend talks and thesis/dissertation defenses
- Read a lot on the topics you are interested in
- Downselect to a few candidates, arm yourself with knowledge of their projects and how you might fit in...
Contacting Potential Advisors

• Knock on door or set up appointment by email
• Have icebreaker questions at the ready:
  – I’m interested in areas X, Y, and Z. Can you tell me more about your research in those areas?
  – Do you have any ongoing projects that I might be able to learn more about or contribute to?
  – May I sit in on your lab meetings?
• Be persistent...
  – Stay in touch with your potential advisor(s)
• ...but not annoying
  – Faculty are usually busy and have limited time
Develop relationships with faculty

• Just as “it takes a village to raise a child”, it takes a department to train a graduate student

• To do your research, you’ll probably need to become expert in several new areas

• Pragmatically, you’ll need a committee of three to five faculty for your thesis or dissertation – and can benefit from having a set of faculty who can serve as references
Campus Resources and Activities
UMBC

THE GRADUATE SCHOOL AT UMBC

DISCOVER ▼ ADMISSIONS ▼ NEW & CURRENT STUDENTS ▼ FUNDING ▼ GRADUATION ▼ RESOURCES ▼ FACULTY & STAFF ▼

U.S. News ranks UMBC online master’s degree in information systems among top 20 in the nation

WELCOME TO THE GRADUATE SCHOOL

Graduate students are finding an exciting environment for meeting the challenges of advanced study at UMBC, a major center for graduate education and research in the Baltimore-Washington, D.C., corridor. UMBC is in the top tier of research universities nationally with one of the highest classifications given by the Carnegie Foundation: Doctoral/ Research University (High Research Activity). Young and dynamic, the university is small enough to provide personal attention, yet large enough to provide state-of-the-art facilities and the finest of faculty.

Join Our Online Community

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Contact Us

Have a question? Contact us at The Graduate School!

Main Campus Office:
Located 2nd Floor Admin Building
Open Mon-Fri, 8:30am - 5pm
410-455-2537

GradSchool@umbc.edu
Data Science MD @ UMBC: Streaming with Heron on the Mesos/Aurora Stack, 6:30pm Mon. Aug 30

News
- PhD defense: Prajit Das, Context-dependent privacy and security management on mobile devices
  - August 18, 2017 12:44 pm
- PhD Defense: Bryan Wilkinson, Identifying and Ordering Scalar Adjectives using Lexical Substitution
  - August 17, 2017 3:25 pm
- Data Science MD @ UMBC: Streaming with Heron on the Mesos/Aurora Stack
  - August 7, 2017 11:46 pm
- talk: Sarit Kraus on Computer Agents that Interact Proficiently with People, Noon Fri 8/4
  - August 1, 2017 11:56 am
- Baltimore Sun highlights UMBC programs that prepare students for high-demand careers
  - July 30, 2017 12:15 pm

Prospective Students
Apply: graduate programs

Calendar Events
New Graduate Student Orientation

Highlights
Apply to UMBC’s Data Science MD Program
follow @UMBCCSEE on Twitter

umbccsee
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News, events & ideas from the 1000-person UMBC Computer Science & Electrical Engineering Dept. We cover the entire computing stack. And then some!

📍 Baltimore MD USA
🔗 csee.umbc.edu
📅 Joined October 2008

77 Photos and videos

New to Twitter?
Sign up now to get your own personalized timeline!
Sign up
The illustrated guide to a Ph.D.

• Professor Matt Might, CS, University of Utah has a good way of explaining what it means to do a Ph.D.
  – It is also applicable to doing MS research
  – and probably your life after graduation
• The presentation is licensed under the Creative Commons Attribution NonCommercial 2.5 License
imagine a circle that contains all of human knowledge
By the time you finish elementary school, you know a little
By the time you finish high school, you know a bit more
With a bachelor's degree, you gain a specialty.
A master's degree deepens that specialty
Reading research papers takes you to the edge of human knowledge
Once you're at the boundary, you focus
You push at the boundary for a few years
Until one day, the boundary gives way
And, that dent you've made is called a Ph.D.
Of course, the world looks different to you now.
So, don't forget the bigger picture
Keep pushing