Department of Computer Science
Graduate Studies Orientation

Regulations and Policies

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Graduate Studies Committee (GSC)

◆ Main regulatory body

◆ Has direct decision making ability in some cases, makes recommendations to department head or faculty of graduate studies (FGS) in others

◆ Reviews all grad courses for breadth/area/quality

◆ Reviews all M.Sc. thesis proposals

◆ Reviews applications to all grad programs

◆ Formulates policy

◆ Need committed people on this committee: excellent for improving your perspective as well as your supervision abilities

Programs

◆ Pre-M.Sc.: Supervised by Grad Assoc. Head

◆ M.Sc (thesis): must have advisor before acceptance (advisor is usually sole advisory committee member)

◆ M.Sc. (coursework): Supervised by Grad Assoc. Head – may be recruited by faculty to M.Sc. (thesis) in first 12 months.

◆ Ph.D: Has advisor as chair of advisory committee. Supervisor known at time of acceptance, advisory committee formed within 8 months [New Ph.D. Student? Do this now!]

(substitute *co-advisor* for advisor anywhere in this presentation)

◆ GPA min = 3.0 in last 60 credit hours; this does not mean every 3.0 student will be accepted

Supervision

◆ Every grad student has an advisor in some form

◆ Advisor cannot do his/her job if he/she is not kept informed

◆ If you are interacting with a grad student in some way, that student's advisor needs to be aware of this (from you – don't assume the student will tell them, even though they should!)

  ✸ e.g. offering to pay for side work; extending a class project to a publication

◆ …all part of being respectful of your colleagues

Supervision

◆ An advisor is not the owner of a graduate student

◆ Graduate students have the right to leave a program or a lab if they desire

◆ Conversely: it makes no sense to force a grad student to stay somewhere they don't want to be!

◆ Actively recruiting students from others is not collegial – at the same time, students can and do change their interests and supervisors

◆ Grad Assoc. Head can assist in mediating some of these issues. See me before this becomes a problem!

Courses

◆ Head assigns courses and determines offerings

◆ GSC approves grad courses: if you have an idea for one, submit a detailed outline (week-by-week material, evaluation, readings, etc.)

◆ Grad courses are approved for breadth in one of three areas: theory, foundations, applications

◆ Assures students have breadth in CS upon finishing program

◆ Highly specialized grad courses are also possible, but will not fall into one of these areas (and will not be useful as breadth checks)

Courses

◆ Courses must follow outline approved by GSC

◆ Work in a course must be complete in the term it is offered: Attempting to grant blanket extensions simply delays students in their other work, and leads to inflation of what can be accomplished in a term

◆ Publication of results cannot be part of a course/grade requirement. Danger of inflating expectations (and generating lots of weak publications) if publication becomes a significant consideration

◆ Publications should be extended work from a grad course, not directly part of it

◆ *Don't be pressured to give high grades (or grades above C) if they are not deserved!*

Reading Courses

◆ It is possible in some circumstances to offer reading courses beyond your normal course allotment

◆ Permission granted by Dept. Head on recommendation from GSC (submit an outline as per a regular course, including the rationale for offering a reading course)

◆ Reading courses are no substitute for regular courses, and there must be some exceptional reason for offering them

◆ When offered, they must be open to more than just your own students

Language Requirements

- ◆ Students not admitted based on the canTEST must take it at the first opportunity

- ◆ If a student fails one or more components, remedial language classes are required along with a repeat of failed component(s)

- ◆ Repeated failure will be a requirement to withdraw

- ◆ English as a second language is no excuse for poor quality language in thesis proposals, thesis submissions. It is the supervisor's job to ensure these are properly proofread before submission, as any student's submissions should be

Progress Reports

◆ *Your main tool for ensuring student progress!*

◆ Most people do not put the effort into these that they should – each year you should out line milestones, and ensure students keep to them

◆ Failure to keep to milestones good rationale for poorer progress reports

◆ "satisfactory" is the boundary that will not arouse GSC – below this requires a rationale and set of milestones (which you should be creating anyway!) – you are encouraged to go below if students deserve it

◆ Two below satisfactory = requirement to withdraw

Progress Reports

◆ Repeatedly giving satisfactory reviews when a student is not making progress is not doing the student a favour

◆ If a student is not done their M.Sc. in two years or their Ph.D. in 4, you should ask why – this doesn't mean unsatisfactory performance, but you should explore these issues with the student

◆ FGS expects progress and has tried to express in regulations situations where you should not be giving a satisfactory performance review

◆ We have too long a time-to-completion for both M.Sc.s and Ph.D.s - this is part of the reason
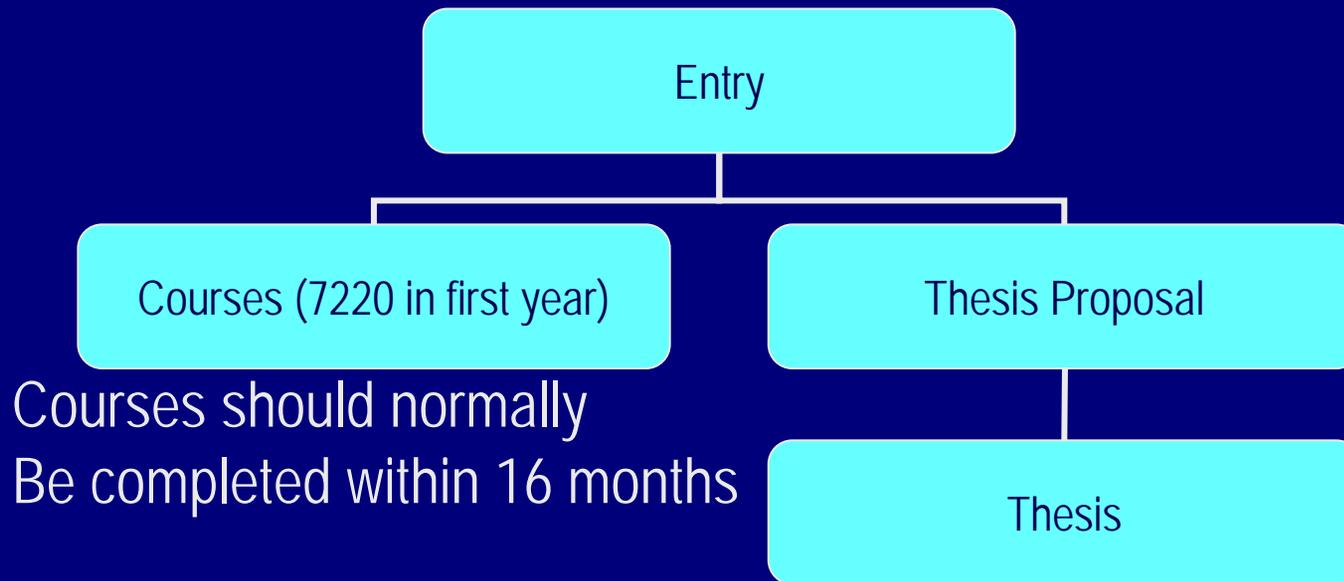
Progress Reports

◆ Remember that these must be "at least annual". The form implies once-a-year in a number of ways, but they can be as often as you want

◆ If they are not annual, need to state when the next one will be, when stating expected milestones

◆ Consider doing these more often than annually with M.Sc. students, especially if you suspect possible problems/slow progress: otherwise, it may be too late to solve a problem before it becomes apparent in a paper trail

◆ Be an active supervisor!

Program-Specific Information

Pre-M.Sc.

◆ Intended to be a one-year program

◆ Mainly for students with little advanced CS (e.g. with only a 3-year degree)

◆ Rarely applied directly to by students – students in this program are usually those who apply to the M.Sc. program and are found deficient in some way

◆ A student in the Pre-M.Sc. program is not guaranteed M.Sc. placement once this program is compete (but is typically desired by the original proposed advisor and does stay)

M.Sc. (Thesis)

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                    │        Entry         │
                    └──────────┬───────────┘
              ┌────────────────┴────────────────┐
    ┌─────────────────────────┐      ┌─────────────────────────┐
    │ Courses (7220 in first  │      │    Thesis Proposal      │
    │         year)           │      └───────────┬─────────────┘
    └─────────────────────────┘                  │
                                      ┌─────────────────────────┐
    Courses should normally           │        Thesis           │
    Be completed within 16 months     └─────────────────────────┘
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◆ Nominally a 2-year program *(but usually longer)*

◆ Min. C+ in each course (and B avg/term)

◆ Thesis proposal ("normally submitted in the first year") must be accepted by GSC 7 months before thesis can be defended

M.Sc.(Thesis)

◆ 15 credit hours of grad courses in given areas of breadth, no more than 6 in one area. This includes comp 7220 (research methods), which does not fall into any of the areas.

◆ Comp 7220 must be taken in first year, has the production of a thesis proposal as a component

◆ *In your and student's best interests to establish a research topic early and let work done in 7220 go directly toward finishing their thesis proposal*

M.Sc. Advisory Committee

◆ All M.Sc. Students should have one within the first eight months

◆ Two additional members beyond advisor/co-advisor. All must be members of FGS, one can be from outside the department

◆ Proposed to Dept. Head, who will circulate to GSC for comments before approval; head can approve modifications later

◆ All must sign progress reports once formed, and all serve as primary reviewers for thesis proposals

Thesis Proposal

- ◆ Purpose is to protect the student and the integrity of the degree: ensure that work clearly demonstrates mastery required for M.Sc. and is of an appropriate scope/quality

- ◆ *Work must be proposed before it takes place* (danger student is wasting their time otherwise)

- ◆ At least 7 months must elapse between when proposal is accepted and a defense can occur

- ◆ M.Sc. thesis proposals are first reviewed by advisory committee and sent to Grad. Associate Head. Changes demanded here are expected to be made before proposal is submitted.

Thesis Proposal Reviews

◆ Please ensure advisory committee members do thorough reviews: cursory or missing reviews will require GSC member reviews to be added, at discresion of Grad Associate Head

◆ Grad associate head will pass reviews and proposal to GSC member(s) for a meta-review

◆ 3 response categories: ok as-is; changes to be verified by Grad Associate Head; major changes and resubmission, requiring full review by all of GSC

Thesis Proposal

◆ 10-15 ds pages not including bibliography (i.e. a succinct proposal does not mean a short bibliography!)

◆ Should include: introduction of topic, clear problem statement, literature review, proposed methodology and evaluation, outline of contributions, timeline

◆ Should be written to assume reader is in CS but not in the student's research area

Thesis

- ◆ FGS has fixed guidelines for thesis formatting

- ◆ Within these – have your students do whatever you feel suits them (and you)

- ◆ I have placed the template I use for my thesis (many of my own idiosyncrasies) on the dept webpage

- ◆ Feel free to use it, or not

- ◆ FGS guidelines sometimes change in some small ways – no guarantee template is current (let me know if there are problems)

- ◆ Getting details of a writeup formatted always takes longer than estimated: don't push deadline boundaries!

Defense

- ◆ Thesis defense requires an examination committee: vetted by department head, form must be submitted one month before desired defense date

- ◆ @ least two persons outside of advisor/coadvisor: one in the department; one outside of department

- ◆ All but one examiner must be members of FGS

- ◆ FGS regulations say the examining committee should have the thesis for a month, but this can be relaxed with approval of entire committee

- ◆ Do not expect a committee to leap to your schedule, or expect to change a committee because someone cannot/will not!

Defense

◆ The Defense Chair is found by the Grad. Assoc. Head – form for this indicating date must be sent in at least two weeks before defense

◆ Defense Chair will normally be a member of GSC without a conflict; where this is not possible the Assoc. Head may look outside the GSC.

◆ There is a Thesis Defense Guidelines document on the website detailing expectations of everyone involved – you and your students should read this thoroughly

◆ Defenses are public and should be well-promoted

Defense

◆ 20-30 minute presentation; 2 rounds of questions (external examiner inward), normally < 30 minutes for first round; 15 for the second

◆ Questioning may be extended but should not go over an hour

◆ Any examiner has right to withhold his/her signature pending changes to thesis

◆ If defense is considered unacceptable by any examiner or the chair it will be a failure

◆ If thesis is considered unacceptable by any examiner it will be a failure

◆ Only two attempts at submission/defense

M.Sc. (Coursework)

◆ 24 credit hours, up to 6 @ 4000 level, the rest must be grad courses

◆ Should be completed within 2 years

◆ No requirement for a supervisor for entry, but entry numbers will be controlled by GSC (intake 2x annually)

◆ Students will not normally take 7220, but can apply to with rationale

◆ Possible to move up to thesis M.Sc. Within first 12 months if a supervisor is found

◆ Possible to move to CW program from Thesis as well

M.Sc. (Coursework)

◆ From a potential thesis supervisor's standpoint, he/she can evaluate students after they are here

◆ Just because a student may have contacted you prior to entry, and you told them to go into the CW M.Sc., they are not "your student"

◆ Recruitment of CW M.Sc. students is open to all

◆ You cannot have your cake and eat it too: if you want a thesis student, state that you will supervise them and take them into that program

Ph.D.

◆ Some of these are hard deadlines, others are elements that should be reflected in annual reviews
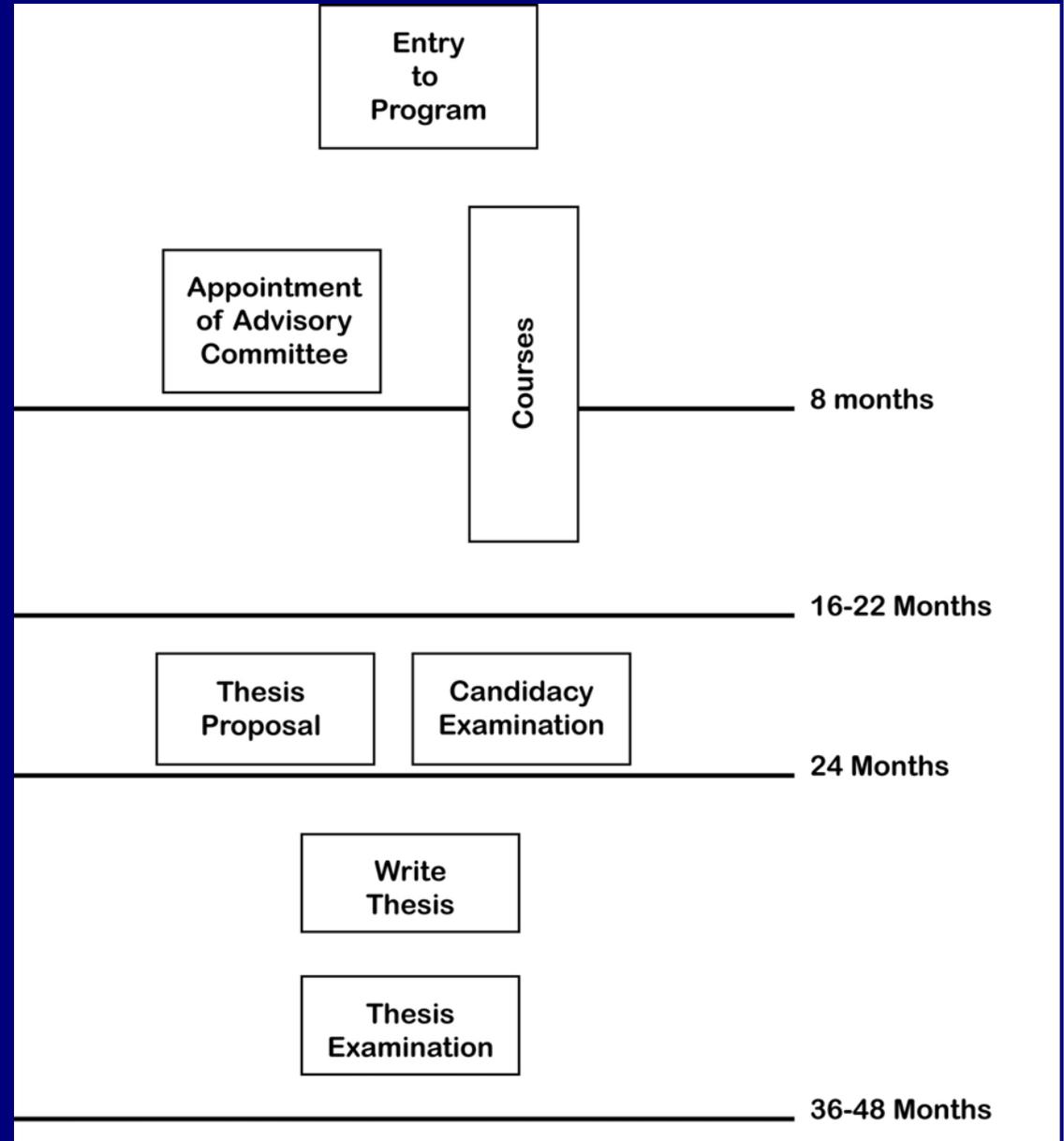
Ph.D.

- Candidates must have completed an M.Sc. degree or equivalent, normally in CS, normally involving the writing of a thesis

- In reviewing applications GSC looks for evidence of research potential as well as good grades, breadth in previous programs
  - Publications, references, other research evidence

- Rare for a CW M.Sc. Student or someone very far removed from CS to get admitted

- Possible to transfer to Ph.D. from M.Sc. within 24 months of admission, on rec. of GSC

- Possible to provisionally be accepted when nearing end of M.Sc.

Courses

◆ Minimum of 12 credit hours of grad courses beyond the M.Sc., and possibly more

◆ As part of a breadth requirement, a new Ph.D. student's prior grad courses within course currency limits are evaluated for breadth (in terms of the 3 areas)

◆ Five "checks" must be found (B+ or better) to account for the breadth needed in current program – at least one, not more than 2 in each area

◆ Checks not already in the student's grad background must be made up in current program (B+ or better)

This means…

◆ No checks remaining: all required courses can be in any area

◆ 5 checks remaining: must take an extra grad course beyond the normal 4

◆ All courses should be complete by the 22nd month of the program

Candidacy Examination

◆ Oral, open only to advisory committee and chair

◆ Purpose: determine if student is capable of independent research and has sufficient knowledge of areas relevant to intended research topic

◆ Advisory committee must have detailed background on student's planned research, intended contributions/understanding of areas related to this/research performed so far, in order to frame appropriate questions

  ✴ Candidacy document: provided to committee at least two weeks before examination date, along with examination booking (Grad Assoc. Head finds chair)

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Candidacy Examination

◆ 20-30 minute overview of area/literature review/intended research and contributions/work so far

◆ Up to two hours of questioning by committee

◆ Intent of questioning: to establish student's breadth and depth of competency in areas related to intended work, and ability to carry out planned research

◆ Focus is not intended to be on the research itself as opposed to the student's abilities, but some discussion/framing of this is necessary – if no value, why do it?

Candidacy Examination

◆ If thesis proposal not yet submitted, formative questions may be asked to further direct the work

◆ Must be completed 12 months prior to defense

◆ Should normally be completed within 24 months of program start date

Thesis Proposal

- ◆ Ensure that the student has a topic that is likely to result in contributions sufficient for the Ph.D., and that goals are likely to be achieved

- ◆ Same form as M.Sc. Thesis: 10-15 pp. not including bibliography

- ◆ Precise problem statement, literature review, proposed methodology and evaluation, and review of contributions

- ◆ Succinct, but sufficient in detail to show quality and originality of contributions – focus is on the work, not the student

- ◆ May precede or follow candidacy (really depends on the nature of the individual research process)

Thesis Proposal

◆ Proposal is submitted to and judged by the advisory committee (form submission to FGS and department)

◆ Once all committee members have signed off on the proposal, it is submitted to the department

◆ The department will also ensure the thesis proposal meets the prescribed guidelines

　✴ i.e. it must be of the stated form, the committee cannot simply agree otherwise

　✴ It CANNOT be the candidacy document – FGS states that proposal and candidacy MUST be separate events

◆ Student is encouraged, but not forced, to give a seminar in the seminar series about this work

Thesis Proposal

◆ Normally done within 24 months of program start date

◆ FGS expects a successful annual review at the 24 month point to indicate completion of both proposal and candidacy

◆ If you have students in the Ph.D. program beyond this point, you should be doing these asap!

Thesis and Defense

- ◆ Again, thesis must meet FGS guidelines, and the template supplied can be used for the Ph.D. as well (but there's nothing forcing you to use it)

- ◆ Ph.D. defenses are conducted by FGS, as is the distribution of the thesis

- ◆ Form for examination committee (normally advisory + a suggested external examiner). FGS vets external examiner.

- ◆ You or the student turn the thesis into FGS, they distribute it, wait for reports, schedule defense and provide chair

- ◆ Again, only two attempts available (where a submission and defense count separately!)

Student/Advisor Problems

◆ Even the best supervisors sometimes have problems with students

◆ Clash of personalities/needs/expectations

◆ This can often be prevented by being thorough and careful in communications

◆ Make sure your expectations of students and yourself are clear, and that both sides live up to this

◆ Repeat and re-emphasize what you expect and by when – ensuring there is a paper trail helps in many ways

◆ Involve the grad associate head at any time, but the earlier the better!

Other Issues/Concerns?