

Hargreaves lab Guide to committee meetings

There are a few purposes to a committee meeting. 1) it is important (and required) to have a regular check in on the progress of your thesis, with some external opinions and a written record of the progress. 2) it is a great opportunity to get feedback on your plans, and ask your committee questions – you have a lot of ability to drive the meeting, so think about what feedback you need and ask your committee for it explicitly. 3) it's a chance for you and me to nail down our ideas, take stock of your progress, and make sure we are on the same page about how to move forward.

Checklist:

Timing	Task
<i>1-2 months before meeting</i>	email your committee members to set a date and time
<i>As soon as you have a date</i>	book a room or make a zoom link for the meeting
<i>At least 3 weeks before meeting</i>	I need to see your written progress proposal/report (expect to have to revise this before sending out – make sure to leave enough time for that)
<i>Two weeks before meeting</i>	send the written doc to your committee members (committees are often fine with just 1 week but ask them if that's OK first). In the same email remind them about the meeting time and location (or zoom link)
<i>At least 3 days before meeting</i>	we need to go over your presentation. Make sure you leave enough time to revise this and then practice it
<i>1 day before meeting</i>	send your committee a reminder with the date, time, location, and resend your progress report
<i>Day of meeting</i>	make sure you have the GPS paperwork form filled out (email it to me before the meeting if we're meeting on zoom, bring a paper copy with you if we're meeting in person)

1) The project proposal / progress report

What is it?

For every committee meeting, you **must** provide your committee a written proposal / report that summarizes your progress and plans. They need this 2 weeks before your meeting. I need to see it at least 1 week before you send it to your committee.

The goal is to *inspire confidence in your committee that you are on track to produce a successful thesis in roughly the amount of time remaining in your degree*. Your committee wants the big picture in a document that is clear, concise, and easy to navigate.

How long should it be?

When I was a grad student I assumed my committee members would just read what I sent them no matter how long it was. Nope. Much more likely is that your committee members blocked off

a limited amount of time to read your proposal /update, then spent some of that time trying to find the email in which you sent it, then were left with not quite enough time. The more concise and well-organized your proposal/update is, the more likely they are to read it all and the more useful their feedback will be. Short is your friend.

Go for:

Times new Roman 12 pt font, 1.5 spacing, 2.54 cm margins.

MSc proposal / updates: 10 pages max including Figures, not including references & appendices

PhD committee meeting proposal (not the QE one) / updates: 12 pages max including Figures

Structure

Your committee wants to know what you are doing and whether the timing is feasible, so don't bury the lead. Have a table that clearly shows the different components of your research (eg your questions or experiments), how they relate to your thesis chapters, and where you are at with each. If it's your first meeting put this after your questions and project description, if it's not your first meeting put this table at the beginning. E.g.:

Ch	Research component	Short description	Status
Ch 1 – Review of pollen theft			
	Literature review	Synthesize past work on pollen theft, identify knowledge gaps	Literature survey complete, 1 st draft written for grad course
Ch 2 – Experimental test of honey bee pollen theft on bird pollinated Aloe (South Africa)			
	Field experiment <i>A. maculata</i>	Hive addition at 4 sites for ½ flowering season	Flowering over, waiting to collect seeds
	Field experiment <i>A. ferox</i>	Hive addition at 2 sites for ½ flowering season	Flowering over, waiting to collect seeds, hives seemed dead at end so might have failed

After that the written structure is flexible (ask your lab mates for examples), and will depend on whether your Chapters are quite similar and can use the same general introduction, or need their own Introductions.

A one-chapter MSc proposal might have the structure:

General introduction (~ 4-6 paragraphs)

Main Chapter: Questions, Methods, Results (if have any at this point)

Bonus project (if main Ch completed early): Questions, Methods, Results (if any) etc

A PhD with multiple chapters using different approaches might have the structure:

General introduction (2-3 paragraphs)

Chapter 1: Background (2-3 paragraphs), Questions, Methods, Results (if any)

Chapter 2: Background (2-3 paragraphs), Questions, Methods, Results (if any)

Chapter 3: Background (2-3 paragraphs), Questions, Methods, Results (if any)

At the end you need to summarize where you're at with other stuff, mostly coursework.

Content

As in every document you write (scholarship applications, thesis chapters, manuscripts, conference abstracts, etc) you must clearly explain why your general research area matters, what important knowledge gaps your project is going to fill, and how your project will fill them and therefore advance the important research area you are in.

Your committee wants to know the biological motivation behind each question, each response variable, each predictor variable. Clearly lay out how your various experiments and analyses relate to you questions and hypotheses.

If it is your first meeting, you are proposing many things that haven't been done. You need to demonstrate that you have thought through the project, from design to analyses to how you will interpret your results (eg what various possible outcomes will mean biologically). In a normal methods section you say what you did and why. In a proposal you say what you plan to do and why you think it will be appropriate.

A good proposal will identify all the same issues as a final methods section. For every experiment / question, these include:

- response variables (the 'y' – ie what you measure)
- predictor variables (the x's – ie what you manipulate, or covariates you measure)
- whether you have potential random effects and how to handle them (eg did you plant multiple plants per plot?)
- intended sample sizes
- statistical framework (will you use Poisson generalized linear mixed models or binomial generalized linear models or structural equation models? Why?)

You should be able to justify each of these components to the committee in terms of design and how they relate to your questions and hypotheses (e.g. why did you choose the response variables and predictors you did?)

Eg for analyses, you should know the basic structure of the data that will be generated by any study. You know whether each response will be a count, a continuous variable, a binomial variable etc – that narrows down the type of error distribution likely to be appropriate (Poisson, normal, binomial respectively). You know your predictor variables. You should be thinking about whether you need to account for random effects (in which case you will use mixed models) or not (normal linear models). It would be appropriate to say 'As my response is binomial (describe response Y), I will use generalized linear models with a binomial error distribution and logit link function to test whether X and Z predict Y. I will test for over or under dispersion by XXX; if so I will...'. If there are two possible approaches list them and say how you will decide which to use once you have your data in hand.

General writing stuff:

Read the lab guidelines to writing 1st drafts.

In particular keep in mind:

- general principles of good writing (paragraphs to ≤ 15 lines, make sure each has a good topic sentence, minimize meta-discourse etc).
- Create a clear structure to help link questions to methods. Keep the same order of topics from Intro paragraph describing the paper to methods to results whenever possible.
- Check your **logic!** For each sentence you write, is the sentence strictly true? Are the comparisons clear?
- Be careful re framing controversy and expressing certainty
- Ideas come first, people second

2) The presentation

Committee meetings start with a 15ish min presentation by the student, that essentially duplicates your written proposal. Assume at least one of your committee members didn't read your proposal carefully and make sure your presentation contains the most important points:

- Why does your topic matter
- What are the knowledge gaps (that you are going to fill – make sure it's clear why they matter)
- What are your questions (related to the knowledge gaps)
- What are you going to do to answer each question (includes introducing your study system)
- Progress to date (often a table – say when you started, what you've done including coursework and research, how you are going to fit in the other components to finish on time)

3) Paperwork

At the end of your meeting your committee signs a form that you must return to Ancil. Get the most recent version from Ancil or the website (ask another student where they got theirs). It's called something like 'GPS graduate student research progress tracking report'.

Before the meeting, fill in all the info you can (your info, the Objectives sections, your committee member names at the end, etc). Bring it to the meeting (if it's a virtual meeting send me the PDF before the meeting). At the end of the meeting I and the committee will fill in the Evaluation & Explanation sections and sign it, then you return it to Ancil. Signing may involve emailing around a PDF if not everyone can be there in person.