

Preparing for your Viva

Short Course for Informatics PhD students

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Course Outline

The course will take about 2 hours and will include:

- presentation: 45 min
- questions: 15 min
- coffee break: 10 min
- mock vivas in pairs: 40 min
- questions and wrap-up: 10 min

PhD Examination Timeline

- two months before submission: intention to submit form to be submitted to College PG Office, including thesis abstract;
- supervisor nominates examiners;
- submission of thesis for examination: two softbound copies;
- 1–3 months after submission: viva;
- 0–12 months after viva: submission of thesis corrections;
- examiners approve corrections;
- submission of final version of thesis: two hardbound copies plus electronic version;
- at least 4 weeks after submission of final version: graduation.

Viva Procedure and Protocol

- You will be examined by two examiners: one internal to the university, one external, i.e., from a different university;
- neither examiner can have been involved in your thesis work prior to the viva;
- your supervisor can attend the viva, but he/she is an observer and can't ask any questions;
- the examiners can ask any questions they like, but typically focus exclusively on the thesis;
- during the viva, the examiners often go through the thesis chapter by chapter (or even page by page);
- the viva typically takes 2–3 hours, but there is no time limit;
- optionally, the viva is preceded by a pre-viva talk.

What the Examiners Do

- Before the viva: read thesis and write preliminary examiner's reports (independently of one another);
- on the day: meet before the viva to discuss strategy;
- on the day: attend pre-viva talk;
- after viva: meet again to discuss outcome and write joint examiners' report;
- later: check thesis corrections if required.

Options

- The pre-viva talk is not part of the examination; but it is a good idea to give one;
- the supervisor is not required to attend the viva, but it traditional to invite him/her to attend;
- if you are employed by the university, a second external examiner is required by the regulations;
- if the internal is examining a PhD for the first time, a non-examining chair is appointed who also attends the viva.

Examination Criteria

The Postgraduate Degree Programme Regulations stipulate as grounds for the award of a PhD:

39. The student must have demonstrated by the presentation of a thesis and/or portfolio, which presents a coherent body of work, and by performance at an oral examination that the student is capable of pursuing *original research* making a *significant contribution to knowledge or understanding* in the field of study, *relating particular research projects to the general body of knowledge* in the field, and *presenting the results of the research in a critical and scholarly way*.

Examination Outcomes

According to Postgraduate Assessment Regulations:

- (a) **Award PhD/Doctorate:** thesis satisfies criteria as is;
- (b) **Minor Corrections Needed:** three months to make editorial corrections or fix minor deficiencies; typically involves no further research;
- (c) **Additional Oral Examination Needed:** up to four months to make editorial corrections or fix minor deficiencies; another viva is required;
- (d) **Additional Work on Thesis Needed – No Oral Re-Examination Needed:** up to 12 months to fix significant deficiencies in the thesis; typically involves additional research;

Examination Outcomes

Postgraduate Assessment Regulations, continued:

- (e) **Substantial Work on Thesis and Oral Re-Examination Needed – Resubmission for PhD/Doctorate:** up to 12 months (exceptionally 24 months) to fix major deficiencies; another viva is required;
- (f)–(h) **Award MPhil, with/without Corrections and Re-Examination:** thesis is deficient for PhD but MPhil can be awarded;
- (i) **Award MSc by Research:** thesis is deficient for both PhD and MPhil, but an MSc by research can be awarded;
- (j) **Fail:** no degree can be awarded.

Examination Outcomes

In addition from the outcome (a)–(j), you will also get “specific criticisms for transmission to the candidate”:

- 1 Where editorial corrections or modifications are required these should be specified in the joint report.
- 2 If the thesis is considered to be substantially deficient, the report should explain in detail which aspects of the thesis require revision to bring it up to the standard required.
- 3 If the examiners recommend that no degree should be awarded, the main reasons for rejecting the thesis should be given.

In cases (1) and (2) a list of corrections is normally provided by the internal immediately, so that you can start with the corrections.

Preparing for your Viva

Purpose of viva:

- to clarify confusions on the part of the examiner;
- to verify that all main criteria are satisfied;
- to explore possible errors.

What you can do to prepare:

- re-read your thesis;
- prepare a good pre-viva talk and dry-run it;
- find out the examiners' research interests and read some of their papers;
- try to anticipate questions the examiners may have.

Your Contribution to the Field

Your main aim is to show that you made an original, significant contribution to the field. Show that you have:

- identified an unsolved problem;
- studied previous work towards a solution;
- mastered the relevant background material;
- developed the theory underpinning your solution;
- demonstrated that your solution works in practice;
- assessed the limitations of your solution;
- identified directions for future work.

Re-reading your Thesis

- Read your thesis carefully cover to cover;
- if you find mistakes, make a note of them and be prepared to address them in the viva;
- identify strong and weak points, questions and criticism;
- take notes chapter by chapter (or even page by page);
- get ready to summarize your thesis in various ways:
 - the central hypothesis or contribution in two sentences;
 - a summary of the whole thesis in two minutes (elevator pitch);
 - summaries of the chapters in two minutes each.

Pre-viva Talk

- The pre-viva talk gives an overview of your thesis;
- use it to summarize your main contributions, and talk about one chapter in more detail;
- don't try to cram a whole thesis in a 45 min talk;
- pre-viva talks are public and questions can be asked by the audience, but normally the examiners don't ask questions;
- the pre-viva talk can shorten the viva, as otherwise the examiners' first question will be: "please summarize the main contributions of your thesis".

Typical Questions

- What are the main contributions of your work?
- What is the overall hypothesis you're testing? What is the "thesis of the thesis"?
- How is this an improvement over previous work? Can you identify this improvement explicitly?
- Which unsolved problem have you solved? How do your experimental results show this?
- What criteria do you think your work should be evaluated on?
- What do you think is the weakest aspect of the work?
- Explain the intuition behind the following equation/table/graph.

Typical Questions

- What assumptions are implicit in the work? Are they discussed anywhere in the thesis? What happens if all some or all assumptions are not met?
- What if you applied your results to another domain? How would you adapt your approach?
- What aspects of your work are similar to previous work?
- What aspects of the material in your thesis are based on the work of people you have collaborated with?
- How do you hope that your work will influence the research community?
- What other experiments should you have done?
- How would you extend your work (e.g., as a post-doc)?

On the Day of the Viva

- Get a good night's rest;
- dress appropriately (conventions vary from field to field);
- make sure everything is prepared for your pre-viva talk;
- bring your thesis and prepare for taking notes during your viva;
- prepare yourself mentally for both positive and negative outcomes;
- but remember that the majority of students who reach the viva stage gain a PhD.

Tricky Situations

Examiner asks obvious things

- examiners will sometimes ask you to explain basic things (e.g., how a standard algorithm works);
- take the question at face value; explain the concept as well as you can;
- as part of your viva preparation, revise the fundamental concepts or algorithms your thesis work presupposes.

Tricky Situations

Examiner asks a question you don't understand

- ask for clarification to figure out what they mean;
- try to answer to the best of your ability;
- don't waffle; admit if there's something you can't answer.

Examiner asks confrontational questions

- expect some degree of criticism in the viva (that's the point!);
- try to see where the examiner is coming from (you have studied his/her papers as part of the viva preparation);
- stay calm and rebut the criticism firmly, but try not to be confrontational yourself.

Tricky Situations

Examiner asks things unrelated to your thesis

- remind the examiner what the hypothesis or contribution of the thesis is;
- explain why what they are asking is not related to that contribution.

Supervisor butts in

- sometimes the supervisor will start answering on your behalf;
- this is against protocol; the internal should step in and remind the supervisor not to do this.

Mock Viva

We will spend the rest of the course doing a mock viva:

- get together in pairs; best to find someone working in the same area;
- one will play the examiner and the other one the examinee; swap roles after 15–20 min;
- use 5–10 min to provide feedback on each other's viva performance;
- make note of any points you want to discuss in the group as a whole.

Mock Viva

During the mock viva, the examiner:

- asks the examinee to summarize the thesis and its main contribution;
- questions the theoretical underpinnings and methodology of the thesis;
- requests clarification regarding evaluation, applications, alternative approaches;
- asks selected other question from the list we saw earlier.

Further Reading

University of Leicester's guide to preparing for your viva:

<http://www2.le.ac.uk/departments/gradschool/training/resources/study-guides/viva/viva>

General advice for PhD students, contains more references:

Estelle M. Phillips and Derek S. Pugh. How to Get a PhD. A Handbook for Students and their Supervisors. Open University Press. 5th edition, 2010.