Advice to Graduate Students on Oral Examinations

Graduate students in the NCSU ECE Department have a number of different oral examinations to take, including the MS Thesis Defense, the PhD Qualifying Review, the PhD Preliminary Examination, and the PhD Defense. This document provides advice on how to make these examinations go smoothly.

• **MRAD Policies** – In 2009, the MRAD group standardized their procedures for the Qualifying Review and Preliminary Written Examinations. Be sure to download those documents and read them. Where discrepancies exist, those documents override this one.

• **Scheduling Forms** – For students that are defending (MS or PhD) or taking the PhD Prelim Exam, be sure to fill out the “Request to Schedule Examination” form and hand it in to the graduate office at least 3 weeks before the date of your exam. The university does not allow us to hold an exam that has not been approved by the central administration, and it can take several weeks for the paperwork to go through. These forms are not required for students taking the PhD Qualifying Review.

• **Slide Numbers** – Put slide numbers on your slides. It helps immensely in discussing the material during the exam. If you do not know how to do this in PowerPoint, see me, and I will personally show you how.

• **Slide Handouts** – Give your committee handouts of your slides. Four slides per page is fine. Again, having this on-hand makes it much easier to grasp the big picture of your work.

• **Food & Drink** – It is not necessary to bring food and drink to an oral exam, and your committee is technically not supposed to eat it, even if you do. However, other students, professors, and professionals often come to these exams, and having refreshments for them definitely makes them more likely to like what you have to say.

• **Scheduling** – Schedule at least two hours. Any less than that, and the committee may feel rushed, and they may decide not to pass you simply because they didn’t have enough time. In 2009, the MRAD group began holding qualifying reviews on one day towards the end of the semester. In the past, Patsy Ashe has maintained the schedule for this day. Contact her to make sure that you get on the schedule.

• **Duration** – The length of your talk should be 30-45 minutes for a MS Defense, 20 minutes for a PhD Qualifying Examination, and 45-60 minutes for the PhD Preliminary Examination and Dissertation Defenses.

• **Rehearse** – I find more often than I should that students ramble during these exams, saying the same thing over and over without conveying any new information. Before you know it, 20 minutes have gone by, and we’re only on slide 5. Then we have to tell the student to speed up, which makes them more nervous, and the exam suffers even more. This problem can be avoided by simply rehearsing. Give the talk to an empty room and time yourself. Notice when you are repeating yourself and practice saying it only once. I often write a
script of what I will say and rehearse with that, just so that I can decide on the most important things to say during the presentation and practice saying them. If you cannot say everything you want to say in the available time, then say less.

- **Number of Slides** – Plan on 1.5 to 2 minutes per slide. More than that, and the audience gets bored. Less than that, and the audience can’t keep up with you. You can do the math to figure out how many slides that needs to be. An absolute maximum number of slides would be 45 for a PhD Preliminary Examination or Dissertation Defense, but don’t feel that you need to have than many.

- **Outline Slides** – It is very helpful to have an outline slide near the beginning of your talk. It is also very helpful to delineate the different sections of your talk with this same outline slide, highlighting the current section to make clear where you are in the talk. These slides need not be included in the total listed above.

- **Problem & Solution** – Somewhere within the first 3 to 7 slides (depending on the length of your presentation) you should have a slide that very clearly states the problem that you are working on and your proposed solution. The rest of the talk should expand on how your work addresses the problem and implements your solution. If you cannot capture this idea on one slide, then don’t expect your committee to be able to understand it (and don’t expect to pass the exam, either). If your presentation contains information that does not relate to this problem/solution statement, then it should be removed.

- **Slide Content** – Call attention to the value of your work. Don’t assume that the committee knows or understands the value. Don’t list a lot of details and expect the committee to see the important ones. Highlight the values that are important to understand the value you add. Don’t list a lot of different approaches to a problem and expect the committee to recognize which one is your approach. Call attention to it visually.

- **Slide Text** – It’s best to limit the text on a slide to the most important points. I try to limit the number of words on a slide to 25 and use no smaller than 24-point type. This rule can be bent, of course.