Quick Reference Guide for ECE PhD Qualifying Exam

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Overview

- Introduction
- Accomplished Work
- Proposed Work
Introduction

• Describe why research should be carried out on this topic
• Include at least 1-3 slides for an examination committee member who is not an expert in this field
• Describe what are the major challenges and which one(s) are you going to tackle
• Spend ~5 minutes for this section
Work Accomplished

• Describe the work you have done
• Depending upon when in your PhD this exam is taking place, the results can be preliminary or fully verified/published
• Don’t worry if results are preliminary and if you are taking the exam in year 1 or 2.
• Show that your work done so far has rigor and novelty. Point out any challenges that you have overcome.
• Spend ~ 10 minutes on this
Work Proposed

• Describe your plan going forward
• *Why* is it important?
• *How* will you do it?
• *What* results do you aim to get out of the work?
• *When* will you finish?
• Include a Gantt chart
• Spend ~10 minutes in this section
Overall

- Aim for 25 minutes of presentation, < 25 slides
- Do not speak too fast
- Committee examining you on three aspects:
  - Qualifying – are you qualified to carry on as a PhD candidate?
  - Proposal – does it make sense, is it too easy, too trivial, irrelevant, too difficult, may take forever?
  - Q/A - how well you answer questions, how well you communicate
- A good PhD candidate should be able to “teach” – convey his/her messages clearly
Q/A

- Ask the committee member to repeat the question if you do not understand it.
- Give direct answers, do not beat around the bush.
- If you don’t know the answer, say so. The time will be better spent on a different question.
Some Reasons for Fail/Conditional Pass

- Future work section briefly presented, not flushed out
- Proposal document >> 30 pages
- Check instructions
- Committee cannot extrapolate from the "work accomplished" that the student is capable of succeeding in PhD
- Work accomplished or proposed is irrelevant, trivial, has no novelty, will likely have no impact
- Poor presentation, confusing
- Why/When/What/How – No clarity
Tips

- Ask your supervisor to share an example of a good QE proposal document
- Work with him/her to prepare for your presentation
- Even if you have published in top-tier conferences/journals, put time and effort in preparing for the exam