

## Tips for a Successful Thesis Defense

Begin with a class project, and develop further with your thesis committee (program advisor, departmental mentor, additional thesis advisors, +/- program statistical mentor)—this is an iterative process that usually takes a few months, so start early. Do not let too much time pass between the end of the class for which the project was submitted and the start of the thesis development process. This will only make it much harder for both you and your mentors. Once your thesis committee decides you are ready to defend, your program advisor *must officially sign off on the approval (with Deb)* before you may schedule a defense date.

Design and Analysis may be defended at the same session if they are pertaining to the same project. If they are not from the same project, students are strongly encouraged to defend each component at separate sessions unless this is not otherwise feasible.

Please take the time to rehearse and anticipate the questions you will be asked! Ensure that the font in all slides is readable by whole audience (i.e., don't include tables and figures that no one can see).

Format for oral defense (for each component):

1. Student presentation (~45 min, maximum 60 min)
2. Question/answer session (max 30 min)
3. MS program curriculum committee deliberation (15 min)  
\*Student and department mentor will be asked to step out during this time.
4. Announcement of decision- recommendations for pass/ pass pending revisions/ fail

### Design Component

- State your thesis/research question- describe the importance of your topic
- Specific aims, hypotheses, methods, outcomes (and rationale), potential sources of bias or confounding, anticipated interactions, safety monitoring
- Include an analytical plan and sample size calculation in your presentation. Be prepared to discuss the rationale behind the analytical plan. If you have developed the plan with the assistance of experts outside of the Center, be able to identify these professionals and articulate the scope and purpose of their contributions
- Discuss potential pitfalls/limitations
- Detail how this study will contribute to the body of knowledge in your field

### Analysis Component

- Be clear on your analytical aims at the outset.
- **Do not copy/paste stata output onto the slides.**
- Explain the rationale behind the choice and type of variables, type of modeling, and choices of what to put in the model, why you left some variables in and took others out (almost never should this be based on a p-value).
- Show that you tested the relevant assumptions, did the proper diagnostics related to your analysis.
- Be able to explain what the findings mean; does a statistically significant result translate into something clinically meaningful?