Science Societies

Prepping for your comprehensive exams

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If you are pursuing your doctoral degree, chances are you will have to take comprehensive exams (also referred to as “comps,” preliminary exams, or “prelims”) in the near future. These exams test the breadth and depth of what you know, and also what you don’t know, to determine if you are ready to be considered a candidate for your doctoral degree and make the transition from coursework into the dissertation process. While every school or department may have a different exam format, planning

ahead, developing good study habits, and managing stress are key for exam preparation. Comprehensive exams can be extremely stressful and difficult but also very rewarding. The preparation tips below are a good starting point for initiating the studying process and conquering your exams.

Talk to Committee Members

It's a great idea to talk to your committee members a couple months ahead of when you plan to schedule your exams. As a group, you can outline any specific details or requirements for your exams and set your timeline. Will you have both written and oral exams? How long will you have to complete each written exam? When will the group reconvene for your oral exam? If you have any input on scheduling your exams, particularly your oral, be sure to schedule for the time of day you feel most energized and alert.

You should also reach out to your committee members individually. This will allow you to discuss each written exam's specific format. Will this member's written exam be short answer, essay, or multiple choice? Will it be open or closed book? Will you need to develop some sort of course syllabus or a class lecture or write up a literature review? Are there certain topics or even specific resources they recommend you review? As you discuss the format of your exams and generate a list of topics to study, ask them for recommended reading materials or specific resources. Some committee members may not be willing to divulge their plans, but at the very least, asking these sorts of questions shows that you are invested in doing well and that you are being proactive in preparing for your exams.



*Going through a mock oral exam with friends and colleagues can help put you in an exam setting, be beneficial for identifying knowledge gaps, and also boost your confidence. Photo courtesy of Flickr/Tomaš Kappa (**https://creativecommons.org/licenses/by-nc/2.0/**).*

Establish a Study Schedule

Once you have an idea of format, potential topics, and time frame, it can be helpful to develop a study schedule to help you stay on track. This can be especially useful if you are busy with coursework and research as well. Start by outlining a study schedule that works for you. Some important things to consider for your schedule include: When do you have non-negotiable commitments such as classes, labs, or fieldwork? When do you feel most productive? Where are you most productive? When do you need time to relax? Consider making a list of your short- and long-term studying goals. For example, a short-term goal could be to read and take notes on a specific chapter by a certain

date. A long-term goal could be to conquer your weakest topic areas and have a practice exam with friends to test this. Start drafting a study schedule based on the answers to these questions and your goals, but remember to be flexible! Your initial schedule may seem like the right fit but may not work in the long run and could require adjustments. After a couple weeks, revisit your study schedule and make changes if necessary. Maybe you found that you are more productive in your office on Monday, but need to work from home or at a coffee shop another day. Perhaps when you thought you'd be the most productive is not the same every day. It's ok to make these adjustments so that you can stay focused and on top of things without feeling overwhelmed.

Take Good Notes

Taking good notes is critical. Establishing a note-taking system may be a helpful resource. Some people organize their notes in a notebook while others use a digital system. Tag each entry with keywords. If you have an open book exam, or if you end up writing a proposal or literature review for your written component, these digital systems can be extremely helpful. When you're looking for an article or book during an exam, these tags can save you time. Also, try taking notes using a *mind map* approach. This is great when you need to think creatively and can help you connect ideas once it shows the overall structure of a subject and the relative importance of individual parts. This is also super helpful when you have problems to solve. Other note-taking strategies are the outline method, which uses a bullet list with tiers to include details, and the Cornell method. The Cornell method calls for dividing your paper into three sections: notes (regular notes), cues (questions that connect this text to others, macro ideas, and main themes), and summary (one-to two-sentence summary of the most important ideas that you covered). Find an approach that works best for you to organize your thoughts and resources.

Determine Knowledge Gaps

Everybody has knowledge gaps. Most people have likely experienced a feeling of inadequacy when trying to explain something. This is nothing but the discovery of a knowledge gap. It does not mean you do not know anything about the topic, but maybe it is just outside of your list of strengths, something you haven't thought of in a while, or a topic that came up in an unexpected context you haven't explored before. One of the best ways to identify and tackle your knowledge gaps is to try to communicate your ideas in your own words by speaking or by writing. Note which topics or ideas you have trouble communicating. It is an extra effort but undoubtedly a useful resource and a helpful way to take notes. Once you identify your gaps, use your network to overcome them. Ask friends, professors, post-docs, and other graduate students to provide potential questions related to your research or field of study that might help you identify knowledge gaps. Then, see if they will help you talk over new ideas or if they can provide material that could help you to fill out these knowledge gaps.

Practice with Friends and Colleagues

Going through a mock oral exam with friends and colleagues can help put you in an exam setting, be beneficial for identifying knowledge gaps, and also boost your confidence. Ask your friends and colleagues for helpful tricks and tips, especially if they have already gone through the comprehensive exam process. Recruit fellow graduate students, post-docs, and friends from your department and ask them to role-play as one of your committee members and develop a few questions each. As you go through the mock exam, jot down the questions that stumped you, so you can read up on that topic later. Your adviser or another committee member may also be willing to go through some practice questions with you. This can be a great opportunity to work through some hard questions and put yourself into the setting

you'll experience on exam day. Remember, your committee wants you to feel prepared and succeed!

Know When to Take Breaks

Studying for comprehensive exams is stressful, and it can quickly consume your time and thoughts. It is important to take breaks and time for self care as you prepare for your exams. Some people find that studying for 25 minutes at a time and then taking a five-minute break to get up and stretch, walk around, and check their phone can increase focus while studying. While you are studying, keep your phone on "do not disturb" or in a different room entirely. Be sure to eat well and drink plenty of water, follow a good sleep schedule, exercise, and get outside occasionally to get some fresh air. Making time for family and/or friends and doing non-academic activities can also be a great way to prevent study burnout. Following these healthy habits and taking breaks can make your studying time more productive, reduce stress, give you more energy, and even improve your memory.

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Tips for Exam Day

One of the best things you can do to prep for exam day is to get a good night's sleep the night before. If you aren't read up on a topic the night before the exam, chances are you won't be able to cram it all in overnight anyway, so you may as well give your brain a break! Plus, if you're tired and groggy from a late night of studying, you're unlikely to remember any of that information you spent so long studying.

Remember, the point of these exams is to test your knowledge and pinpoint any gaps in your knowledge. It is okay not to know something! Even your committee members have limits to their knowledge (whether they admit it or not). If you get to a question that you aren't sure about, be honest. Say you aren't sure, but try to follow up with a logical sequence of how you might go about answering the question. If you don't understand a question, follow up or ask for it to be rephrased. Another pro-tip: Ask questions. This will show you are listening and following the discussion, thinking deeper than the surface-level question at hand, interested in learning more, *and best of all, it gets your committee members talking*. The more they talk, the less you have to.

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Conclusion

Comprehensive exams are a right of passage and should be viewed as an opportunity for you to demonstrate your knowledge, readiness to pursue your research, and ability to think critically. Careful preparation and a mindful approach to exam day will help reduce the anxiety associated with comps, so you can showcase your competency with confidence.

Helpful Resources

Several study platforms may help you prepare for your comprehensive exam. **Quizlet**, **OneNote**, **Evernotes**, **Xmind**, and **Flashcards±** are some examples.

Other resources:

- 8 Ways to Prepare for Comprehensive Exams (**https://bit.ly/3tuQNTS**)
- Surviving Studying for Comprehensive Exams (**https://bit.ly/38KKrWM**)

- 20 Tips for the Ph.D. Exam (**https://history.washington.edu/20-tips-phd-exam**)

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