Review experimental designs
What is the role of randomization in an experimental design?
Can you define different types of causes? (Aristotelian distinctions)
- material causes—what something is comprised of
- efficient causes—forces that work to make something exist
- form or structural causes—the shape or structure of something
- utility causes—what a thing is for
What is the difference between random selection and random assignment?
Why is it nearly impossible to conduct a "true" experiment in the social sciences?
Make sure you are familiar with the roles of independent, dependent, and control variables in a research design.

Causal comparative and correlational designs
What aspects of your work are you planning to compare?
Do you have groups formed that are randomized or matched in some way?
Are you making comparisons between groups that cannot be changed (i.e., using organismic variables such as gender, ethnicity)?
Are you making comparisons between groups whose characteristics raise ethical issues if you were to change them (i.e., people with health issues)?
Are you making comparisons between intact groups or naturally occurring groups with characteristics you cannot control (i.e., intact classes in a school)?
Are there important variables that you may need to match between groups so that you can equate the groups?
Are there ways to ensure randomization of variables that may not be directly tied to your theoretical questions? (Dimensions that you could use as a covariate in your analysis to “control”?)
Is there a way to create meaningful subgroups in your sample so that you can explore the nature of the variance you obtained in the findings?
What does it mean to explain variance? (And why is shared variance a potential problem in some research designs?)

Survey designs
When might it be reasonable to simply survey participants and to avoid making group comparisons?
Why are response rates especially important in survey research?
Why would researchers need to spend large amounts of time on sampling issues when planning a survey study?
What should you think about when designing the survey?
How might researchers administer surveys?
How can these studies be defined as valid?

Single subject designs
What are some differences between single-subject designs and experimental or quasi-experimental designs?
What do researchers mean when they talk about “randomized-clinical trials”?
What roles to baselines play in single-subject designs?
What is an ABAB design? Why would researchers use such approaches?
Why are most factorial designs not appropriate for use when researchers tend to focus on single-subject issues? What measurement problems occur?