This is your midterm study guide. All key terms and questions on the exam will come from this study guide.

The midterm exam will include several key terms, for which you will be asked to define the term, state its significance, and give an example. The terms on the exam will be drawn from this study guide. Terms not on this list will not be on the exam.

**Definition:** 1 sentence. Self-explanatory. Make sure this is sufficiently detailed to distinguish the term from other similar terms on the list.

**Significance:** How does this term relate to the core material we are covering? i.e. how does trade create wealth, how are the gains from trade distributed, who wins and who loses from trade openness, etc. It is also correct to relate this term to similar terms, or opposite terms covered in the course.

**Example:** Give me an example of the term. This does not need to come from lecture or the book, but those are the easiest place to look for examples. There is no specific example we are looking for – any appropriate example will be considered correct.

Sample correct exam answer:

**Term:** Nominal Measure

**Definition:** A type of measure with multiple categories, where the categories are unordered.

**Significance:** Nominal measures are difficult to use in quantitative analysis.

**Example:** Religion is often measured nominally (e.g. Christian, Jewish, Muslim, Hindu)

There will also be 1-2 mini-essay questions requiring answers of 3-6 sentences and 2-3 short answer questions that require 1-word or 1-sentence answers. As with the key terms, I will only ask questions that come directly off of the study guide.

**Note:** On exam day, bring your bluebook, several pens/pencils, and not much else. Everything except writing instruments and bluebooks will need to be placed down at the front of the class. This includes bags, books, etc. and especially PHONES. No phones at your seat, so if you have a fancy smartphone, you might want to leave it at home, along with your laptop and other valuables.

No trick questions. No surprises. The midterm is on Friday, October 23. Good Luck!
**Key Terms:**

Wicked Problems  
Positivism

Replication  
Cumulative research

Inductive Theory Building  
Deductive Theory Testing

Correlation  
Causation

Theoretical construct  
Independent variable  
Dependent variable

Omitted variable  
Intervening variable  
Spurious relationship

Measurement Validity  
Content validity  
Criterion validity  
Convergent validity  
Discriminant validity  
Inter-rater (inter-observer) reliability  
Proxy measure

External Validity (i.e. generalizability)  
Internal Validity (i.e. causal validity)

Nominal measure  
Ordinal measure  
Interval measure  
Ratio measure  
Dummy variable (AKA dichotomous, binary)

Sampling Error  
Simple Random Sampling  
Stratified Random Sampling  
Cluster Sampling  
Availability Sampling

Weak law of Large Numbers
Central Limit Theorem
Random sampling error

Unit of analysis
Ecological fallacy
Reductionist fallacy

True experiment (your definition should list the 3 core requirements)
Random assignment
Natural Experiment
Regression discontinuity design

Null hypothesis
Falsifiability

Pretest
Posttest

Differential attrition (mortality)
Contamination
Treatment misidentification
History Effects

Short Answer Questions

1. Describe what Jonathan Haidt refers to as “wicked problems” in economics. What does professor Haidt suggest as a solution? What does Professor Graham suggest? (1 sentence for the first part. A few words for each of the next two parts.

2. Answer each short-answer question based on the following research design (I will give a different design on the exam, but will ask the same questions about it).

   I have a hypothesis that says that immigration from Haiti to the United States improves income and health outcomes for migrants. I want to know if this is true, and I want to estimate the size of these effects. To conduct this study, I compare Haitians who entered a green card lottery and won (i.e. received a green card) to those who entered a green card lottery and lost.

   1. Is this design a true experiment, natural experiment, quasi-experiment, or non-experimental design?
   2. Name one of the dependent variables in this study (there are two)
   3. What is the independent variable of interest (i.e. the treatment)?
   4. What is the unit of analysis in this study?
   5. What is the population about which I can make a strong inference in this study?
6. What is the treatment group in this study?
7. What is the control group in this study?
8. Do I have random assignment? Explain in one sentence.

3. If I employ random sampling, what is true about my sample relative to the population?

4. If I employ random assignment, what is true about my treatment group in comparison to my control group.

5. Randomized controlled trials are becoming more common in international aid organizations. How is this good for aid organizations? How is this risky for them? (1 sentence each)

Mini-Essay Questions

1. Is causal inference necessary for prediction? Is it necessary for identifying useful policy interventions? In each case, why or why not?

2. Randomized controlled trials are becoming more common in international aid organizations. How is this good for aid organizations? How is this risky for them? What are the ethical concerns with random assignment? What is one approach aid organizations can use to (partially) address this? (1 sentence each)

3. Compare and contrast these two country-year measures of “economic development.”

   Measure 1: GDP per capita
   Measure 2: An index that includes the literacy rate, life expectancy, infant mortality, and level of democracy

   a. Assess each of these measures in terms of their content validity.
   b. Which of these measures will have better inter-rater (inter-coder) reliability?
   c. Would you expect these two measures to be positively or negatively correlated with one another?