Information about the ECON 125 Midterm

The midterm exam will be one hour long, starting at 9:30 am on May 2. It will test your understanding of the demographic concepts and measures we discussed in class, as well as your knowledge of the readings. It will pose a series of short-answer questions, which you will answer with a few sentences for each question.
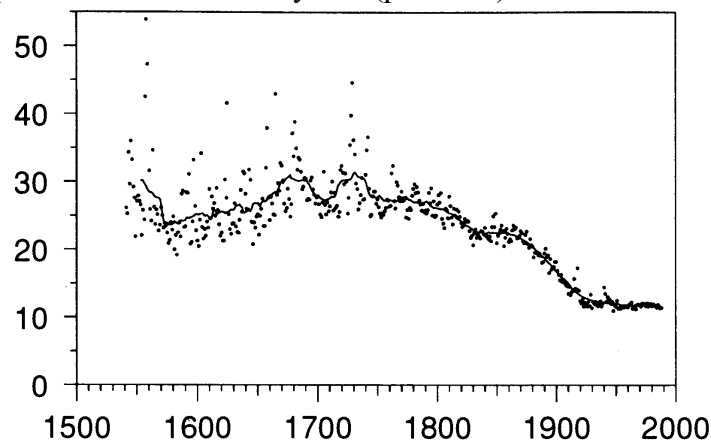
Only material from weeks 1-4 will be included. You will not be required to remember detailed facts from lectures and readings, only concepts and broader ideas. You may be asked to interpret tables or figures from the readings, but only those included in the lecture slides.

You are permitted to bring a one-page 8.5" x 11" cheat sheet, written in your own handwriting. You may use both sides of the page. Calculators will not be useful; calculations will be minimal.

Practice Questions

1. The Demographic Balancing Equation says that population growth is always equal to the crude birth rate minus the crude mortality rate. True or false? Explain.

2. Cohort life expectancy is the same as the average age at death. True or false? Explain.

The graph below reports the crude mortality rate (per 1000) over time in historical England.

3. How is the crude mortality rate defined? What are its pros and cons relative to other measures of mortality?

4. From the mid 1500s to early 1700s, the crude mortality rate was high and volatile. In Malthus's view, what caused this volatility?

5. From the late 1700s to early 1900s, the crude mortality rate steadily declined. In the reading for week 2, what factors do Cutler et al. argue drove this decline?

6. The crude mortality rate was flat through the second half of the 20th century. Do you think this pattern reflects stagnation in mortality decline? Why or why not?

The graph below is taken from the reading for week 3, by the GBD 2021 team.
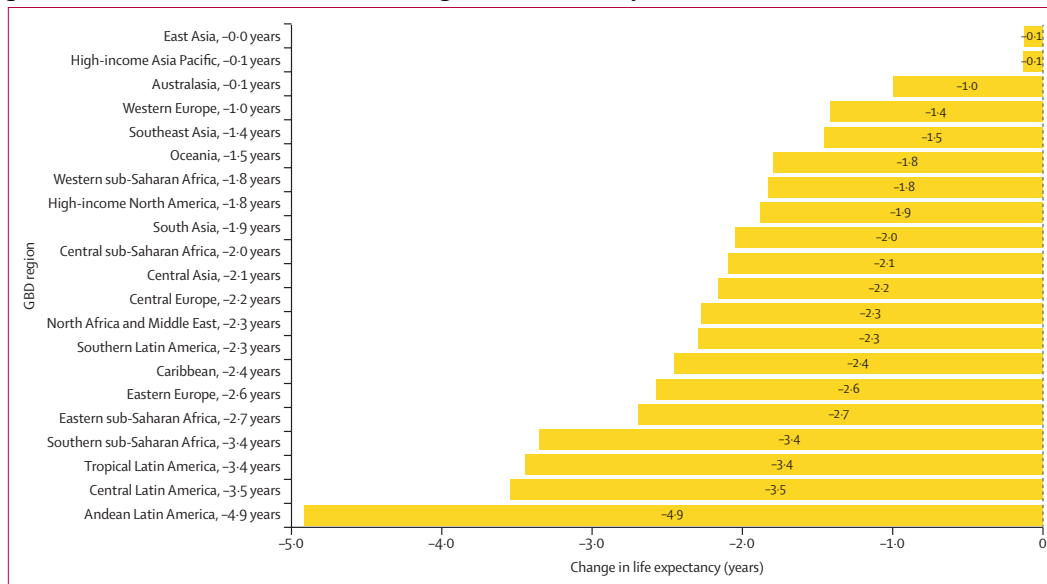

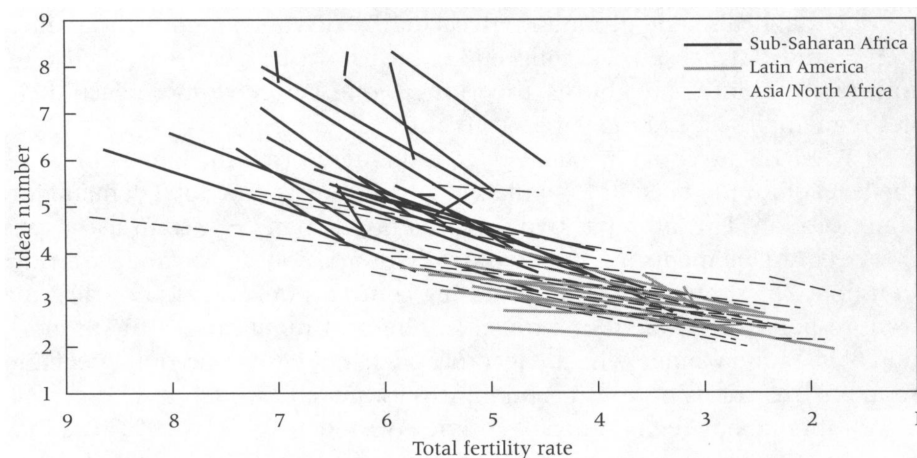*Figure 6:* **Effect of COVID-19 on life expectancy by GBD region, 2019–21**
For readability, labels indicating a change in life expectancy of less than 0·05 years are not shown. GBD=Global Burden of Diseases, Injuries, and Risk Factors Study.

7. In which parts of the world did COVID-19 have the largest effect on life expectancy at birth? Conceptually explain the magnitude of the effect for the most affected region.

8. COVID-19 was a leading cause of death in 2021. What was one other leading cause of death in that year?

The graph below is taken from the reading for week 4, by Bongaarts and Casterline.

FIGURE 7   Trends in ideal number of children by total fertility rate

NOTE: Earliest and most recent survey in each country, n = 63 countries.

9. What does the graph reveal about the relationship between the total fertility rate and the ideal number of children? Is the within-country relationship similar to or different from the cross-country relationship?

10. Describe one conclusion Bongaarts and Casterline draw from this graph regarding Africa's high level of fertility.