Economics 70424-01
University of Notre Dame
Climate Change Economics
Spring 2021

Instructor: Professor Nelson Mark
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Hours: TR 330-5
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Course Website: https://www3.nd.edu/~nmark/Climate/AA_Climate_70424.html

Time and Location: TR 9:35-10:50 **DBRT 117**, 04 February–23 March.

Course Description: Climate change is real and is the result of human activity. It might, or might not, pose an existential threat to humanity. At this time, we don't know for sure. This short course will cover issues of climate change confronting humanity and what economists can and have done to contribute to our knowledge and the conversation about climate change. When we study an old problem (e.g., effectiveness of monetary policy), we need to develop a new methodology or uncover new data to expand the research frontier. When we study a new (and urgent and pressing) problem (e.g., climate change), one that climate scientists have been studying for years, we, as economists, can have the highest value-added by studying that problem with established tools and methodology from our discipline.

A succesful economic researcher does three things well: Learn, think, and do. Learn refers to reading the literature, understanding the questions addressed in the research and knowing what was done to answer those questions. Think, refers to thinking critically about the limitations of a study, coming up with ways to remedy those limitations, suggestions for further study either along these same dimensions or in other useful directions. Do, refers to doing the research. This might be formulating, solving, and running a quantitative model or estimating an empirical formulation or model. We will concentrate on the 'learn' and 'think' parts. This is how you get research ideas. The 'do' component was covered in large part in your first year, in Stangeby's quantitative methods course and in your econometrics courses. Due to the short time-frame for the course, we won't be engaged in 'doing'.

In terms of skills development, we will focus on the 'learn' and 'think' parts. I will present some introductory material on each topic, after whigh you will be tasked with presenting a paper and delivering discussion points (critical ones if the paper deserves it) in the same fashion as one would write a referee report or serve as a discussant at a conference. You will need these important and critical skills as a professional economist. We might as well start developing these skills now. Importantly, one does not do this while isolated in a cubicle, cut off from other people. Economic research is a social activity. We learn from listening to what others have to say and we also learn from telling others what we think. Communication with others accelerates the research process–especially the learn and think phase. Very important for us to to talk to one another.

Grades: are based on presentation and class participation in development of 'learn' and 'think' skills.

Topics. The main topics planned are listed below. I will post the actual papers and topics that we will cover, and who will be covering the material on the course website:

1. What economists need to know about climate science and our potential contributions
2. Channels of climate change on the economy

3. Integrated Assessment Models–modeling economic damages and estimating the social cost of carbon
4. Empirical work on the effect of weather on the economy and damage assessments
5. Empirical work on the economic effect of carbon taxes
6. Climate and finance
7. Adaptation