

Freie Universität Berlin  
 Department of Economics  
 Institute for East European Studies  
 Prof. Dr. Theodor Grigoriadis  
[theocharis.grigoriadis@fu-berlin.de](mailto:theocharis.grigoriadis@fu-berlin.de)  
 Winter Semester 2024/25

### **Seminar**

Tuesdays, 16-18, Garystr. 55/105.

### **Office Hours**

Mondays, 8-10, Garystr. 55/101A.

### **Modules**

Master of Science in Economics & Master of Science in Public Economics: *Aktuelle Forschungsfragen der internationalen Finanzpolitik/Topics in Applied Economic Policy Analysis*.

Master of Arts in East European Studies/Political Science/IR: *Vertiefung*.

## **Economics of Climate Change**

This is a course on the economics of climate change with a focus on analytical tools and policy-relevant debates that underpin what is considered by many the most important issue of global development. It will start with an overview of optimization methods related to pollution control, the allocation of exhaustible resources, and the regulation of natural monopolies. It will continue with the introduction of estimation methods on the impact and valuation of climate change and its relation to the economic development of the Global South. Climate change is then observed through the lenses of cost-benefit analysis and discounting, uncertainty, and equity. A discussion on the relationship between climate and international security as well as an analysis of fundamental quantitative techniques toward the assessment of climate change complete the policy and analytical dimensions of the course. Students are expected to become conversant with the analytical tools and theoretical discussions presented in the literature and related to the economic analysis of climate and its transformation. Slides, which have been graciously provided by Richard Tol (U Sussex), will be used to facilitate the learning process.

### **Regular participation**

75 percent attendance.

### **Active participation**

Collective presentation (12 slides per person, 15 minutes per person) in the last three weeks of the semester.

### **Required Textbooks**

1. Seo, S. Niggol. *Climate Change and Economics: Engaging with Future Generations with Action Plans*, Palgrave MacMillan, 2021.
2. Tietenberg Tom and Lynne Lewis. *Environmental and Natural Resource Economics*, Pearson Education Inc., Boston et al., 9<sup>th</sup> Edition, 2018.
3. Tol, Richard SJ. *Climate economics: economic analysis of climate, climate change and climate policy*. Edward Elgar Publishing, 2023.
4. Viscusi Kip, John Vernon, and Joseph Harrington. *Economics of Regulation and Antitrust*, Cambridge, MA: MIT Press, 2018.

**Grade**

Research Paper: Economics/Public Economics/East European Studies/Political Science/IR  
Masters Students.

**Week 1: Introduction to Climate Change & Resource Economics**

- Tol, Ch. 1-2.
- Tietenberg and Lewis, Ch. 2.

**Week 2: Pollution Control I**

- Tol, Ch. 3.
- Tietenberg and Lewis, Ch. 14.

**Week 3: Pollution Control II**

- Tol, Ch. 4.
- Tietenberg and Lewis, Ch. 15.

**Week 4: Pricing of Exhaustible Resources**

- Tietenberg and Lewis, Ch. 5-7.
- Nordhaus William, "The Allocation of Energy Resources," Brookings Papers, No. 3 (1973): 529-570. <http://cowles.econ.yale.edu/P/cp/p04a/p0401.pdf>

**Week 5: Natural Monopolies & Regulation of Energy Markets**

- Viscusi, Vernon, and Harrington. Ch. 11-12 & 18.
- Joskow Paul, "Electricity sectors in transition," Energy Journal, 19(2), 1998.

**Week 6: Impact & Valuation of Climate Change**

- Tol, Ch. 5-6.
- Tietenberg and Lewis, Ch. 3-4.

**Week 7: Climate & Development**

- Tol, Ch. 7.
- Tietenberg and Lewis, Ch. 9-11.

**Week 8: Optimal Climate Policy & Discounting**

- Tol, Ch. 8-9.
- Tietenberg and Lewis, Ch. 12-13.

**Week 9: Uncertainty**

- Tol, Ch. 10.
- Tietenberg and Lewis, Ch. 16.

**Week 10: Equity**

- Tol, Ch. 11.
- Tietenberg and Lewis, Ch. 17.

**Week 11: International Environmental Agreements**

- Tol, Ch. 12.
- Tietenberg and Lewis, Ch. 18.

**Week 12: Integrated Assessment Model**

- Tol, Ch. 13.
- Tietenberg and Lewis, Ch. 19.

**Week 13: Climate Diplomacy & Civil Society**

- Tol, Ch. 14.
- Tietenberg and Lewis, Ch. 20-21.

**Week 14: Activism, Africa & South Asia**

- Seo, Ch. 1-5.

**Week 15: Grasslands, Technologies, China & the Poles**

- Seo, Ch. 6-9.

**Week 16: Fisheries, Pandemics & Diplomacy**

- Seo, Ch. 10-13.