

Master on Sustainable Development Year 2020 – 2021



UNIVERSITAT DE
BARCELONA

- **Title/Título:** The Economics of Climate Change / La Economía del Cambio Climático
- **Coordinator/Coordinador:** Humberto Llavador (UPF & Barcelona GSE)
- **Languages/Idiomas:** English and Spanish. Material and slides may use indistinctly English or Spanish, independently of the language of the session. / Inglés y Castellano. El material y las diapositivas pueden utilizar inglés o castellano, independientemente del idioma de la sesión.
- **Dates/Fechas:** March 23rd-April 27th / 23 de marzo – 27 de abril
- **Instructor/Instructor:** Humberto Llavador
- **Speakers/Colaboradores:** Alejandro Caparrós (Instituto de Políticas y Bienes Públicos, CSIC), Juan Carlos Ciscar (Joint Research Center-Sevilla), Natalia Fabra (U. Carlos III de Madrid), Thomas Stoerk (European Commission and Grantham Research Institute-LSE), Alessandro Tavoni (U. of Bologna), Jordi Teixidó (U. of Barcelona-School of Economics), Jeroen van den Bergh (ICTA-UAB)
- **Credits/Créditos:** 3 ECTS.

1. Content/Contenido:

This course uses the elements of economic analysis to study the challenges, costs and benefits of climate change, mitigation and adaptation, as well as the social and distributional aspects associated with climate change. / Este curso utiliza los elementos del análisis económico para estudiar los retos y los costes y beneficios del cambio climático, la mitigación y la adaptación, así como los aspectos sociales y distributivos asociados al cambio climático.

2. Objectives/Objetivos

The objective of the course is to provide a general understanding of the main economic issues related to climate change, offering the instruments to understand current debates and challenges. / El objetivo del curso es proporcionar un acercamiento a los temas económicos más relevantes relacionados con el cambio climático, ofreciendo los instrumentos para poder entender los retos y los debates existentes.

3. Grading/Evaluación:

Students will have to write short essays on each session offered by an external speaker. Grading will be based on the score for those essays and on participation in the class as well as in the different activities and discussions. / La evaluación se basará en los ensayos que los estudiantes han de escribir para cada una de las sesiones ofrecidas por los colaboradores y la participación en las discusiones y las actividades.

4. Program:

The course consists of twelve 2-hour sessions. Each session will focus on a specific issue related to the economic aspects of climate change. If necessary, we might change the program to adapt to unforeseen circumstances. / El curso consta de 12 sesiones de 2 horas. Cada sesión se centra en un tema relacionado con los aspectos económicos del cambio climático. El programa es susceptible de cambios que permitan adaptarse a circunstancias imprevistas.

(* in English / **en castellano)

March 23th, 16:00-18:00 (online**)

1. Introduction. What is the economics of climate change? The economics of public goods, common goods and externalities. /
Introducción. ¿Qué es la economía del cambio climático? La economía de los bienes públicos, bienes comunes y las externalidades. (H. Llavador, UPF-GSE)

Nordhaus (2019); Stavins (2011); Unit 20 at CORE-Team (2020)

- March 25th, 16:00-18:00 (online**) **2. Game Theory (an introduction): social interactions and social preferences. / Teoría de juegos (una introducción): interacciones sociales y preferencias sociales (H. Llavador, UPF-GSE)**
Dixit et al. (2020), Dixit and Nalebuff (2011)
- March 26th, 15:00-17:00 (online**) **3. Climate change impacts. / Impactos del cambio climático. (Juan Carlos Ciscar, JCR-Sevilla)**
Ciscar (2019), Feylen et al (2020), Hsiang and Kopp (2018)
- April 6th, 16:00-18:00 (online**) **4. Aggregating climate change damages across space and time: the social cost of carbon, discounting and sustainability. / Agregación de los costes del cambio climático en el tiempo y el espacio: el coste social del carbono, la tasa de descuento y la sostenibilidad. (H. Llavador, UPF-GSE)**
Llavador et al. (2015)
- April 8th, 16:00-18:00 (online*) **5. Environmental cooperation. / Cooperación medioambiental. (A. Tavoni U. of Bologna)**
Unit 4 at CORE-Team (2020); Tavoni et al (2011); Carattini, S Levin, A Tavoni (2019); List (2016)
- April 9th, 15:00-17:00 (online**) **6. Energy transition and climate change. / Transición energética y cambio climático. (N. Fabra, U. Carlos III)**
Fabra (2020)
- April 13th, 16:00-18:00 (online*) **7. Global carbon pricing. / Precio global del carbono. (J. van den Bergh, ICTA-UAB)**
van den Bergh *et al.* (2020); Baranzini *et al.* (2017)
- April 15th, 16:00-18:00 (online**) **8. Inequality and climate change. / Desigualdad y cambio climático (J. Teixidó, UB-School of Economics)**
Bel et al. (2020); Jacob et al. (2020); Roy et al. (2018)
- April 16th, 15:00-17:00 (online*) **9. Climate Negotiations and Environmental Agreements. / Negociaciones del clima y acuerdos medioambientales. (A. Caparrós, IPP-CSIC)**
Barrett (2016); Caparrós (2016a); Caparrós (2016b)
- April 20th, 16:00-18:00 (online*) **10. Uncertainty and tipping points in the economics of climate change. / Incertidumbre y puntos de inflexión en la economía del cambio climático. (T. Stoerk, EC-GRI/LSE)**
Nordhaus (2019a); Lenton et al. (2008)

April 22nd, 16:00-18:00 (online*)

11. Emissions Markets: The EU Emissions Trading System (EU ETS) /
Mercado de Emisiones: El régimen europeo de intercambio de
emisiones. (T. Stoerk, EC-GRI/LSE)

PMR&ICAP (2016); Sterner (2020)

April 27th, 15:00-17:00 (online**)

12. Conclusions / Conclusiones (H. Llavador, UPF-GSE)

5. References/Bibliografía:

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