

24166: Spatial Economics and the Environment

Augusto Ospital

Summer 2025

E-mail: augusto.ospital@econ.lmu.de

Office Hours: By appointment

Lectures: Geschw.-Scholl-Platz 1 (main building), room E004 Wednesdays, 6:15 – 7:45 PM

Tutorials: Schellingstr. 3, room S005 Thursdays, 2:15 – 3:45 PM

Moodle Name: Spatial Economics and the Environment

Enrollment Key: see2025

<https://moodle.lmu.de/course/view.php?id=40346>

Course Overview

This course explores the emerging field of Spatial Environmental Economics, encompassing key theories and empirical studies that connect urban, regional, and spatial economics to environmental issues.

We will examine environmental contexts where geography matters and spatial contexts where environmental factors matter. To achieve this, we will explore fundamental ideas and models in spatial economics, including concepts such as agglomeration economies and amenity spillovers. Additionally, we will discuss concepts in environmental economics, such as emission and pollution externalities, and their relevance to the analysis of environmental, energy, and natural resource goods. In each instance, we will highlight how spatial policy analysis benefits from environmental considerations and how environmental policy evaluation gains from incorporating spatial aspects.

This course is designed for bachelor students with a solid command of microeconomics and econometrics.

Assessment

The final exam will take place on **July 24** during the usual class time. The final exam will be based on both the lectures and the tutorials.

Please note that registering for the exam is mandatory (check [here](#) on the ISC page). Without registration, participation in an examination is not possible, and no exceptions are allowed.

The registering period is from **June 2 to June 26, 2025**. If you have any difficulties with exam registration, please contact the ISC directly at ISC@econ.lmu.de.

Class Structure

Lectures

Lectures will provide the necessary framework to justify theoretically and evaluate quantitatively a range of urban and regional public policies. They will also demonstrate the most significant applications of this framework in evaluating specific policies and summarize the recent applied research.

Tutorials

Tutorials will complement the preceding lectures by either covering practical applications of the theoretical frameworks, delving deeper into the derivations of the models, or presenting complementary tools that can help the student apply the ideas in the lecture to other settings.

Course Materials

Lecture Notes

- Lecture and tutorial notes will be made available on Moodle.

Bibliography

- There is no required textbook for this class. The examination will be based on the lecture and tutorial notes uploaded to Moodle.
- If students want to explore any topic further, they can consult the following sources:
 - The research papers mentioned in the class notes.
 - The chapter "Spatial Environmental Economics" in the Handbook of Regional and Urban Economics by Clare Balboni and Joe Shapiro. You can find a PDF on Shapiro's website: [link](#).
 - "Fundamentals of Environmental Economics" by Matthew Kahn. Available for purchase here: [link](#).
 - "Environmental Economics: Lecture notes" by Richard Tol. Available for purchase here: [link](#).

Weekly Schedule

Week	Date	Activity	Date	Activity
1	23.04.25	Lecture	24.04.25	Tutorial
2	30.04.25	No class	01.05.25	No class
3	07.05.25	Lecture	08.05.25	Tutorial
4	14.05.25	Lecture	15.05.25	Tutorial
5	21.05.25	Lecture	22.05.25	Tutorial
6	28.05.25	No class	29.05.25	No class
7	04.06.25	Lecture	05.06.25	Tutorial
8	11.06.25	Lecture	12.06.25	Tutorial
9	18.06.25	No class	19.06.25	No class
10	25.06.25	Lecture	26.06.25	Tutorial
11	02.07.25	Lecture	03.07.25	Tutorial
12	09.07.25	Lecture	10.07.25	Tutorial
13	16.07.25	Lecture	17.07.25	Tutorial
14	23.07.25	Review	24.07.25	Exam

Topics

1. Motivation: what is Spatial Environmental Economics and why do we care?
2. Environmental externalities and regulation: carbon emissions, air pollution
3. Spatial externalities: agglomeration and amenity spillovers
4. Hedonics and the valuation of environmental goods
5. Elements of spatial models and the monocentric city model
6. The Roback urban model
7. Quantitative Spatial Equilibrium (QSE) models
8. Traffic congestion and pollution

The list of topics is tentative and subject to change. The topics covered will be listed on the Moodle page.