

1	Module name 57488	Seminar in Energy and Environmental Economics: Econometric Applications	5 ECTS
2	Courses / lectures	Seminar: Seminar in Energy and Environmental Economics: Econometric Applications Attendance is mandatory in this seminar. Absences must be personally arranged with the seminar instructor.	-
3	Lecturers	Prof. Dr. Mario Liebensteiner	

4	Module coordinator	Prof. Dr. Mario Liebensteiner	
5	Contents	<p>This seminar provides students with an advanced exploration of state-of-the-art causal econometric models applied to energy and environmental economics. Methodologically, students deepen their understanding of various causal models, including difference-in-differences, event studies, regression discontinuity, kink regressions, and synthetic control methods. Content-wise, they engage with topics of interest published in top journals related to energy markets, environmental policy, health economics, and related fields.</p> <p>In small groups, students have the opportunity to discuss methods and applications of their interest in detail. This prepares them for conducting their own empirical research, whether for their Master's thesis, an advanced doctoral program, or empirical analyses in their later jobs.</p> <p>The students are required to give presentations on an econometric method. They should explain the basic methodology, advantages and disadvantages, identification assumptions, data requirements, and application examples. Additionally, the students should find one or two studies published in top journals on the application of this method and present them in detail. In the group, we will then discuss our own application cases and how the method could be used.</p> <p>Moreover, in the group, we will discuss how an empirical paper is typically structured, how to motivate a research question, how to best visualize and present data and empirical findings, and how to convince stakeholders (e.g., your thesis supervisor, reviewers, etc.) of the quality of your work.</p>	
6	Learning objectives and skills	<ul style="list-style-type: none"> • Students will become familiar with fundamental econometric models for causal inference, including difference-in-differences, event studies, regression discontinuity, kink regressions, synthetic control methods, matching, and more. • Students will explore applications of these methods in fields such as energy markets, environmental issues, health economics, and related areas. • Students will learn how to structure an empirical paper, formulate a research question, present data and regression results effectively, and how to convince stakeholders (such as 	

		<p>Master's thesis supervisors, reviewers, etc.) of the research quality.</p> <ul style="list-style-type: none"> • Students will have the opportunity to deepen their understanding of a method and topic that are particularly relevant to their interests.
7	Prerequisites	<ul style="list-style-type: none"> • A solid understanding of microeconomics, energy economics, health economics, or environmental economics. • A basic understanding of econometrics, including multivariate OLS regressions. <p>Prior attendance in the course "Empirical Environmental Economics" would be ideal.</p>
8	Integration in curriculum	no Integration in curriculum available!
9	Module compatibility	<p>Wahlpflichtbereich Master of Science Arbeitsmarkt und Personal 20172 Miscellaneous Master of Science Economics 20212 Specialisation: Energy Markets Master of Science Economics 20212 Wahlbereich Master of Science Gesundheitsmanagement und - ökonomie 20152</p>
10	Method of examination	Seminar achievement
11	Grading procedure	<p>Seminar achievement (100%) Grading is based on the seminar presentation and on intellectual class participation.</p>
12	Module frequency	This seminar is offered every summer term.
13	Workload in clock hours	<p>Contact hours: ?? h (keine Angaben zum Arbeitsaufwand in Präsenzzeit hinterlegt) Independent study: ?? h (keine Angaben zum Arbeitsaufwand im Eigenstudium hinterlegt)</p>
14	Module duration	1 semester
15	Teaching and examination language	english
16	Bibliography	<ul style="list-style-type: none"> • Angrist, J. D., & Pischke, J. S. (2009). Mostly harmless econometrics: An empiricist's companion. Princeton university press. • Cunningham, S. (2021). Causal inference: The mixtape. Yale university press.