

**Public Policies for Research, Development and
Innovation**

Code: 45541

ECTS Credits: 10

2025/2026

Degree	Type	Year
Economía y Administración de Empresas	OP	1

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Teaching groups languages

You can view this information at the [end](#) of this document.

Prerequisites

Fundamentals of Economics and Business I

Fundamentals of Economics and Business II

Objectives and Contextualisation

Causal Impact Evaluation Methods in Public Policies:

The objective of this course is to familiarize students with the growing field of impact evaluation in economics. The course presents the main methodologies used to quantify the causal effect of policy interventions on outcomes, including randomized evaluations, difference-in-differences, regression discontinuity designs and natural experiments. These methodologies are assessed critically focusing on their weaknesses and strengths as well as focusing on their application in Stata. The course also offers an overview of the key debates in the design and implementation of a wide range of policies, and their impact on socially relevant issues such as tackling poverty, improving quality and access to education, regeneration of deprived areas, fostering employment.

Economics and Policy of Infrastructure and Public Investment:

This course studies the economic aspects of infrastructures using the tools of economic analysis in deciding the optimal level of infrastructure provision, the role of public and private sector in their provision and operation and shows the policy implications of the deregulation process that has taken place in infrastructure markets in recent years. The emphasis of the course is empirical, with detailed examples and case studies to show the economic consequences of alternative policy designs.

Education Economics and Policies:

The course provides a deep dive into the intersection of economics and education. Beginning with foundational concepts, such as human capital and global perspectives, students' progress to scrutinize education production functions and educational innovations. The course culminates with an exploration of education policy, funding models and strategies for addressing inequalities, and the autonomy in schools. Through lectures and case studies, students gain a comprehensive understanding of how economic principles shape educational outcomes globally, preparing them to critically analyze policies and contribute to the evolving discourse on the future of education.

Learning Outcomes

1. CA10 (Competence) Evaluate the impact of different public policies for sustainable development and social progress taking into account possible gender biases.
2. CA11 (Competence) Offer information effectively about the need, characteristics, and effects of public policy to audiences with and without prior knowledge of economic analysis .
3. KA10 (Knowledge) Recognise the appropriate empirical techniques for the analysis and evaluation of public policies and the causal relationship between the different variables considered.
4. KA11 (Knowledge) Identify the determinants of labour market developments and their effects on social welfare.
5. KA12 (Knowledge) Describe the role of policies to promote research and innovation in environments characterised by rapid technological progress.
6. KA13 (Knowledge) Identify the relevant factors in the design of educational policies for social progress.
7. KA14 (Knowledge) Identify gender biases in the analysis and evaluation of different public policies for their correction and improvement.
8. SA06 (Skill) Evaluate the impact of different social policies from the perspective of gender, efficiency, ethics, social responsibility, and sustainability.
9. SA07 (Skill) Analyse the processes of designing public policies aimed at social progress.
10. SA08 (Skill) Evaluate the social impact of the different topics that can be dealt with in a research project.

Content

Causal Impact Evaluation Methods in Public Policies:

1. Key challenges of estimating the causal impact of public policies
2. Randomized evaluations
3. Difference-in-differences
4. Propensity score matching
5. Regression discontinuity designs
6. Endogeneity and Instrumental Variables
7. Natural and quasi-natural experiments

Economics and Policy of Infrastructure and Public Investment:

1. Introduction: economic importance of infrastructures: Economic impact of public infrastructures: demand and supply effects, net and spillover effects, crowding out effects and distributive effects.
2. Infrastructures and economic growth: Models used to investigate the relationship between infrastructure and economic activity: Input Output Models, Econometric Models.
3. Decision-making on infrastructure provision: Cost Benefit Analysis and beyond.
4. Models of public-private infrastructure management: The problem of monopoly in infrastructure provision and the range of possible solutions. Public provision of infrastructures and reasons for privatization.
5. Infrastructure provision with private contracts and concessions: Private contracts. Infrastructure concessions and the renegotiation problem. Public Private Partnerships (PPPs).
6. Infrastructure regulation and competition: Infrastructure regulation: rate of return & price cap. Vertical unbundling and the introduction of competition. Regulation of liberalized infrastructures.

Education Economics and Policies:

1. Introduction to economics of education
 - 1.1 Definition and scope of economics of education
 - 1.2 Human capital and growth
 - 1.3 Returns to education
 - 1.4 Global perspectives on education
2. Education production functions
 - 2.1 Introduction to education production functions
 - 2.2 Education production functions specifications in the literature
 - 2.3 Measurement of educational outcomes
 - 2.4 Which inputs are relevant in education production functions
3. Innovation in education
 - 3.1 Impact of technology on educational outcomes
 - 3.2 Innovative pedagogical methods
 - 3.3 What skills are relevant for the future and how do we enhance them?
4. Education inequalities
 - 4.1 Socioeconomic status and educational outcomes
 - 4.2 Gender and minority disparities
 - 4.3 Policies to address educational inequalities
5. Education policy and funding
 - 5.1 The role of government in funding and regulation
 - 5.2 Funding models and equity
 - 5.3 Fiscal federalism and education
 - 5.4 Schools' autonomy

Activities and Methodology

Title	Hours	ECTS	Learning Outcomes
<hr/>			
Type: Directed			
Lectures with ITC support	37.5	1.5	
Resolution of exercises	37.5	1.5	
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Type: Supervised			
Tutoring and monitoring work in progress. In-class presentations	62.5	2.5	
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Type: Autonomous			
Study, Reading, Exercise solving, Essays writing,	79.5	3.18	

The activities that will allow the students to learn the basic concepts included in this course are:

1. Theory lectures where the instructor will explain the main concepts.

The goal of this activity is to introduce the basic notions and guide the student learning.

2. Problem Sets

In some subjects, a problem set which students will have to solve individually or in teams will be included in every unit. The goal of this activity is twofold. On one hand students will work with the theoretical concepts explained in the classroom, and on the other hand through this practice they will develop the necessary skills for problem solving.

3. Practice lectures

The aim of this activity is to comment on and solve any possible doubt that students may have had solving the problem assignment. This way they will be able to understand and correct any errors they may have had during this process.

4. Essay writing

In some subjects students will produce written essays on the topics proposed.

5. Tutoring hours

Students will have some tutor hours in which the subject instructors will help them solve any doubts they may have.

Annotation: Within the schedule set by the centre or degree programme, 15 minutes of one class will be reserved for students to evaluate their lecturers and their courses or modules through questionnaires.

Assessment

Continuous Assessment Activities

Title	Weighting	Hours	ECTS	Learning Outcomes
Exercises and essays	35%	27	1.08	CA10, CA11, KA10, KA11, KA12, KA13, KA14, SA06, SA07, SA08
Topic Exam: Causal Impact Evaluation Methods in Public Policies	21.66%	2	0.08	CA10, CA11, KA10, KA14, SA08
Topic Exam: Economics and Policy of Infrastructure and Public Investment	21.66%	2	0.08	CA10, CA11, SA07, SA08
Topic Exam: Education Economics and Policies	21.66%	2	0.08	CA10, CA11, KA11, KA13, KA14

1. The module consists of a number of different subjects or parts taught by different professors. The final mark for the module will consist of the average of the marks of each subject within the module.

- The module is considered successfully passed if:

- the mark for each subject within the module is higher than or equal to 3.0 (in a 0 to 10 scale), and
- the final mark for that module is higher than or equal to 5.0 (in a 0 to 10 scale).

IMPORTANT: Students are expected to attend all lectures. Class attendance and in-class participation will be part of the final assessment of each subject.

- If the module is not successfully passed, the MEBA coordinators will ask the student to re-take the exams for those subjects that, according to the coordinators and the professors opinions, may help the student to successfully pass the module.

If after the re-take exams the student successfully passes the module, her or his mark for that module will be upgraded accordingly, otherwise the previous grade will remain valid. Two restrictions apply for the results after retaking:

- the highest mark for any subject retaken is 5.5; and
- the final grade of the module after the re-take exams cannot be higher than 6.8.

The calendar for the re-retake exams will be announced along with the grades report

1. The mark -between 0 and 10- for each subject will be computed by each professor based on his or her own criteria and on the student's performance. As a general rule, 35% of the mark will correspond to the assessment of the continuous work of the student during the course, and 65% will consist of a comprehensive final examination. The duration and nature of the final examination is decided by each professor.
2. Final exams are compulsory. Re-take exams are only thought for those students having previously written a first exam and failed.

Bibliography

General References

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- Straub, S., Infrastructure and Development: A Critical Appraisal of the Macro-level Literature, *The Journal of Development Studies*, vol. 47(5), 683-708, 2011.
- World Bank, World Development Report 1994: Infrastructure For Development. Oxford University Press, New York. Overview and Chapter 1, 1-36, 1994.

Specific References

- Each professor will provide specific references for each topic along the course.

Software

STATA

Groups and Languages

Please note that this information is provisional until 30 November 2025. You can check it through this [link](#). To consult the language you will need to enter the CODE of the subject.

Name	Group	Language	Semester	Turn
(TEm) Theory (master)	30	English	second semester	morning-mixed