

Core Economics and Sustainable Development I

Educational subject description sheet

Basic information

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|---|--------------------------------|---|-------------------------------------|
| <p>Field of study Joint Bachelor in Sustainability</p> <p>Speciality Geography & Economics</p> <p>Organizational unit Faculty of Law and Administration</p> <p>Study level first cycle (joint degree programme)</p> <p>Study form full-time degree programme</p> <p>Education profile General academic</p> <p>Mandatory obligatory</p> | | <p>Education cycle 2025/26</p> <p>Subject code UJ.WPAJBSGECES.840.16517.25</p> <p>Lecture languages english</p> <p>Subject related to scientific research Yes</p> <p>Disciplines Economics and finance</p> <p>ISCED classification 0311 Economics</p> <p>USOS code</p> | |
| Subject coordinator | Piotr Szwedo | | |
| Lecturer | Omar Joya, Tom Van Puyenbroeck | | |
| Period Semester 3 | Examination exam | Activities and hours Discussion class: 45 | Number of ECTS points 5.0 |

Goals

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| C1 | First steps in the track: getting acquainted with key disciplinary notions and concepts in order to apply them to sustainability studies. First approach of the links between nature and economy |
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Subject's learning outcomes

| Code | Outcomes in terms of | Effects | Examination methods |
|---|--|------------|---------------------|
| Knowledge - Student knows and understands: | | | |
| W1 | the concept of sustainability and recognize the differences in relevant definitions, models and approaches. | JBS_K1_W01 | written exam |
| W2 | theory and methodology of disciplines included in the selected specialisation track to sustainability-related problems, taking into consideration practical limitations such as protection of intellectual property. | JBS_K1_W07 | written exam |
| Skills - Student can: | | | |
| U1 | demonstrate considerable entrepreneurial initiative, autonomy, and readiness to act in complex and changing environments, especially in the context of supporting, undertaking, and co-organising activities beneficial for a sustainable society. | JBS_K1_U04 | written exam |
| U2 | apply adequate methods and tools, including selected IT tools, to solve problems related to data collection, analysis, and management in the context of sustainability. | JBS_K1_U03 | written exam |
| Social competences - Student is ready for: | | | |
| K1 | to consider different visions of the future and develop own evidence-based opinions in reference to the balance of values linked to economic development, social welfare, and environmental protection. | JBS_K1_K03 | written exam |

Calculation of ECTS points

| Activity form | Activity hours* |
|--------------------------|---------------------|
| Discussion class | 45 |
| problem analysis | 45 |
| preparation for the exam | 30 |
| preparation for classes | 15 |
| Student workload | Hours 135 |
| | ECTS 5.0 |

* hour means 45 minutes

Study content

| No. | Course content | Subject's learning outcomes |
|-----|---|-----------------------------|
| 1. | Section 1: Macroeconomics I. <ul style="list-style-type: none"> • Introduction to natural resource and environmental economics • Welfare economics and the environment • Pollution control: targets and instruments • Valuing the environment • International environmental problems | W1, W2, U1, K1 |
| 2. | Section 2: Environmental economics I. 1. Introductions 1.1. A Historical Perspective on Living Standards <ul style="list-style-type: none"> • The hockey-stick diagram of income growth • Technological revolution and its impact on productivity 1.2. The Economy and the Environment <ul style="list-style-type: none"> • How does the economy relate to the physical environment (biosphere and natural resources)? • Mutual effect between human economic activities and the environment (climate change, deforestation, etc.) • Circular flow of the economy incorporating the biosphere & natural resources 1.3. What is Economics? <ul style="list-style-type: none"> • A more intuitive definition of economics and how it may relate to environment and sustainability. 2. National Income Accounts, and the Environmental Accounting 2.1. Gross Domestic Product 2.2. Environmental Accounting: Green GDP? | W1, W2, U1, U2, K1 |
| 3. | 3. Measuring National Income 3.1 Gross National Income, and Savings 3.2 Sustainable National Net Income (SNNI) 3.3 Real GDP, Price Indices, and Inflation | W1, W2, U1, U2, K1 |

| No. | Course content | Subject's learning outcomes |
|-----|--|-----------------------------|
| 4. | 4. Productivity, Output, and the Economy 4.1 The Production Function 4.2 Demand of Labor 4.4 Unemployment 5. Money, Banks and the Credit Market 5.1 What is money? 5.2 Demand for money 5.3 Money growth and Inflation 5.4 Borrowing and Consumption Smoothing 5.5 Banks money and the Central Bank 5.6 Credit market constraints | W1, W2, U1, K1 |
| 5. | 6. The IS-LM/ AD-AS Model 6.1 Equilibrium in the Goods Market 6.2 Asset Market Equilibrium 6.3 General Equilibrium: IS-LM 6.4 Aggregate Demand & Supply | W1, W2, U1, U2, K1 |
| 6. | Section 3: Microeconomics I. <ul style="list-style-type: none"> • Market equilibrium for dummies • What's underneath? A: technology, cost functions, economies of scale and scope • What's underneath? B: the profit maximizing firm • What's underneath? C: essentials of consumer behavior • Playing with building blocks: price discrimination, intertemporal consumption and other variations on the theme • Homo economicus • Sustainability and production economics • Sustainability and consumer theory | W1, W2, U1, K1 |

Course advanced

Teaching methods :

text analysis, brainstorming, conversation lecture, practicals

| Activities | Examination methods | Credit conditions |
|-------------------|----------------------------|---|
| Discussion class | written exam | Active participation (non-graded), written exam based on open questions (graded). |

Entry requirements

None

Literature

Obligatory

1. Core Econ Team (2024), The Economy 1.0, url : <https://www.core-econ.org/project/core-the-economy/>
2. Core Econ Team (2024), Economy, Society, and Public Policy, url : <https://www.core-econ.org/project/core-espp/>

Effects

| Code | Content |
|------------|---|
| JBS_K1_K03 | The graduate can consider different visions of the future and develop own evidence-based opinions in reference to the balance of values linked to economic development, social welfare, and environmental protection. |
| JBS_K1_U03 | The graduate can apply adequate methods and tools, including selected IT tools, to solve problems related to data collection, analysis, and management in the context of sustainability. |
| JBS_K1_U04 | The graduate can plan and effectuate simple sustainability-related projects under supervision and in the context of personal lifelong learning, both individually and in a team, using appropriate transversal skills and taking shared responsibility for the outcome. |
| JBS_K1_W01 | The graduate can describe the concept of sustainability and recognize the differences in relevant definitions, models and approaches. |
| JBS_K1_W07 | The graduate can apply the theory and methodology of disciplines included in the selected specialisation track to sustainability-related problems, taking into consideration practical limitations such as protection of intellectual property. |