

## ECONOMICS OF SUSTAINABILITY

|                          |                                                                                    |
|--------------------------|------------------------------------------------------------------------------------|
| <b>Course code</b>       | <i>GRAE034</i>                                                                     |
| <b>Course title</b>      | <i>Economics of Sustainability</i>                                                 |
| <b>Type of course</b>    | <i>Compulsory</i>                                                                  |
| <b>Level of course</b>   | <i>Graduate</i>                                                                    |
| <b>Year of study</b>     | <i>1<sup>st</sup></i>                                                              |
| <b>Number of credits</b> | <i>6 ECTS (36 contact hours + 2 consultation hours, 124 individual work hours)</i> |
| <b>Lecturer</b>          | <i>Dr. Saite Lu</i>                                                                |
| <b>Prerequisites</b>     | <i>none</i>                                                                        |
| <b>Teaching language</b> | <i>English</i>                                                                     |

### THE AIM OF THE COURSE

This course will offer an introduction to the field of sustainable development. The course will analyse the key topics of the sustainable development process across countries and cover the major theories and policy debates on the causes of (under) development. This will include discussion on important concepts in sustainable development such as the environment and climate change, human capital (education and healthcare), social capital as well as the role of finance in the development process. We will study the analytical frameworks behind the theories of development and review the empirical evidence that supports or rejects such theories. The course will also cover areas such as health and education, focusing on their relations with development and examining some of the policies attempted in these areas and the reasons for their success/failure.

### MAPPING OF COURSE LEVEL LEARNING OUTCOMES (OBJECTIVES) WITH DEGREE LEVEL LEARNING OBJECTIVES (See Annex), ASSESSMENT AND TEACHING METHODS

| Course level learning outcomes (objectives)                                                                                                              | Degree level learning objectives (Number of LO) | Assessment methods               | Teaching methods  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|----------------------------------|-------------------|
| CLO1. Acquire a solid knowledge of the core tools to understand contemporary issues in sustainable development                                           | LO3.1, LO4.1, LO5.1                             | Project presentation, Final exam | Lectures/Seminars |
| CLO2. Understand the current debates on sustainable development policies/programs.                                                                       | LO3.1, LO4.1, LO5.1                             | Project presentation, Final exam | Lectures/Seminars |
| CLO3. Familiar with different empirical methods that can be used to test a theory and to provide compelling evidence on what works, what doesn't and why | LO3.1, LO4.1, LO5.1                             | Project presentation, Final exam | Lectures/Seminars |

### ACADEMIC HONESTY AND INTEGRITY

The ISM University of Management and Economics Code of Ethics, including cheating and plagiarism are fully applicable and will be strictly enforced in the course. Academic dishonesty, and cheating can and will lead to a report to the ISM Committee of Ethics. With regard to remote learning, ISM remind students that they are expected to adhere and maintain the same academic honesty and integrity that they would in a classroom setting.

### AI USE POLICY

1. Learning Aid: Generative AI tools (e.g., ChatGPT) are permitted as study aids for brainstorming, research assistance, and language polishing during the semester.
2. Attribution & Responsibility: Any AI assistance in data gathering or presentation structure must be explicitly cited, including the exact prompt and model used. Students are fully responsible for the accuracy and analytical rigor of submitted

work. Copying AI text without attribution constitutes plagiarism.

3. Final Exam Rules: No electronic devices or AI tools are permitted during the final exam. The exam is open-book, but all work must be completed without the assistance of AI tools.

### Course Content

| DATES      | TOPIC                                                                                                                                                     | IN-CLASS HOURS | SUGGESTED READINGS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2026 09 29 | <b>1. Introduction to sustainable development.</b><br>Overview of sustainable development concepts<br>Overview of measurements of the development process | 4              | Agarwala, M., Cinamon Nair, Y., Cordonier Segger, M.C., Coyle, D., Felici, M., Goodair, B., Leam, R., Lu, S., Manley, A., Wdowin, J., Zenghelis, D. 2020. Building Forward: Investing in a Resilient Recovery. Bennett Institute for Public Policy, University of Cambridge.<br><br>Caselli, Francesco. "Accounting for cross-country income differences." <i>Handbook of economic growth</i> 1 (2005): 679-741.<br><br>Sachs, Jeffrey D. <i>The Age of Sustainable Development</i> . Columbia University Press, 2015.                                    |
| 2026 10 01 | <b>2. Demography</b><br>Economic models of demographic behaviour, social interactions and fertility transitions                                           | 4              | J. Bongaarts and S. C. Watkins, 'Social interactions and contemporary fertility transitions', <i>Population and Development Review</i> 22(4), 639-682 (1996).<br><br>G.S. Becker & G.H. Lewis, 'On the interaction between the quantity and quality of children' <i>Journal of Political Economy</i> 81:2 (1973), 279-88.<br><br>P. Dasgupta, 'Population and resources: An exploration of reproductive and environmental externalities' <i>Population and Development Review</i> , 26(4), 643-690 (2000).                                                |
| 2026 10 02 | <b>3. Economics of the environment</b><br>Climate change, cost-benefit analysis, environmental policies.                                                  | 4              | <i>The Economy</i> . Chapter 20.<br><br>Acemoglu, Daron, Simon Johnson, and James A. Robinson. "Reversal of Fortune: Geography and Institutions in the Making of the Modern World Income Distribution." <i>Quarterly Journal of Economics</i> 117 (4) 1231-1294.<br><br>Dell, Melissa, Benjamin F. Jones, and Benjamin A. Olken, "Temperature Shocks and Economic Growth: Evidence from the Last Half Century," <i>American Economic Journal: Macroeconomics</i> 2012, 4 (3): 66–95.                                                                      |
| 2026 10 06 | <b>4. Formal and informal institutions</b><br>Path-dependency of formal institutions, social capital and social institutions                              | 4              | Tabellini, Guido (2010) "Culture and Institutions: Economic Developments in the Regions of Europe", <i>Journal of the European Economic Association</i> , 677–716.<br><br>Acemoglu, Daron, Simon Johnson, and James A. Robinson (Dec. 2001) "The Colonial Origins of Comparative Development: An Empirical Investigation," <i>American Economic Review</i> , 1369-1401<br><br>Pappaioanou, Elias and Stelios Michalopoulos. "National Institutions and Subnational Development in Africa," <i>Quarterly Journal of Economics</i> , 2014, 129 (1): 151-213 |
| 2026 11 10 | <b>5. Human capital</b><br>demand and supply of healthcare, demand and supply of education                                                                | 4              | <i>Poor Economics</i> , Chapter 2, "A Billion Hungry People?"<br><br><i>Poor Economics</i> , Chapter 3, "Low-Hanging Fruit for Better (Global) Health?"<br><br><i>Poor Economics</i> , Chapter 4, "Top of the Class"                                                                                                                                                                                                                                                                                                                                      |

|            |                                                                                                                              |                        |                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|------------|------------------------------------------------------------------------------------------------------------------------------|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2026 11 11 | <b>6. The financial system</b><br>Financial stability, green financing, stock-flow consistent modelling                      | 4                      | Dafermos, Yannis, Maria Nikolaidi, and Giorgos Galanis. "Climate change, financial stability and monetary policy." <i>Ecological Economics</i> 152 (2018): 219-234.<br><br>Godley, Wynne, and Marc Lavoie. <i>Monetary economics: an integrated approach to credit, money, income, production and wealth</i> . Springer, 2016.                                                                                                           |
| 2026 11 12 | <b>7. Credit market in low-income countries</b><br>Credit market failure, microfinance                                       | 4                      | Karlan, Dean and Jonathan Zinman (2009) "Observing Unobservables: Identifying Information Asymmetries with a Consumer Credit Field Experiment", <i>Econometrica</i> , 77(6), pp. 1993-2008.<br><br>Banerjee, Abhijit, Esther Duflo, Rachel Glennerster, and Cynthia Kinnan (2010) "The Miracle of Microfinance? Evidence from a Randomized Experiment," <i>American Economic Journal: Applied Economics</i> , Vol 7, No. 1, January 2015 |
| 2026 11 16 | <b>8. Risk and insurance market in low-income countries</b><br>The efficiency consequences of uninsured risk, microinsurance | 4                      | Rosenzweig, Mark R. and Hans Binswanger, "Wealth, Weather Risk and the Composition and Profitability of Agricultural Investments," <i>Economic Journal</i> , January 1993.<br><br>Karlan, Dean, Robert Osei, and Isaac Osei-Akoto. "Agricultural Decisions after Relaxing Credit and Risk Constraints," <i>The Quarterly Journal of Economics</i> (2014), 597-652                                                                        |
| 2026 11 17 | <b>9. Saving behaviour in low-income countries</b><br>The market for savings, behavioural economics                          | 4                      | Ashraf, Nava, Dean Karlan and Wesley Yin. 2006. "Tying Odysseus to the Mast: Evidence from a Commitment Savings Product in the Philippines", <i>Quarterly Journal of Economics</i> 121(2): 635-672<br><br>Thaler, R.H., and C.R. Sunstein. 2012. <i>Nudge: The Final Edition</i> . Penguin Books Limited.                                                                                                                                |
|            |                                                                                                                              | <b>Total: 36 hours</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|            | CONSULTATIONS                                                                                                                | 2                      |                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|            | FINAL EXAM                                                                                                                   | 2                      |                                                                                                                                                                                                                                                                                                                                                                                                                                          |

#### FINAL GRADE COMPOSITION

| Type of assignment               | %          |
|----------------------------------|------------|
| <i>Group Components 35%</i>      |            |
| Group presentation               | 35%        |
| <i>Individual Components 65%</i> |            |
| Attendance                       | 15%        |
| Final exam                       | 50%        |
| <b>Total:</b>                    | <b>100</b> |

#### DESCRIPTION AND GRADING CRITERIA OF EACH ASSIGNMENT

(Provide short descriptions and grading criteria of each assignment)

1. The final exam is open book. Students can refer to their notes and textbooks during the exam.
2. The group project will cover the topics from the first five lectures.

3. The final exam will cover all topics discussed during the course. The retake exam will cover all topics without such preferences.

### RETAKE POLICY

The retake exam for the students who did not meet the passing score is normally scheduled 1-2 weeks after the announcement of the final grades. It covers 100% of the total grade.

### REQUIRED READINGS

All recommended readings are provided in the course outline. The following books should be used as an encyclopaedia rather than core reading.

- Sachs, Jeffrey D. *The Age of Sustainable Development*. Columbia University Press, 2015.
- The CORE team, *The Economy*. Available at: <https://www.core-econ.org>. [14 December 2021].
- Banerjee, Abhijit, and Esther Duflo. *Poor Economics: A Radical Rethinking of the Way to Fight Global Poverty*. Public Affairs, 2011.
- Banerjee, Abhijit, Roland Benabou and Dilip Mookherjee, eds. *Understanding Poverty*. Oxford, UK: Oxford University Press, 2006

### ADDITIONAL READINGS

Attendance is counted for 15% of the final grade. If for some reasons you need to miss a class, please notify the lecturer *beforehand*.

Please note, due to the travel/health regulations in place, some meetings may be held via MS Teams.

Students are expected to be acquainted with the undergraduate level of economics. Therefore, if a student feels shortage of knowledge and wants to improve his/her understanding in economics, the lecturer is available for further consultation by appointment.

**ANNEX**

**DEGREE LEVEL LEARNING OBJECTIVES**

**Competency goals and learning objectives for the Master of Social Science**

*Programmes:*

*Financial Economics*

| <b>Competency Goal</b>                                     | <b>Learning Objective</b>                                                                                                                                                                                                                                                                               |
|------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Students will demonstrate advanced disciplinary knowledge. | LO1.1. Students will demonstrate advanced discipline knowledge through the independent development of a Master's thesis, showing a deep understanding and appropriate application of theories, concepts, and methods relevant to their field of study.                                                  |
| Students will be digitally competent.                      | LO 2.1. Students will demonstrate digital agility competencies by selecting and applying appropriate tools, platforms or technologies, integrating digital insights into business decision-making, and adapting digital approaches in response to evolving project requirements and contextual changes. |
| Students will be critical thinkers                         | LO3.1. Students will be able to identify underlying assumptions, limitations of previous research; evaluate managerial solution alternatives.                                                                                                                                                           |
| Students will be independent learners                      | LO4.1. Students will become <b>independent learners</b> and develop their own comprehension of scientific theories, models, and concepts                                                                                                                                                                |
| Students will be socially responsible leaders              | LO5.1. Students will be able to evaluate past and current practices in their discipline from an <b>ethical perspective</b> .                                                                                                                                                                            |
| Students will be effective communicators                   | LO6.1. Students will develop and deliver a <b>coherent oral presentation</b>                                                                                                                                                                                                                            |
|                                                            | LO6.2. Students will develop and deliver a <b>coherent written research paper</b>                                                                                                                                                                                                                       |