



Course and Examination Fact Sheet: Autumn Semester 2018

7,384: Ecological Economy

ECTS credits: 4

Overview examination/s

(binding regulations see below)

Decentral - examination paper written at home (individual) (100%)

Attached courses

Timetable -- Language -- Lecturer

[7,384,1.00 Ecological Economy](#) -- Englisch -- [Shmelev Stanislav](#)

Course information

Course prerequisites

It is desirable but not compulsory to have a basic understanding of economics and current environmental issues: climatic change, biodiversity loss, waste crisis. It is also desirable but not compulsory to have an understanding of a variety of mathematical approaches, such as matrix algebra, linear programming, econometrics, network analysis, multi-criteria decision aid.

Course content

This course explores the development of ecological economics as an interdisciplinary field focused on the issues of sustainable development that emerged in response to the difficulties in solving the global and local environmental problems. It draws on the expertise of a range of disciplines: economics, ecology, physics, environmental sciences, sociology, psychology, complex systems theory, etc. to address the current challenges the world is facing, including tackling climate change, preventing the loss of biodiversity, and achieving sustainability. Ecological economics has been critical of the dominant approaches to decision making, namely cost-benefit analysis, the use of GDP as a key economic progress measure and the limits of the economic models not taking into account resource and environmental constraints. The course will address three key elements of the socio-ecological transformation required for the society to reach sustainable development and overcome growing energy and resource requirements, rising volumes of emissions and wastes, facilitate the change towards renewable energy sources and conservation of biodiversity. Firstly, it will analyse the concept of industrial ecology, which highlights the importance of intersectoral flows of matter and energy required for the production of the goods and services, analyzed in detailed throughout the whole lifecycle of the given product, service or a whole regional or national system. The method of environmentally extended inputoutput analysis will be introduced to illustrate this approach. Secondly, it will explore the system of tools for decision making based on multicriteria methods, which applied at different levels would shift the patterns of decisions making towards more socially equitable and more environmentally friendly as well as economically sound decisions. Thirdly, the course will criticise existing approaches to measure macro sustainability performance and introduce new conceptual tools for the assessment of Progress.

Course structure

Theoretical Module

1. The Economic System and the Environment
2. Macroeconomy: Market Failures and Externalities vs Industrial Ecology
3. Economic Valuation and Decision Making: Multi-Criteria Decision Aid
4. Economic Models and the Environment: Material and Energy Flows, Environmentally-Extended Input-Output Analysis
5. Sustainable Development: Big Picture Vision and Measuring Progress



Applied module

6. Sustainable Cities : Interdisciplinary Perspective
7. Renewable Energy and Sustainable Waste Management
8. Sustainable Business Practice: Corporate Social Responsibility
9. Ecosystems and Biodiversity: Alternative Multi-Dimensional Valuation Methods
10. Applied Climate Change Analysis

Course literature

Shmelev S.E. (ed) (2017) The Green Economy Reader: Lectures in Ecological Economics and Sustainable Development, Springer <https://www.amazon.co.uk/Green-Economy-Reader-Ecological-Sustainability/dp/3319389173>, 463 pp.

Shmelev S.E. (2012) Ecological Economics: Sustainability in Practice, Springer, <http://www.amazon.co.uk/gp/product/940071971X/>, 248 pp.

Books will be provided. Each student is supposed to get a copy.

Additional course information

Further information could be obtained from Dr Stanislav Shmelev: director@environmenteurope.org

Examination information

Examination sub part/s

1. Examination sub part (1/1)

Examination time and form

Decentral - examination paper written at home (individual) (100%)

Remark

Supervision by Stanislav Shemelev

Examination-aid rule

Term papers

- Term papers must be written without anyone else's help and in accordance with the known quotation standards, and they must contain a declaration of authorship.
- The documentation of sources (quotations, bibliography) has to be done throughout and consistently in accordance with the APA or MLA standards. The indications of the sources of information taken over verbatim or in paraphrase (quotations) must be integrated into the text in accordance with the precepts of the applicable quotation standard, while informative and bibliographical notes must be added as footnotes (recommendations and standards can be found, for example, in METZGER, C. (2017), Lern- und Arbeitsstrategien (12th ed., Cornelsen Schweiz).
- For any work written at the HSG, the indication of the page numbers both according to the MLA and the APA standard is never optional.
- Where there are no page numbers in sources, precise references must be provided in a different way: titles of chapters or sections, section numbers, acts, scenes, verses, etc.
- For papers in law, the legal standard is recommended (by way of example, cf. FORSTMOSER, P., OGORÉK R. et SCHINDLER B. (2018, Juristisches Arbeiten: Eine Anleitung für Studierende (6. Auflage), Zürich: Schulthess, or the recommendations of the Law School).

Supplementary aids

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Examination languages

Question language: English

Answer language: English

Examination content

Examination will be held in the form of a paper that the students will have to prepare under the supervision of a scientific advisor, Dr Stanislav Shmelev on the subject of their choice focused on (but not limited to) sustainable cities, climate change analysis, environmentally-extended input-output analysis, multi-criteria decision aid applications in sustainable development, renewable energy, circular economy and sustainable waste management, CSR and new business models. The intention is to publish these papers in peer-reviewed journals as co-authored publications.

Examination relevant literature

Dr. Stanislav Shmelev will direct the interested students to specific literature.

Please note

We would like to point out to you that this fact sheet has absolute priority over other information such as StudyNet, faculty members' personal databases, information provided in lectures, etc. When will the fact sheets become binding?

- Information about courses and examination time (central/decentral and grading form): from the start of the bidding process on 23 August 2018
- Information about decentral examinations (examination-aid rule, examination content, examination relevant literature): after the 4th semester week on 15 October 2018
- Information about central examinations (examination-aid rule, examination content, examination relevant literature): from the start of the enrolment period for the examinations on 05 November 2018

Please look at the fact sheet once more after these deadlines have expired.