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SHORT INTENSIVE COURSES

- *ON-LINE* -

Students of the TARUS Consortium may follow on-line specialistic courses on topics / methodologies related to the internship programmes organised by TAURUS Universities. An active participation is mandatory for the students selected for the Internship (trainee). The courses are free of charge and open to the registered students up the maximum reported in the programme. A final certificate of participation will be provided by the organising University.

Course title: Sustainable Urban Development

Linked to the Internship programme: “Smart technologies in engineering urban landscapes” and “Decision-support systems for sustainable development of urban green infrastructures”

Edition: 2021

Academic coordinator: Dr. Viacheslav Vasenev

Total class hours: 30h

Period of the course: Spring 2021

ENTRY REQUIREMENTS:

- to be currently enrolled in one the TAURUS partner Universities (<https://www.taurus-erasmus.eu/consortium/consortium/>)
- to have a university level knowledge on ecology, biology, chemistry
- upper level of English

GENERAL OBJECTIVES

This course aims at providing an overview on the concept of sustainability. Sustainable developed is analysed from different angles (economic, environmental and social perspectives) to give a comprehensive understanding of sustainability issues.

COURSE CONTENTS

General introduction:

Module 1: *What is sustainable development? / International agreements and goals of sustainable development*

Lecturer: M. De Martino

He has earned a PhD in Comparative Politics from the Peoples’ Friendship University of Russia (RUDN University), a post-graduate master in European Interdisciplinary Studies from the College of Europe (Natolin campus) and a Master degree in International Studies from the University of



Siena. He is an assistant professor at the Faculty of Economics of the Peoples' Friendship University of Russia. His main research interests focus on European and international studies.

Module 2: *Urbanization: from global to local / Urban ecosystems / Soil, water and air quality in cities / Urban green infrastructure*

Lecturer: V. Vasenev

Viacheslav Vasenev was trained as soil scientist in Lomonosov Moscow State University (2008) and obtained Dr (PhD) degrees in Lomonosov Moscow State University (2011) and in Wageningen University (2015). His research interests have always been focused on urban ecosystems. The main topics include, but are not limited to the following: urban soils' quality and health; IoT technologies and remote sensing to monitor urban green infrastructure; urban farming; soil contamination and remediation; engineering artificial soil constructions; urban climate; social and economic metrics to evaluate ecosystem services provided by urban green infrastructure. Viacheslav Vasenev coordinated 11 research projects as a project leader and was involved in 5 more projects as a principal investigator.

Module 3: *Urban landscape / Urban soundscape / Urban Ecosystem services and nature-based solutions*

Lecturer: M Matasov

M Matasov is a geographer and landscape. His research interests cover a wide range of topics from mapping natural landscapes to acoustic ecology of urban areas. He worked with paleogeographers, geomorphologists, geophysicists and archaeologists at the Avdevo and Zabolotye archaeological sites. He was engaged in mapping the natural reserves in the Meshchera Lowlands, and monitoring changes of natural complexes at the field-station Lesunovo in the Ryazan region. He studied long-term land use changes based on historical maps and satellite images using statistical modeling with environmental history approach. Participated in the formulation of a strategy for the development and functional zoning of museums-reserves and UNESCO sites. Co-author of the Russian regional maps Atlas. He studied soundscapes and even virtual landscapes.

Module 4: *Urban climate: mesoclimatic anomalies and resilience to climate change*

Lecturer: P. Konstantinov

P. Konstantinov is researcher at RUDN laboratory "Smart technologies for sustainable development of urban environment in the conditions of global change" (Moscow). He is Assistant Professor of Department of Meteorology and Climatology, Lomonosov Moscow State University, Geographical faculty (Moscow).

His skills and expertise include: Microclimatology, Biometeorology Medical Geography Urban Planning Urban climatology (modeling of heat exchange in urban canopy) , Theory of Climate, Climate modeling Climatology of Polar regions

EXPECTED LEARNING OUTCOMES



- Know the political and historical background of the sustainable idea.
- Be able to discuss the main problematics which are involved in the sustainable development concept on the national as well as on the global scale.
- Be familiar with potential strategic options for sustainable development;
- Be able to discuss the (dis-)advantages of instruments for sustainable development.
- Understand the sustainable development challenge for companies, their responsibility and their potentials for action.

TEACHING METHOD

#	Topic	Lecturer	Lecture
1	What is sustainable development?	M. De Martino	22/02/2021 10:00 – 13:00
2	International agreements and goals of sustainable development	M. De Martino	01/03/2021 10:00 – 13:00
3	Urbanization: from global to local	V. Vasenev	08/03/2021 10:00 – 13:00
4	Urban landscape	V. Matasov	15/03/2021 10:00 – 13:00
5	Urban ecosystems	V. Vasenev	22/03/2021 10:00 – 13:00
6	Urban climate: mesoclimatic anomalies and resilience to climate change	P. Konstantinov	29/03/2021 10:00 – 13:00
7	Soil, water and air quality in cities	V. Vasenev	05/04/2021 10:00 – 13:00
8	Urban green infrastructure	V. Vasenev	12/04/2021 10:00 – 13:00
9	Urban soundscape	V. Matasov	19/04/2021 10:00 – 13:00
10	Urban Ecosystem services and nature-based solutions	V. Matasov	26/04/2021 10:00 – 13:00

ASSESSMENT (*limited to trainees*)

Presentations of the course project "Projecting ecosystem costs and benefits from the reconstruction of the university campus"

MAXIMUM NUMBER OF PARTICIPANTS: no special restrictions

REGISTRATION



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For the registration send by email your contact info (name, email, home University, course you are enrolled in, short CV) to the following address: de-martino-m@rudn.ru putting as subject “TAURUS SIC 2021”

OTHER NOTES:

A detailed calendar of the Class activities as well as the links for the Lectures and for the Class activities, will be provided by the organiser to the registered students.

SUGGESTED LITERATURE

Sarkar, Runa, and Anup Sinha. Economics of Sustainable Development, Business Expert Press, 2016. ProQuest Ebook Central,

Gerardus Blokdyk. Sustainable Development Goals a Complete Guide - 2020 Edition, Emereo Pty Limited, 2020

John Blewitt, Understanding Sustainable Development, Routledge, 2017

Jeffrey D. Sachs, The Age of Sustainable Development, Columbia University Press, 2015.