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Erasmus+ Project

**New curricula in Precision Agriculture using GIS technologies
and sensing data**

(CUPAGIS)

Online Master Classes

2020 –2021

**TAL
TECH**



EXOLAUNCH

Online Master Classes Program

November 2020 – January 2021 (Central European Time)

Fr. 20.11.2020	Ass. Prof. Sergey Dogadov Technische Universität Berlin, Berlin, Germany
10:00 – 12:00	Big Data and Machine Learning and intelligent data analysis with Python: Python Basics
	<ul style="list-style-type: none"> - Data types and structures, functions, conditions - List and dictionary comprehensions - File reading/writing - Class inheritance

Fr. 04.12.2020	Ass. Prof. Sergey Dogadov Technische Universität Berlin, Berlin, Germany
10:00 – 12:00	Big Data and Machine Learning and intelligent data analysis with Python: Scientific computing and plotting
	<ul style="list-style-type: none"> - NumPy package for scientific computations - Matplotlib package for scientific plotting - Pandas package for data analysis and manipulation - Linear Algebra, PCA, Linear Regression

Fr. 18.12.2020	Ass. Prof. Sergey Dogadov Technische Universität Berlin, Berlin, Germany
10:00 – 12:00	Big Data and Machine Learning and intelligent data analysis with Python: Neural networks
	<ul style="list-style-type: none"> - Pytorch framework with GPU acceleration - Linear and Convolutional layers with batch normalization and dropout - Classification of handwritten digits

Tue. 22.12.2020	MBA Elena Eyngorn Technische Universität Berlin, Berlin, Germany
10:00 – 12:00	Soft Skills for Engineers

Wed. 13.01.2021	Prof. Dr. Dimo Atanasov Agricultural University – Plovdiv, Plovdiv, Bulgaria
10:00- 12:00	Agricultural economics and business
	<ul style="list-style-type: none"> - Specifics of agriculture - Farm system types - Production methods – conventional, organic, biodynamic - Production functions in agriculture - Relationships between resources, technology and products

Thu. 14.01.2021	Prof. František Kumhála Czech university of life sciences Prague, Prague, the Czech Republic
10:00 – 12:00	Yield Sensors for Precision Agriculture
	<ul style="list-style-type: none"> - Basic overview - Yield sensors for grain - basic principles - Yield sensors for grain - calibration, errors

Fr. 15.01.2021	Prof. Krum Hristov Agricultural University – Plovdiv, Plovdiv, Bulgaria
10:00 – 12:00	Global Navigation Satellite Systems (NAVSTAR, GLONASS, GALILEO, etc.)
	<ul style="list-style-type: none"> - GNSS Overview and Architecture. Coordinate and Time Systems - Basic GNSS Concepts. Satellite Systems - GPS (Global Positioning System, United States)

Tue. 26.01.2021	Dr. Jan Chyba Czech university of life sciences Prague, Prague, the Czech Republic
10:00 – 12:00	Introduction to the course, Soil importance & basics
	Definition, division, importance & critical aspects