Erasmus+ Project

New curricula in Precision Agriculture using GIS technologies and sensing data

(CUPAGIS)

Training on 19-30 August:
Geographic Information System

Precision Agriculture

Remote sensing

Co-funded by the
Erasmus+ Programme
of the European Union

Course Overview

Get exclusive access to the world's best training in precision agriculture using new technologies in physical sciences, such as Geographic Information System/GIS, big data and remote sensing. This intensive course is unique and numbers are limited to give you a personal and interactive education experience. The course also provides the participants with exposure to a unique interdisciplinary, international and intercultural learning environment.

About Us:

The training is offered by the Chair of Space Technology, one of the six chairs of the Department of Aeronautics and Astronautics at Technische Universität Berlin, established in 1963, it is the first Aerospace Department in Germany. Since then, it has successfully conducted research and educates systems engineers for the aerospace industry. The focus is set on the design, implementation and operation of small satellite missions. State-of-the-art research on picosatellites and nanosatellites (BEESAT series, Technosat, TUBIN, S-NET) shall continue the successful tradition of the ILR (TUBSAT series).

Training Course Program

Mo. 19.08.2019	**Venue: Berlin Institute of Technology**
9:00 – 10:00	**Registration of the participants/Opening keynotes. Presentation of the participants. Presentation of the study program. Administration issues** **Welcome by the Head of International Relation Office, Mrs. E. Skurski**
10:00 – 13:00	**Prof. Kada** • GIS Geovisualization • GIS Internet, Mobile, and Distributed GIS • GIS Advanced Methods for Geospatial Analysis
13:00 – 14:00	Lunch
14:00 – 17:00	**Prof. Kada** • GIS. Data processing and adjustment • Processing of remote sensing data obtained from satellites • Spatial Databases and Infrastructures • GIS Geographical Information Systems

Tue. 20.08.2019	**Venue: Berlin Institute of Technology**
9:30 – 10:30	**Prof. Dr. Alipbeki Onggarbek** Development of the academic content and methodology. Presentation of international joint publication on “Precision agriculture”
10:00- 13:00	**MBA, Elena Eyngorn** • Soft Skills for Engineers • Start-up initiatives for future farmers • Management Marketing and Decision Making in Precision Agriculture • Start-up initiatives for future farmers • Management Marketing and Decision Making in Precision Agriculture
13:00 – 14:00	Lunch
14:00 – 17:00	**Sergej Dogadov** • Big Data for Precision Agriculture
17:00	Guided tour through Berlin and Reichstag visit

Wed. 21.08.2019	**Venue: Berlin Institute of Technology**
10:00 – 14:00	**Dr. Jitka Kumhálová / Prof. Kumhála František** • Yield sensors for Precision Agriculture • Soil physical properties and its measurement
14:00 – 15:00	Lunch
15:00 – 17:00	**Dr. Jan Chyba** • Application of Precision Agriculture for crops growing

Thu. 22.08.2019	**Venue: Berlin Institute of Technology**
10:00 – 14:00	**Dr. Jitka Kumhálová / Prof. Kumhála František** • Yield sensors for Precision Agriculture • Soil physical properties and its measurement
14:00 – 15:00	Lunch
15:00 – 17:00	**Dr. Jan Chyba** • Application of Precision Agriculture for crops growing

Fr. 23.08.2019	**Venue: Berlin Institute of Technology**
10:00- 12:30	**Prof. Dr. Dr. h.c. Harald Schuh, Director of "Geodesy" at Helmholtz Centre Potsdam, GFZ German Research Centre for Geosciences, President of the International Association of Geodesy (IAG) ,Professor for "Satellite Geodesy" at Technische Universität Berlin (TU Berlin)** • Space Geodetic Techniques • Space geodesy (VLBI, GNSS, etc.)
12:30 – 13:30	Lunch
13:30 – 17:30	**Prof. Dr. Dr. h.c. Harald Schuh** • Space Geodetic Techniques

Mo. 26.08.2019	**Venue: Berlin Institute of Technology**
10:00 – 13:00	**Prof. Dr. – Eng. Klaus Briess** • Remote Sensing and Space Sensors Systems

13:00 – 14:00	Lunch
14:00 – 17:00	**Prof. Dr. – Eng. Klaus Briess** • Remote Sensing and Space Sensors Systems

Tue. 27.08.2019	**Venue: Berlin Institute of Technology**
10:00 – 13:00	**Prof. Dimo Atanasov** • Using of SENTINEL1-2-3 imagery for agricultural field monitoring • Precision agriculture – characteristics, technologies, economic efficiency, optimal use of resources
13:00 – 14:00	Lunch
14:00 – 17:00	**Prof. Krum Hristov** • Global Navigation Satellite Systems (NAVSTAR, GLONASS, GALILEO)

Wed. 28.08.2019	**Venue: Berlin Institute of Technology**
10:00 – 13:00	**Prof. Julieta Arnaudova** • Using GIS and SENTINEL1-2-3 imagery for agricultural field monitoring
13:00 – 14:00	Lunch
14:00 – 17:00	**Prof. Dimo Atanasov** • Precision agriculture – characteristics, technologies, economic efficiency, optimal use of resources

Thu. 29.08.2019	**Venue: Berlin Institute of Technology**
10:00 – 13:00	**Dr. Abror Gafurov** MODSNOW-Tool – a remote sensing based instrument to monitor water resources • Introduction into MODSNOW-Tool • Manual processing scheme of satellite snow cover data • Operational monitoring of snow and water using the satellite data
13:00 – 14:00	Lunch
14:00 – 17:00	**Dr. Abror Gafurov** MODSNOW-Tool – a remote sensing based instrument to monitor water

	resources • Time series analysis of satellite snow cover data • Statistical modelling of water availability using the satellite snow cover data • Quality assessment of MODSNOW-processing and modelled results
18:00	**Final Dinner**

Fr. 30.08.2019	**Venue: Berlin Institute of Technology**
10:00 – 13:00	**Prof. Tarmo Soomere** • Scientific Work and Paper
13:00 – 14:00	Lunch
14:00 – 17:00	**Coordination meeting** Points for Discussion: • Report 6 M implementation overview and recommendations • Dissemination/Full media coverage of the project activities • Documentation on Service offices • Retrain academic teachers 2020 • International BA/ MSc Summer Schools 2020 • International Text book for PA • Purchase the equipment; install the equipment; rooms for new classrooms and laboratories • Preparation of the documents for staff costs (joint declaration + timesheets) for the first year of the project

TU Berlin campus map