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Erasmus+ Project

**New and Innovative Courses for Precision Agriculture
(NICOPA)**

Erasmus+ 597985-EPP-1-2018-1-KZ-EPPKA2-CBHE-JP

Course delivery at the PASO

March-April 2022

Agenda

March 2022 (Tashkent Time)

Wed. 02.03.2022	Dr. Uzbekhon Mukhtorov
	Geoinformation systems and technologies / Geoaxborot tizimi va texnologiyalari
8:30 – 9:50	Introduction to the GIS, its concepts and tasks / GAT faniga kirish, fanning tushunchalari va vazifalari
10:00 – 11:20	The main components of GIS / GAT fanining asosiy komponentlari
11:20 – 12:50	Data model / Ma'lumotlar modeli

Fri. 04.03.2022	Dr. Sherzod Rakhmonov
	Remote Sensing / Masofadan zondlash
8:30 – 9:50	Introduction. The purpose and tasks; the concept, main directions and tasks of remote sensing of the earth / Kirish. Fanning maqsadi va vazifalari. Yerni masofadan zondlash tushunchasi, asosiy yo'nalishlari va vazifalari
10:00 – 11:20	Sensors and platforms / Sensorlar va platformalar
11:20 – 12:50	Active and passive remote sensing. Electromagnetic energy / Aktiv va passiv masofadan zondlash. Elektromagnit energiya

Mon. 07.03.2022	Dr. S.Abdurakhmonov
	Aerospace Image Internet Resource Information/ Aerokosmik suratlarning internet-resurs ma'lumotlari
8:30 – 9:50	Fundamentals of Aero and Space Images / Aero va kosmik fotosuratlarining asoslari
10:00 – 11:20	Internet resource database of aerial images / Aerokosmik suratlarning internet-resurs ma'lumotlari bazasi
11:20 – 12:50	Global navigatsion sun'iy yo'ldosh tizimlari yordamida ma'lumotlarni olish / Data acquisition using global navigation satellite systems

Wed. 09.03.2022	Dr. Uzbekhon Mukhtorov
	Geoinformation systems and technologies / Geoaxborot tizimi va texnologiyalari
8:30 – 9:50	Datums and geolinking / Datumlar va geobog'lash
10:00 – 11:20	Data collection and input for geographic information systems / Geografik axborot tizimlari uchun ma'lumotlarni to'plash va uni kiritish
11:20 – 12:50	Visualization of geographic data / Geografik ma'lumotlarning vizualizatsiyasi

Fri. 11.03.2022	Dr. Sherzod Rakhmonov
	Remote Sensing / Masofadan zondlash
8:30 – 9:50	Application of remote sensing of the earth / Yerni masofadan zondlashning qo'llanilishi
10:00 – 11:20	Visual interpretation of the image / Tasvirni vizual interpretatsiya qilish
11:20 – 12:50	Digital image processing / Tasvirlarni raqamli qayta ishlash

Mon. 14.03.2022	Dr. S.Abdurakhmonov
	Aerospace Image Internet Resource Information/ Aerokosmik suratlarning internet-resurs ma'lumotlari
8:30 – 9:50	Processing of aerial images and obtaining information based on remote sensing / Aerokosmik suratlarni qayta ishlash va masofadan zondlash asosida ma'lumotlar olish
10:00 – 11:20	Decoding of aerial photographs / Aerokosmik suratlarni deshifrovkalash
11:20 – 12:50	Data integration / Ma'lumotlar integratsiya qilish

Wed. 16.03.2022	Dr. Uzbekhon Mukhtorov
	Geoinformation systems and technologies / Geoaxborot tizimi va texnologiyalari
8:30 – 9:50	Raster data processing. Measurement operations / Rastr ma'lumotlarni qayta ishlash. O'lchash operatsiyalari.
10:00 – 11:20	Vektor ma'lumotlarni qayta ishlash. Raqamli relief modellari / Vector data processing. Digital terrain models.
11:20 – 12:50	Data collection and input for geographic information systems / Geografik axborot tizimlari uchun ma'lumotlarni to'plash va ularni kiritish.

Fri. 18.03.2022	Dr. Sherzod Rakhmonov
	Remote Sensing / Masofadan zondlash
8:30 – 9:50	Image evaluation and analysis techniques. Image classification/ Tasvirni baholash va tahlil qilish texnikalari. Tasvirni sinflash.
10:00 – 11:20	Microwave and lidar remote sensing of the earth / Mikroto'lqinli va lidar yerni masofadan zondlash.
11:20 – 12:50	Kosmik suratlarni proyeksiyaga haqida tushuncha / Concept of projection of satellite images.

Mon. 21.03.2022	Dr. S.Abdurakhmonov
	Aerospace Image Internet Resource Information/ Aerokosmik suratlarning internet-resurs ma'lumotlari
8:30 – 9:50	Catalogs and data source / Kataloglar va ma'lumotlar manbai
10:00 – 11:20	Data quality and metadata / Ma'lumotlar sifati va metama'lumotlar
11:20 – 12:50	Image-to-image decoding on the eCognition Developer / eCognition Developer daturida tasvirlarni suratlarni deshifrlash

Wed. 23.03.2022	Dr. Uzbekhon Mukhtorov
	Geoinformation systems and technologies / Geoaxborot tizimi va texnologiyalari
8:30 – 9:50	Acquisition of spatial raster data for the geoinformation system / Geoaxborot tizimi uchun fazoviy rastr ma'lumot olish.
10:00 – 11:20	Obtaining vector information for the geoinformation system / Geoaxborot tizimi uchun vektor ma'lumot olish.
11:20 – 12:50	Obtaining data for GIS using modern geodetic instruments and technologies / Zamonaviy geodezik asboblardan va texnologiyalardan yordamida GAT uchun ma'lumotlar olish.

Fri. 25.03.2022	Dr. Sherzod Rakhmonov
	Remote Sensing / Masofadan zondlash
8:30 – 9:50	An understanding of stereocomparators / Stereokomporatorlar haqida tushuncha.
10:00 – 11:20	Use of earth remote sensing materials in various sectors of the national economy/ Yerni masofadan zondlash materiallaridan xalq xo'jaligining turli sohalarida foydalanish.
11:20 – 12:50	Yerni masofadan zondlash materiallarini suv xo'jaligi sohalarida foydalanish / Use of remote sensing materials in water management.

Mon. 28.03.2022	Dr. Z.Mamatkulov
	Three-dimensional modeling in GIS / Geoaxborot tizimlarida uch o'lchamli modellashtirish
8:30 – 9:50	Practical application of architectural graphics / Arxitekturaviy grafikaning amaliy qo'llanilishi.
10:00 – 11:20	Architectural graphics is a professional communication tool / Arxitekturaviy grafika — professional kommunikatsiya vositasi.
11:20 – 12:50	Getting to know the interface of the program / Dasturning interfeysi bilan tanishish.

Wed. 30.03.2022	Dr. Uzbekhon Mukhtorov
	Geoinformation systems and technologies / Geoaxborot tizimi va texnologiyalari
8:30 – 9:50	Remotely controlled devices and drones / Masofadan boshqariluvchi qo‘rilmalar va dronlar.
10:00 – 11:20	Remote sensing of earth / Yerni masofadan zondlash.
11:20 – 12:50	Modern development of geoinformation systems / Geoaxborot tizimlarining zamonaviy rivojlanishi.

Fri. 01.04.2022	Dr. Sherzod Rakhmonov
	Remote Sensing / Masofadan zondlash
8:30 – 9:50	Yerni masofadan zondlash materiallarini qishloq xo‘jaligi sohalarida foydalanish/ Use of remote sensing materials in agriculture.
10:00 – 11:20	Application of remote sensing materials in forestry / Yerni masofadan zondanlash materiallarini o‘rmon xo‘jaligi sohalarida qo‘llash.
11:20 – 12:50	Use of Remote Sensing of earth materials in land Resources Monitoring / Yerni masofadan zondlash materiallarini yer resurslarini monitoring qilishda foydalanish.

Mon. 04.04.2022	Dr. Z.Mamatkulov
	Three-dimensional modeling in GIS / Geoaxborot tizimlarida uch o‘lchamli modellashtirish
8:30 – 9:50	Logical mechanism of the interface / Interfeysning mantiqiy mexanizmi.
10:00 – 11:20	Basic tools / Asosiy asboblari.
11:20 – 12:50	Basics of modeling in SKETCHUP / SKETCHUPda modellashtirish asoslari.

Wed. 06.04.2022	Dr. Rustam Oymatov
	Web-GIS/ Web GAT
8:30 – 9:50	Practical application of architectural graphics / Arxitekturaviy grafikaning amaliy qo'llanilishi.
10:00 – 11:20	Getting to know the interface of the program / Dasturning interfeysi bilan tanishish.
11:20 – 12:50	Logical mechanism of the interface / Interfeysning mantiqiy mexanizmi.

Fri. 08.04.2022	Dr. Ilkhomjon Aslanov
	Precision Agriculture
8:30 – 9:50	History of Precision Agriculture.
10:00 – 11:20	Sensing Technology for Precision Crop Farming.
11:20 – 12:50	Data Processing and Utilization in Precision Agriculture

Mon. 11.04.2022	Dr. Z.Mamatkulov
	Three-dimensional modeling in GIS / Geoaxborot tizimlarida uch o'lchamli modellashtirish
8:30 – 9:50	Organization of models / Modellarni tashkil etish.
10:00 – 11:20	Building modeling / Binoni modellashtirish.
11:20 – 12:50	Overview of SANDBOX tools / SANDBOX asboblarining obzori.

Wed. 13.04.2022	Dr. Rustam Oymatov
	Web-GIS/ Web GAT
8:30 – 9:50	Basic tools / Asosiy asboblari.
10:00 – 11:20	Basics of modeling in SKETCHUP / SKETCHUPda modellashtirish asoslari.
11:20 – 12:50	Organization of models / Modellarni tashkil etish.

Fri. 15.04.2022	Dr. Ilkhomjon Aslanov
	Precision Agriculture
8:30 – 9:50	Control of Precision Agriculture Production.
10:00 – 11:20	Precision Agriculture in Large-Scale Mechanized Farming.
11:20 – 12:50	A Systems Approach to Community-Based Precision Agriculture

Mon. 18.04.2022	Dr. A.Inamov
	Modern geodetic equipment/ Zamonaviy geodezik asboblari
8:30 – 9:50	Theoretical foundations of total stations/ Elektron taxeometrlarning nazariy asoslari.
10:00 – 11:20	Conducting field research on total stations/ Elektron taxeometrida dala tadqiqot ishlarini olib borish.
11:20 – 12:50	Evolution of levels / Nivelirlar evolyutsiyasi.

Wed. 20.04.2022	Dr. Rustam Oymatov
	Web-GIS/ Web GAT
8:30 – 9:50	Building modeling / Binoni modellashtirish.
10:00 – 11:20	Overview of SANDBOX tools / SANDBOX asboblarining obzori.
11:20 – 12:50	Plot modeling / Uchastkani modellashtirish.

Fri. 22.04.2022	Dr. Ilkhomjon Aslanov
	Precision Agriculture
8:30 – 9:50	Precision Agriculture – From Mapping to SiteSpecific Application.
10:00 – 11:20	Smart Farming Technology Types.
11:20 – 12:50	How to Model the Adoption and Perception of Precision Agriculture Technologies

Mon. 25.04.2022	Dr. A.Inamov
	Modern geodetic equipment/ Zamonaviy geodezik asboblar
8:30 – 9:50	Digital and laser levels/ Raqamli va lazerli nivelirlar.
10:00 – 11:20	Satellite devices / Sputnik apparatlar.
11:20 – 12:50	Satellite receivers / Sun'iy yo'ldosh to'lqin qabul qilgichlari.

Wed. 27.04.2022	Dr. Ilkhomjon Aslanov
	Precision Agriculture
8:30 – 9:50	Future Perspectives of Farm Management Information Systems
10:00 – 11:20	Economic Analysis and Decision Support Systems using GIS models
11:20 – 12:50	Machine learning algorithms for predicting crop yields, pest outbreaks, and optimal management practices

Fri. 29.04.2022	Dr. A.Inamov
	Modern geodetic equipment/ Zamonaviy geodezik asboblari
8:30 – 9:50	Determination of the surface of land areas / Yer maydonlari yuzasini aniqlash.
10:00 – 11:20	Ground laser scanners / Yerusti lazerli skanerlar.
11:20 – 12:50	Remote controlled devices or drones / Masofadan boshqariluvchi qurilmalar yoki dronlar.