



TEMPUS GE-UZ project
**Geoinformatics: enabling sustainable
development in Uzbekistan**

530808-TEMPUS-1-2012-1-HU-TEMPUS-JPCR Tempus IV

Andrea Pődör
UWH GEO

TEMPUS GE-UZ project
Geoinformatics: enabling sustainable development in Uzbekistan

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Aims

To ensure that UZ partner universities have the capacity to offer a Master programme in Geoinformatics that meet Bologna process and international academic quality.



Why GIS can be essential?

- **Many problems:**
 - **Land degradation**
 - **Heavy use of agrochemicals**
 - **Environmental and health problem**
 - **land registration in Uzbekistan is done manually without using computer-based GIS, mainly due to lack of competence in digital mapping and particularly lack of competence in GIS**

GIS is powerful tool for decision making in national development and poverty reduction strategies; a coordinated and effective response to natural hazards, epidemic; and protect vulnerable populations.

Objectives

- **Develop a successful MSc in Geoinformatics**
- **Ensure qualified staff for course delivery**
- **Build a sustainable educational network**
- **Support UZ in sustainable development**



Develop a successful MSc in Geoinformatics

WP 2. Curriculum development (DEV)

- 2.1 As-is survey, needs analysis
- 2.2 Bologna conform curriculum
- 2.3 Accredited and licensed courses

WP 3. Development of learning materials (DEV)

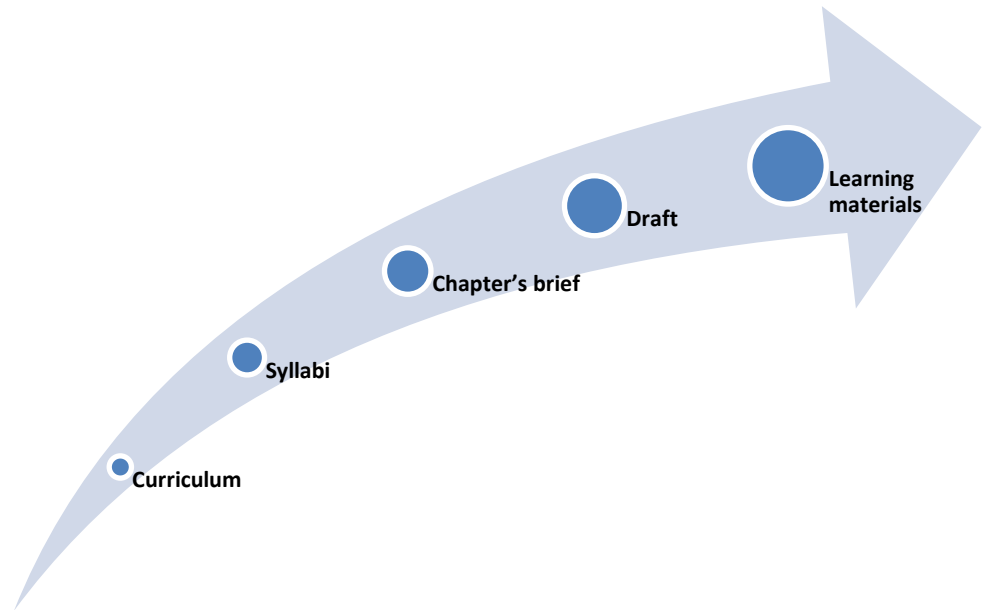
- 3.1 Guidelines
- 3.2 Course syllabi in English
- 3.3 8 modules in Uzbek
- 3.4 Review
- 3.5 Final draft
- 3.6 Feedback from the pilot course
- 3.7 8 core modules in Uzbek and Russian

WP 5. Development of learning environment (DEV)

- 5.1 Learning Management System (LMS)
- 5.2 Installation and operation of 4 computer labs
- 5.3 Use of photogrammetric workstation, laserscanner

WP 7. Quality Management (QPLN)

- 7.1 Quality Manual assuring project quality
- 7.2 Guidelines for Quality Assurance of learning material development
- 7.3 Guidelines for Quality Assurance of course delivery
- 7.4 External Evaluation Report (EER)



Outcomes

1. Project management (MNGT)
 - 1.1 Well managed communication and reporting
 - 1.2 Coordinated use of project resources
 - 1.3 Careful cash-flow and budget handling
2. Curriculum development (DEV)
 - 2.1 As-is survey, needs analysis
 - 2.2 Bologna conforming curriculum
 - 2.3 Accredited and licensed courses
3. Development of learning materials (DEV)
 - 3.1 Guidelines
 - 3.2 Course syllabi in English
 - 3.3 8 modules in Uzbek
 - 3.4 Review
 - 3.5 Final draft
 - 3.6 Feedback from the pilot course
 - 3.7 8 core modules in Uzbek and Russian
4. Train-the-teachers (DEV)
 - 4.1 32 trained teachers prepared for course development
 - 4.2 12 trained teachers in data acquisition and GeoDBMS
 - 4.3 12 trained teachers in data analysis
 - 4.4 12 trained staff members in educational quality assurance
5. Development of learning environment (DEV)
 - 5.1 Learning Management System (LMS)
 - 5.2 Installation and operation of 4 computer labs
 - 5.3 Use of photogrammetric workstation, laserscanner
6. Educational network development (DEV)
 - 6.1 National network based on agreements
 - 6.2 International network based on agreements
7. Quality Management (QPLN)
 - 7.1 Quality Manual assuring project quality
 - 7.2 Guidelines for Quality Assurance of learning material development
 - 7.3 Guidelines for Quality Assurance of course delivery
 - 7.4 External Evaluation Report (EER)
8. Pilot course implementation
 - 8.1 Business plan (BP)
 - 8.2 Potential students informed
 - 8.3 Motivated students admitted into the MSc course
 - 8.4 16 trained teachers prepared for use of new technologies
 - 8.5 24 students give feedback on the course materials and course delivery
9. Dissemination and awareness (DISS)
 - 9.1 Brochures, posters, presentations and other PR materials
 - 9.2 Project website
 - 9.3 GE-UZ visibility in social and professional media
 - 9.4 4 newsletters (annual)
 - 9.5 80 participants from CA countries will be informed on the project results

Sustainable MSc courses
Quality management system
8 textbooks in Uzbek
Learning Management System
32 trained teachers
4 computer labs
Equipments

Learning Management System

http://elearn.geoinformatics.uz/

Tempus Geuz Geoinformatics Uzbekistan You are logged in as [\[username\]](#) [Logout](#) [English \(en\)](#)

Home

Navigation

- Home
- My home
- Site pages
- My profile
- My courses

Settings

- Front page settings
 - Turn editing on
 - Edit settings
- Users
- Filters
- Backup
- Restore
- Question bank
- My profile settings
- Site administration

Tempus Geuz Technical Guidelines
Introduction to the Learning Management System "Moodle", used for educating GI-Professionals in Uzbekistan

Moodle content upload guidelines

My courses

Materials for the Workshop in Szekesfehervar

Workshop Szekesfehervar

Teacher: Bekhonjon Abdullaev
Teacher: Odi Akbarov
Teacher: Olimjon Allanzarov
Teacher: Olabek Avsibayev
Teacher: Alibergen Botojnov
Teacher: Tolmas Botbayev
Teacher: Bernhard Brelt
Teacher: Oybek Djallilov
Teacher: Yakhshemurod Khudayberganov
Teacher: Nizamiddin Namozov
Teacher: Béla Márkus
Teacher: György Molnár
Teacher: Djamaiddin Muxitdinov
Teacher: Uzbekiston Mukhtarov
Teacher: Bekhonboev Niszarov
Teacher: Ziya Otunayev
Teacher: Andrea Pödör
Teacher: Sherzad Rakhmonov
Teacher: Azizjon Rushev
Teacher: Eshkabi Safarov
Teacher: Komjon Sayidov
Teacher: Akmaljon Yuldashiev

Spatial Analysis Workshop Salzburg

Teacher: Bernhard Brelt
Teacher: Ragina Hadzinar-Stangl
Teacher: Barbara Hüfer
Teacher: Fakhr Kholid
Teacher: Martin Loidl
Teacher: Béla Márkus

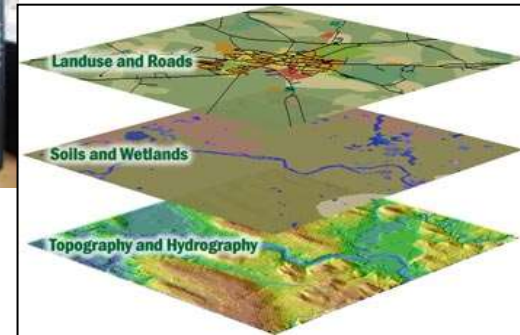
This is the Tempus GeUZ Learning Platform providing professional Courses in Geoinformatics

Courses	Edit	Select
Workshop Szekesfehervar	X ↓	<input type="checkbox"/>
2.1.1 Geoinformation Systems and Sciences	X ↑ ↓	<input type="checkbox"/>
2.1.2 Remote Sensing	X ↑ ↓	<input type="checkbox"/>
2.1.3 Spatial Data Models	X ↑ ↓	<input type="checkbox"/>
2.1.4 Data Acquisition and Data Integration	X ↑ ↓	<input type="checkbox"/>
2.2.1 Geodatabases and Distributed Architectures	X ↑ ↓	<input type="checkbox"/>
2.2.2 Cartography and Geovisualization	X ↑ ↓	<input type="checkbox"/>
2.2.3 Spatial Analysis	X ↑ ↓	<input type="checkbox"/>
2.2.4 Project Management and Organisation	X ↑ ↓	<input type="checkbox"/>
Spatial Analysis Workshop Salzburg	X ↑	<input type="checkbox"/>

Move selected courses to...



Handheld GPS Trimble Juno 3B



GNSS Rover and Base Station Trimble R4



Trimble TX5

Openings









Project partners

Coordinator

P1 University of West Hungary (UWH), Sopron, HU

Uzbekistan

P2 National University of Uzbekistan named after Mirzo Ulug'bek (NUU), Tashkent, UZ

P3 Karakalpak State University (KSU) Nukus, UZ

P4 Tashkent Architecture Building Institute (TABI) Tashkent, UZ

P5 Tashkent Institute of Irrigation and Melioration (TIIM) Tashkent, UZ

P6 Ministry of Higher and Secondary Specialized Education (MHSSE) Tashkent, UZ

P7 National Center of Geodesy and Cartography (NCGC) Tashkent, UZ

P8 State Unitary Enterprise "Geoinformkadastr" (Geoinformkadastr) Tashkent, UZ

EU

P9 Paris-Lodron Universität Salzburg (PLUS) Salzburg, AT

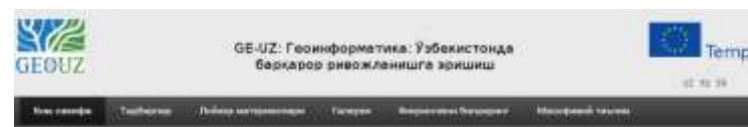
P10 Royal Institute of Technology (KTH) Stockholm, SE

P11 University of Greenwich (UoG) London, UK

Websites

www.ge-uz.eu/

www.geoinformatics.uz



Posters

GEUOZ (2013) is a 2013-14 GEUOZ-UK Tempus II project. This project has been funded with support from the European Commission. This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

The GE-UZ

Geoinformatics: enabling sustainable development in Uzbekistan.



Objectives:

- to develop a successful MSc in Geoinformatics.
- to ensure that there will be qualified staff available for course delivery by organizing train-the-teachers
- to ensure the universities are adequate equipments for GIS/geodesy teaching by buying geodetic equipment and GIS laboratories
- to ensure the sustainability of the educational environment with building a sustainable educational network.



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Outcomes:

- As-is analysis report
- Updated Bachelor program in Geodesy, Cartography and Cadastre
- MSc curriculum and syllabus in Geoinformatics
- Master courses (8 modules and summer school)
- Developed and published teaching materials
- Retrained staff
- Trained students
- Established centers: website/network portal, 4 GIS labs, software, GIS/surveying equipment
- Dissemination activities
- Business plan and cooperation agreement

Website: www.ge-uz.eu

Project coordinator:
Prof. Markus Bella - mb@geo.info.hu
University of West Hungary (UWH)

Partner country coordinator:
Oshir Akbarov - oshir@tiim.uz
Tashkent Institute of Irrigation and Melioration (TIIM)

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Geoinformatics: enabling sustainable development in Uzbekistan.



Uzbekistan faces many problems which can be more effectively handled with the help of GIS.

Land degradation is accelerated due to desertifying, irrigation and drainage infrastructure causing water logging and soil salinity.

The heavy use of agricultural fertilizers and huge amounts of irrigation water from the two main rivers (Syr Darya and Angren) that feed the region, and the chronic lack of water treatment plants and among the factors that have caused health and environmental problems on an enormous scale. As an example we should mention the coal fires. There is an assumption that all large underground high-sulfur deposits in Uzbekistan are polluted by industrial and chemical wastes. Rural areas: poor water management and heavy use of agricultural fertilizers also have polluted the soil. Salt and dust storms and the washing of pesticides and herbicides for the cotton crop have led to severe degradation of its quality. Other areas: Salinized and sub-saline soils are a growing threat to agriculture.

In land and real property management Geoinformatics support the computer based land registration. For this reason the GIS usage can enhance the reliability and accuracy of the real properties. At present, land registration in Uzbekistan is done manually without using computer-based GIS, results due to lack of competence in digital mapping and particularly lack of competence in GIS.

Due to excessive pressure on the land and water resources, Uzbekistan now faces environmental problems mainly represented by land degradation and water shortage which negatively affects food security in the country. An INSPIRE driven Geoinformatics has all conditions to be an environmental protection. It can help to map and monitor, analyze and assess various projects, plan irrigation network for agriculture and water resource management.

As a developing country Uzbekistan faces with the problem of growing population, its rapid and uneven population concentration in the densely populated and environmental impacts of urban settlements is an increasingly important topic of attention in urban and policy.

It is an opportunity that GIS is powerful tool for decision making, to rational development and quality reduction strategies, to investigate and effective response to natural hazards, epidemics, and protect vulnerable populations.

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www.geoinformatics.uz

Articles

Geoinformatics: enabling sustainable development in Uzbekistan

**Bela Markus¹, Andrea Podor¹, Odil Akbarov², Josef Strobl³,
Huaan Fan⁴,
Fakhar Khalid⁵, Mike McGibbon⁵**

1 University of West Hungary (UWH), Sopron, HU

**2 Tashkent Institute of Irrigation and Melioration (TIIM)
Tashkent, UZ**

3 Paris-Lodron Universität Salzburg (PLUS) Salzburg, AT

4 Royal Institute of Technology (KTH) Stockholm, SE

5 University of Greenwich (UoG) London, UK

Email: ge-uz@geo.info.hu

Articles

**Geoinformatics: enabling sustainable development in
Uzbekistan**

Needs and responses

**Andrea Podor¹, Odil Akbarov², Bela Markus¹, Josef Strobl³,
Huaan Fan⁴,
Fakhar Khalid⁵, Mike McGibbon⁵**

1 University of West Hungary (UWH), Sopron, HU

**2 Tashkent Institute of Irrigation and Melioration (TIIM)
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4 Royal Institute of Technology (KTH) Stockholm, SE

5 University of Greenwich (UoG) London, UK

Email: ge-uz@geo.info.hu

Articles

**Ўзбекистондаги ҳамкор университетларда Геоинформатика
магистратура мутахассислиги учун таълим тизимини
яратиш**

**Шухрат Шокиров¹, Одил Акбаров¹, Андреа Подор², Жозеф
Штробл³, Барбара Брунер³, Бернард Бретц³, Хуаан Фан⁴**

**1 Тошкент ирригация ва мелиорация институти, Тошкент,
Ўзбекистон**

2 Ғарбий Венгрия университети, Будапешт, Венгрия

3 Париж-Лодрон университети, Залцбург, Австрия

**4 Швеция Қироллик технология институти, Стокгоlm,
Швеция**

Email: ge-uz@geo.info.hu

Newsletters

Aims, objectives, activities, partners and outcomes




The GE-UZ **Geoinformatics: enabling sustainable development in Uzbekistan**

Highlights

- At a glance
- Background
- Aims and objectives
- Our activities
- Our partners
- Outcomes
- What we are working on now?
- How can you help us?

At a glance
This newsletter is intended to give you information about a new TEMPUS project that is underway in Uzbekistan. The aim of the project is to ensure that UZ partner universities have the capacity to offer a Master programme in Geoinformatics that conform to the Bologna process, meet international academic quality standards, address job market needs and support Uzbekistan in sustainable regional development. The project is supported by the EU TEMPUS programme with the aim of strengthening the cooperation between EU and Central Asian countries in the field of education.

Background
The EU considers ways to cooperate with non-EU countries around the world in terms of education systems. It is a priority for the EU to promote and modernize the education system of these countries in line with international standards and according to the Bologna process. Uzbekistan is a post-communist country suffering from numerous problems including environmental pollution, severe droughts, inadequate land use etc. These issues would be manageable very efficiently with support from GIS technologies. In Uzbekistan curricula and the educational infrastructure also need to be modernized; therefore it is a key point to supply partner universities with the necessary equipment. All in all, Uzbekistan needs to enhance Geoinformatics education and infrastructure in order to properly manage the challenges.

Aims and objectives
GE-UZ is a project devoted to ensure that Uzbek partner universities have the capacity to offer a Master programme in Geoinformatics meeting Bologna guidelines, international academic quality standards, job market needs and support Uzbekistan in sustainable development.
The specific objectives of the project are:
o to develop a successful MSc in Geoinformatics,
o to ensure that there will be qualified staff available for course delivery by organizing train-the-teachers
o to ensure the universities are adequately equipped for GIS teaching by buying surveying equipment and develop GIS laboratories
o to ensure the sustainability of the educational environment by building an educational network.

Our activities
At the beginning of the project needs-analyses will be accomplished and the further curriculum development will be based on the results of these analyses. The overall programme definition is discussed by all partners, and general rules and templates will be set for an elaborate description. The curriculum and syllabus development is followed by development of the learning materials by the Uzbek partners. The testing and reviewing of the modules will ensure that it will meet the standards and needs of stakeholders.






The GE - UZ **ГЕОИНФОРМАТИКА: Ўзбекистонда барқарор ривожланишга эришишни таъминлаш**

ЎСЎНМАҚ

- Қисқичта
- Қадамлар тарихи
- Мақсад ва кўрсаткичлар
- Ўқувчи факультетлари
- Тезкор хабарлар
- Қулайликлар
- Қулайликлар
- Қулайликлар
- Қулайликлар
- Қулайликлар

Қисқичта
Ушбу хабарнома сизга янги TEMPUS GE-UZ лойиҳаси тоғрисида ўзбекистонда амалга оширилаётган ривожланишни таъминлаш йўли ҳақида маълумот берди. Ушбу лойиҳанинг мақсади Ўзбекистондаги ҳамкор университетларнинг "Бologna жараёни"га, ҳамкор юртимиздаги талабаларнинг қишлоқлик бўлиб қолганини таъминлаш ва Ўзбекистондаги барқарор ривожланишга ёрдам бериш ва геологларнинг ўқувчи магистратура дастурига таъминлаш, таълим қилиш мутахассислари таъминлашдаги ишбилдиришни амалга ошириш. Лойиҳа Европа Иттифоқининг TEMPUS дастури доirasida амалга оширилади ва янгиликлар Европада ишбилдириши амалга оширилади ва янгиликлар Европада ишбилдириши амалга оширилади.

Қадамлар тарихи
Европа Иттифоқи бу лойиҳа Европада ишбилдириши амалга оширилади, шу жумладан, ривожланишни таъминлашга ёрдам бериш ҳақида ўқувчи магистратура таъминлаш мақсадида таълим қилиш ва янгиликлар Европада ишбилдириши амалга оширилади. Европада Иттифоқи TEMPUS дастурига асос қилиб ушбу лойиҳанинг таълим қилиш қисмини таъминлади, шу жумладан, таълим қилиш мақсадида таълим қилиш ва янгиликлар Европада ишбилдириши амалга оширилади.

Мақсад ва кўрсаткичлар
GE-UZ лойиҳасининг мақсади Ўзбекистондаги ҳамкор университетларнинг "Бologna жараёни"га, ҳамкор юртимиздаги талабаларнинг қишлоқлик бўлиб қолганини таъминлаш ва Ўзбекистондаги барқарор ривожланишга ёрдам бериш ва геологларнинг ўқувчи магистратура дастурига таъминлаш, таълим қилиш мутахассислари таъминлашдаги ишбилдиришни амалга ошириш.
Лойиҳанинг асосий кўрсаткичи қуйида:
o Геологларнинг ўқувчи магистратура таъминлаш қисмини таъминлаш ва янгиликлар Европада ишбилдириши амалга оширилади.
o Тўртинчи курсларда таълим қилиш магистратура дастури билан таъминлаш ва янгиликлар Европада ишбилдириши амалга оширилади.
o Ўқувчи магистратура дастури билан таъминлаш ва янгиликлар Европада ишбилдириши амалга оширилади.
o Барқарор таълим қилиш ва янгиликлар Европада ишбилдириши амалга оширилади.

Ўқувчи факультетлари
Лойиҳа амалга оширилади факультетлар таъминлаш ва янгиликлар Европада ишбилдириши амалга оширилади. Маълумотлар дастурига асос қилиб таъминлаш ва янгиликлар Европада ишбилдириши амалга оширилади.

Thank you for your attention
ge-uz@geo.info.hu