

# SWOT analysis



DrS. Prof. Mykola Zaichenko

**RETHINK<sub>e</sub>**

20.05.2014

# Donbas National Academy of Civil Engineering and Architecture



ДОНБАСЬКА НАЦІОНАЛЬНА АКАДЕМІЯ БУДІВНИЦТВА І АРХІТЕКТУРИ

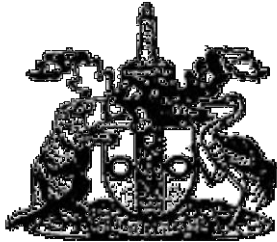


# Donbas National Academy of Civil Engineering and Architecture

## THE JOINT BOARD OF MODERATORS



The Institution  
of Structural Engineers



The Institution  
of Civil Engineers



Chartered Institution  
Building Services  
Engineers

4 building specialties of the Academy were accredited by the Joint Board of Moderators of the [Institute of Civil Engineers \(ICE, Great Britain\)](#)



2 specialties of the economic sphere were certified by the [International Education Society \(IES, Great Britain\)](#)

For 65 years the Donbas National Academy of Civil Engineering and Architecture (DonNACEA) has trained experts for the civil engineering and architecture.

In Donetsk and Lugansk regions (Donbas) the DonNACEA is the only higher school which trains architects, experts in the municipal construction and city economy, economists and managers for construction, road and aerodrome builders.

The Academy has trained more than 25000 civil engineers and 1800 architects, including more than 500 foreign students.

The Academy has trained 30 Doctors of Sciences and 250 Doctors of Philosophy; they work in many countries of the world. Today more than 6000 young people from Ukraine, the CIS countries, Africa, Asia, Middle East etc. are the students of the Academy. The DonNACEA faculty comprises 368 lecturers, including 53 DSc., Professors, 259 PhD, Associate Professors.



## Donbas National Academy of Civil Engineering and Architecture



The Association of European  
Civil Engineering Faculties

The Academy is a member of the  
**Association**  
**of Civil Engineering Faculties (AECEF)**



The Academy is a member of the  
**Association of Educational Civil Engineering  
Institution (AECEI).**



The DonNACEA service in the field of higher  
education and scientific researches meets the  
standards ISO 9001:2000



## Donbas National Academy of Civil Engineering and Architecture

- 5 educational and 3 laboratory buildings;
- 15 computer classes with access to the INTERNET and Wi-Fi ;
- 3 libraries and 2 reading halls;
- assembly hall;
- student Palace of culture;
- 4 gyms;
- 5 hostels;
- sanatorium-preventorium;
- canteen;
- sports and recreation camp called "Monolit" on the beach of Azov Sea in Sedove;
- driving school.





# Donbas National Academy of Civil Engineering and Architecture

## Our International Experience



DAAD



European Commission  
TEMPUS



European Commission  
ERASMUS  
MUNDUS

During last time a lot of our candidates have won the awards of the DAAD, Visegrad Scholarship Programme (IVF), the National Scholarship Programme of the Slovak Republic (SAIA) etc.

Our Academy is the participant of TEMPUS project – **RETHINK** (Reform of Education THru International Knowledge exchange)

and 3 projects Erasmus Mundus Programme, one of them is Joint Master Course under title **SUSCOS\_M** (Sustainable Constructions under natural hazards and catastrophic events),

- the second is **TEMPO** (Trans-European Mobility Project On Education for Sustainable Development)

- and the third is **INFINITY** (INternational Fellowship IN transdisciplinarITY).



# SUSCOS



## SUSCOS—M 2012-2013



Jozsef Balint



Jocelyn Reyes



Vaidas Alechnavicius



Abdul Hossain



Denny Syamsudin



Dmitriy



Gonçalo Ferraz



Guanghe Yu



Zdenek Dreveny



Ingrid Krause



Jakub Dolezal



Jovana LuKac



Maksym Podgaysky



Refat Ahmhed



Shafiul Azam



Trayana Tankova



Mohd Fazulnizam



Nguyen-The Quang



Tamas



Chuan Lin



Sergii Kulik



Vittoria Galli



David Cassiano



Ibrahim Sani





# TEMPO

Trans-European Mobility Project On Education for Sustainable Development  
supported by Erasmus Mundus Programme of the European Union





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[International relations](#) / [International Projects](#) / [TEMPUS](#)

**RETHINK (Reform of Education THru International Knowledge exchange)**

**Useful materials**

Searching

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**Contact information**

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+38 (06232) 4-07-33

**E-mail:**

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selection committee:

RETHINK (Reform of Education THru International Knowledge exchange)



**Project called "Reform of Education THru International Knowledge exchange" (RETHINK) № 544178 -TEMPUS- 1 -2013- 1 -PT-TEMPUS-JPCR** opens new unique opportunities for our Academy!

Firstly, our Academy is the winner of the grant TEMPUS IV, which aims to support the modernization of higher education systems in the partner countries of the European Union. The project duration is 36 months, the budget is more than 1 million 200 thousand Euros.

The theme of the project RETHINK is the evolution of a society based on a pragmatic outlook, in which the environment and sustainable development are inextricably linked with business and education. Therefore, the project is aimed to rethink the curricula of Higher Education Institutions - in the general area of ENVIRONMENT - through the development of new masters and PhD courses in the fields of architecture, urban planning, design, climate engineering, and environmental sciences and aims to establish the relationship between the academic and business worlds within the parameters set by the European Neighbourhood Policy, and based on regional priorities: environment.

The RETHINK project consortium is composed by 4 universities from the European Union and 12 universities from the partner countries, 3 Ministries of Education, several business partners.

## RETHINK (Reform of Education Thru International Knowledge exchange)

### Useful materials

#### Searching

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[omc@donnasa.edu.ua](mailto:omc@donnasa.edu.ua)



#### Site map

#### Feedback

#### Old site version

## Useful materials

**Materials of the seminar for winners of Tempus projects of the 6th Call** (March 12, 2014, National Tempus Office in Ukraine)

On the 12th of March, 2014 National Tempus Office in Ukraine in cooperation with the delegation of the European Union to Ukraine and with support from Ministry of education and science of Ukraine together with National economic University named after Vadym Hetman organized a seminar for the partners from Ukraine of Tempus projects – the winners of the 6th Call of Tempus IV 2013 Program.

In this event from Donbas National Academy of Civil Engineering and Architecture took part the first vice-rector Zaichenko Mykola, who is responsible for realization by the Academy of the project № 544178 - TEMPUS -1 - 2013 -1 -PT - TEMPUS – JPCR **"Reform of Education Thru International Knowledge exchange" (RETHINK)**.



The purpose of the event was the acquaintance with the peculiarities of introduction of the projects of Tempus Program and inter project cooperation. 83 participants from partners' HEIs from all Ukraine took part in this event. They were contact person from HEI of Ukraine in the projects of the 6th Call, representatives of international departments, representatives of financial-economical departments and others involved into the realization of the projects. Special sessions on management, maintaining documents, registration, information distribution about the project, visualization and communication, results distribution, cooperation with the current Tempus projects etc were held during the seminar.

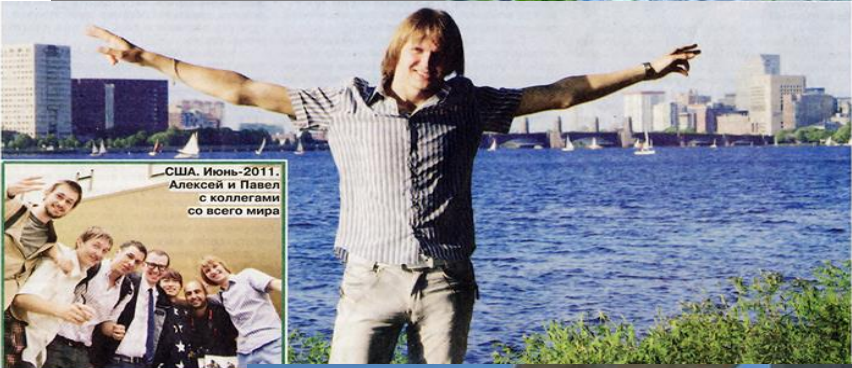
# Visegrad Fund

[www.visegradfund.org](http://www.visegradfund.org)





DAAD





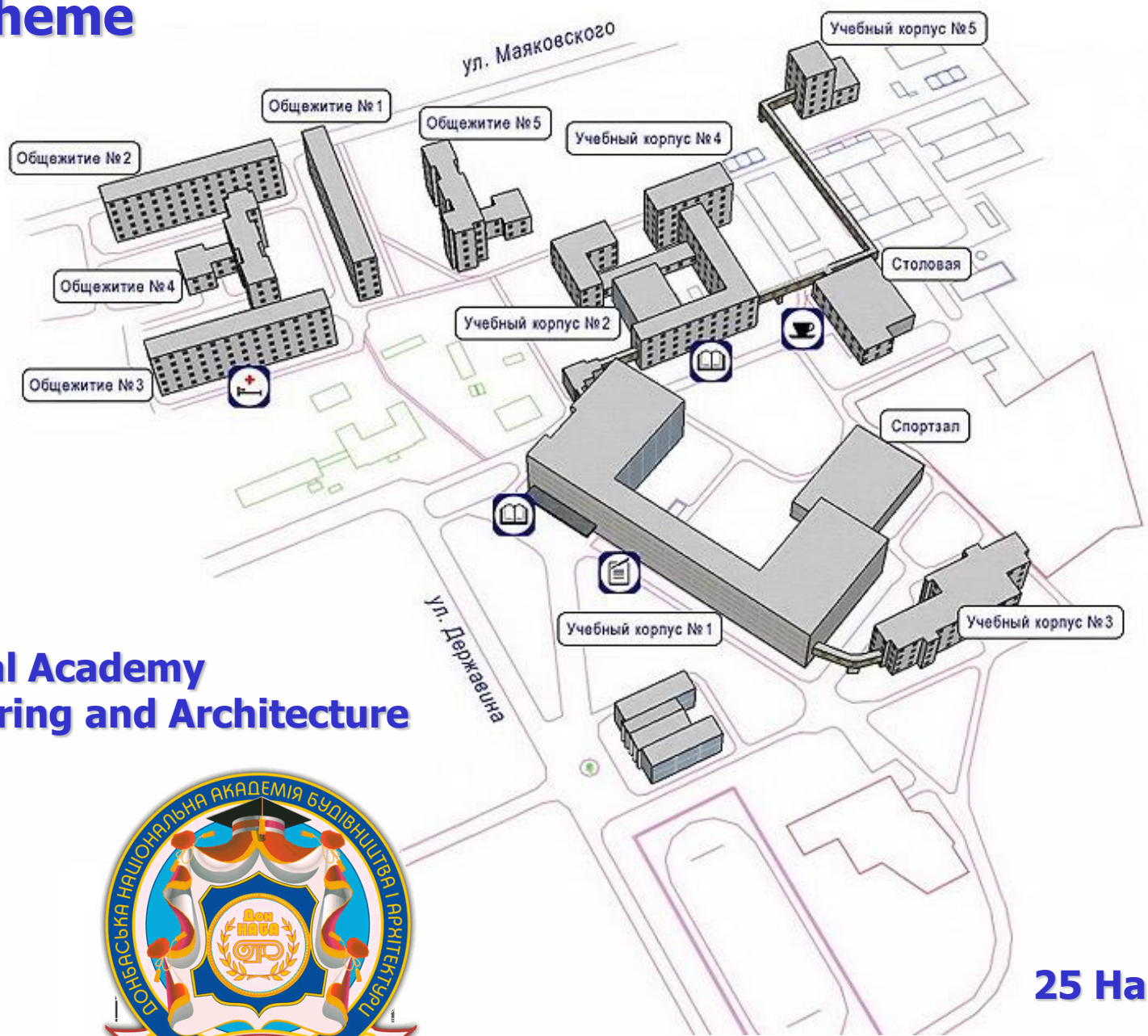
## Donbas National Academy of Civil Engineering and Architecture

# The Academy structure

- Civil Engineering Institute
- Institute of Municipal Economy and Environment Protection
- Institute of Economics, Management and Law in Civil Engineering
- Institute of Post-diploma Education and Professional Development
- Architectural Faculty
- Mechanical Faculty



# Campus scheme



**Donbas National Academy  
of Civil Engineering and Architecture**



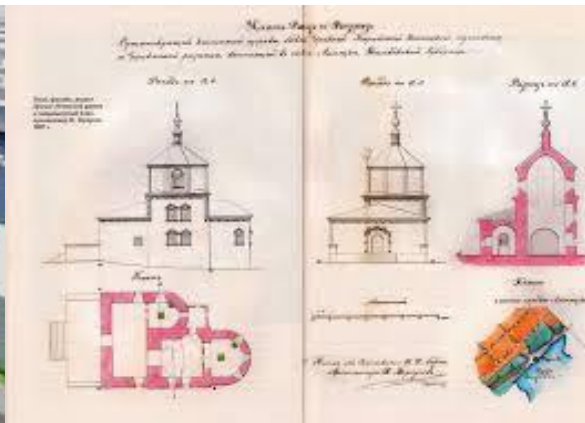


## Key research areas

# Architecture, Urban / Regional Planning



- Historical problems in architecture and town planning of Donbas;
- Problems and outlooks of standard designing progress and refurbishment of standardized blocks of flats in Donbas cities;
- Development of general plans of settlements and land valuation;
- Problems of regulation of wind loads in the reconstruction with the formation of high-rise buildings.





## Key research areas

### Engineering, Technology

- Fundamental substantiation and efficient designs for the high-quality building materials and products from industrial waste of Donbas;
- Fundamental substantiation and electric activation designs for building materials, products and constructions with high level of operating longevity and service property;
- Fundamental substantiation, design and integration of the latest biotechnologies of sewage and natural water treatment;
- Development and integration of efficient power resource conservation and ecotechnological systems of heating and ventilation;
- Environmental engineering, reliability assurance and security of municipal services;
- Electrolyte recovery of the lead-acid cells.







## Key research areas

### Engineering, Technology

- Development of determination methods of stressed-strained state of concrete and reinforced concrete for common case of volume stressed state and heat and force action;
- Analysis of stressed-strained state of the tower-type reinforced structures, regarding to the erection process;
- Improvement of the design techniques for strength and deformability of reinforced concrete structures with steel to concrete bond fault;
- Engineering developments of underpinning of bases and efficient constructive foundation forms, improvement of their design methods, including complex of geotechnical conditions.





## Key research areas

### Business Studies/Management Science



- Problems of certification, licensing and ecological examination in construction;
- Economic and organizational aspects of management strategy and tactics of regional building organizations in market conditions;
- Methodological background of the economic strength application in building industry;
- Increase of economic efficiency, management and organization in building complex.



Helpful

Harmful

Strengths

Weaknesses

Internal

S

W

Opportunities

Threats

External

O

T

## Strengths



### **MS Course content**

- Architectural Project in Building;
- Building Design of the Architectural Environment;
- Basis of Building:
- Economics;
- Civil Defense;
- Principles of Management;
- Principles of Marketing;
- Principles of Business;
- Architecture and Building of the region;
- Special Construction Engineering;
- Roads Designing;
- Regional Peculiarities of Designing of Building and Structures;
- Practical Training;
- Students' Research Work

1. The courses provide the educational base in fundamental (mathematics, physics, mechanic and chemistry) also as engineering and architectural sciences and an introduction to engineering and architecture practice and applications through design, drawings, projects and diploma works.

2. All students get their initial professional training on Architecture and Civil Engineering. All related courses are dealing with visiting constructional sites, municipal enterprises, design offices, architectural enterprises. A part of lectures is delivered by practicing engineers and architects within these courses of training.

3. Also practicing specialists are invited to deliver some lectures on professional specialties.

4. During the students industrial practice they are sent to the special architectural and design enterprises to be supervised and consulted by the enterprises practicing specialists themselves.



5. As a rule, the authorities of building and architectural enterprises are at the head of State exam boards during presenting diploma projects.

6. The Faculty has necessary scientific laboratories and workshops for education and scientific research, such as: painting and drawing (90 m<sup>2</sup>); sculpture and monumental arts (72 m<sup>2</sup>); modeling (36 m<sup>2</sup>) and also special laboratories: classroom of architectural designing (48 m<sup>2</sup>); classroom of architectural building units and structures (72 m<sup>2</sup>); laboratory of building physics (72 m<sup>2</sup>). There are also specialized classroom: the classroom for course architectural design (90 m<sup>2</sup>); the classroom of diploma architectural design (90 m<sup>2</sup>); the computer classroom of "Architecture of Industrial and Civil Construction" department (33,2 m<sup>2</sup>); the computer classroom of "Architecture" department (18 m<sup>2</sup>).

7. There is well-qualified staff of lecturers, among them there are Doctors of Architecture, Doctors of Science, Ph.D. in Architecture etc. who try to improve their knowledge and practice skills always. Also they must have their advanced practical courses at the architectural and design enterprises.

## Weaknesses



1. Insufficient level of knowing English language of staff.

2. Our staff doesn't have an experience of participation in such projects.

3. There are a lot of bureaucratic barriers relatively the structure of the scientific activity management of Ukrainian universities.



# Donbas National Academy of Civil Engineering and Architecture

## The Basic Principles of the Academic Activity Organization for a Bachelor Degree and Master Degree

**Education during the life:** Bachelor (BSc) – Master (MSc) – advanced professional training – retraining – expansion of skills profile – internship – Doctorate (PhD) – Dr.Sc

**BSc**

**4 year  
240 ECTS**

**Master**

**1-1,5 years  
60-90 ECTS**



1. The Academy is situated in an important industrial region of Ukraine between Donetsk and Makiyivka. So the promotion and development of business start-ups can be very efficient.

2. Better introducing computer technologies.

3. Improving teaching staff which involves scientific & professional probation at building and scientific enterprises.

4. Inviting professors from other higher schools either for giving classes to the students or taking part in scientific seminars.

5. Providing regular seminars on special problems inviting specialists taking part in international conferences.

6. Classes in foreign language are supposed to be held.



## Threats



1. The instable political and economical situation in Ukraine.

2. There are problems with money transfer to the Ukrainian budgetary organizations.

## Strengths



### PhD Course content

- the program 18.00.01 - Theory of Architecture, Restoration of Architectural monuments;
- the program 18.00.02 - Architecture of Buildings and Structures:

1. There are several research departments on the Architectural Faculty of the Academy. These departments are headed by experts in the relevant branch who have the appropriate licenses to perform survey and design works and solve a number of issues related to the research problems of urban planning and architecture of the Donbas region. One of these research units is the center of historical and architectural research "Architectural heritage". The main activities of the Centre are: a study of urban development of Donbas region, revealing monuments of architecture and town planning, development planning and creative recommendations for their recovery, and reuse.

2. A large amount of research and design work commissioned by local administrations and organizations from different regions of Ukraine are performed by the Project Research and Training Institute of DonNACEA. This institute together with other research departments of the Academy deals with the study, design and construction of almost all kinds of houses and buildings.



### PhD Course content

- the program 18.00.01 - Theory of Architecture, Restoration of Architectural monuments;
- the program 18.00.02 - Architecture of Buildings and Structures:

3. There are two offices of specialized Academies of Ukraine: Regional Branch Academy of Ukraine (Professor Ye. Horokhov is the head of the department) and Academy of Higher Education of Ukraine (Department of the Problems of Civil Engineering and Architecture) are situated at the DonNACEA. Besides, the professors of the DonNACEA are the collective (or individual) members of many scientific programs and organizations, including international curriculum ESDEP.



1. The postgraduate in the field of the program of the theory of architecture, restoration of architectural monuments as well as the program of architecture of buildings and structures operates at the Academy.

## Accreditation of Joint Degree on the national level

Nowadays our HEI has already achieved some results towards the main aim of the RETHINK Project. We have monitored the existing Curricula of the specialty called "Urban Planning" in Kharkov and Kiev HEI's also we have investigated the current situation in region economy and social life with the purpose to find out the demand on these specialists on our labor market. So now we have made a decision to create this specialty in our HEI. We created new department at the Architectural Faculty called "Urban Planning, Land Planning and Cadastre" for providing the education of the specialist in this sphere.

That's why we're very interested in a Joint Degree in the field of Urban Planning.

Now we're preparing all the required documents for receiving the license for preparation specialists in the field of Urban Planning in our country. This includes all scientific & methodological support of the specialty, among them new curricula, educational books, manuals, guidelines etc., staff provision, facilities provision and others.



# Donbas National Academy of Civil Engineering and Architecture

<http://donnasa.edu.ua>

