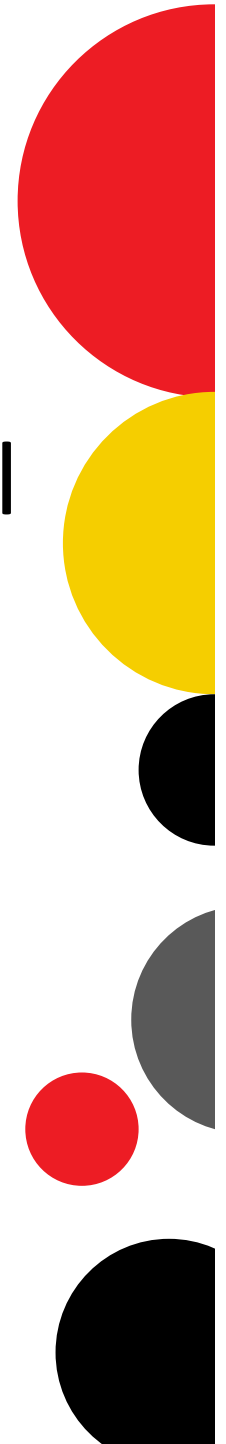


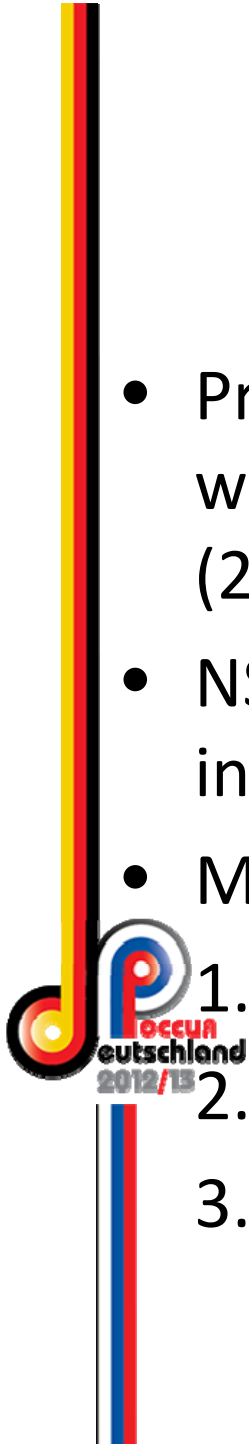
# About some Aspects of Educational and Research Networking on the Basis of NSTU Partnerships




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16.05.2013

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- Program of NSTU Strategic Development Program was supported by the Federal grant for 3 years (2012-2014)
  - NSTU SDP is a multitask project (faculty, students, infrastructure)
  - My focus:

1. Improving language competences at the University
  2. Creation of Network Technical University
  3. Development of Joint Educational Programs
- 

# Foreign language competences analysis for students, PhD and university staff

- Low entering level for students (A1-A2)
- Low workload for foreign language courses
- Insufficient number of faculty members (except Foreign Language Dpts, Regional Studies Dpt.) who has good knowledge of foreign languages: 109



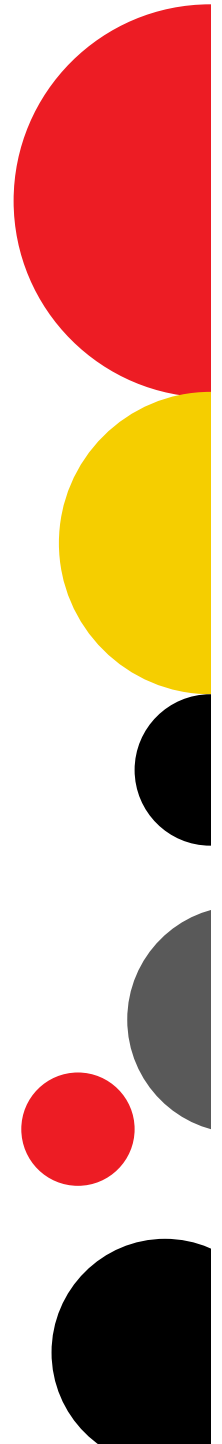
# Improving language competences at the University

- **Expected Results:** Implementation of the motivation and control system for improving foreign language competences at university for students, MSc and PhD students, faculty members and administrative staff.



# Main targets!

- To create and support personal motivation
- To have a positive example
- To give instruments and opportunities

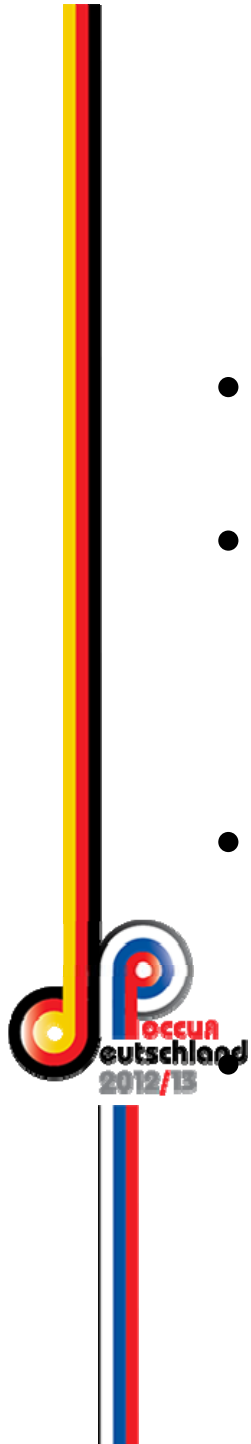


## English knowledge certification at NSTU

- Original tests of English according to the international standards have been developed
- Proposals for NSTU English Certification System of English language skills have been worked out

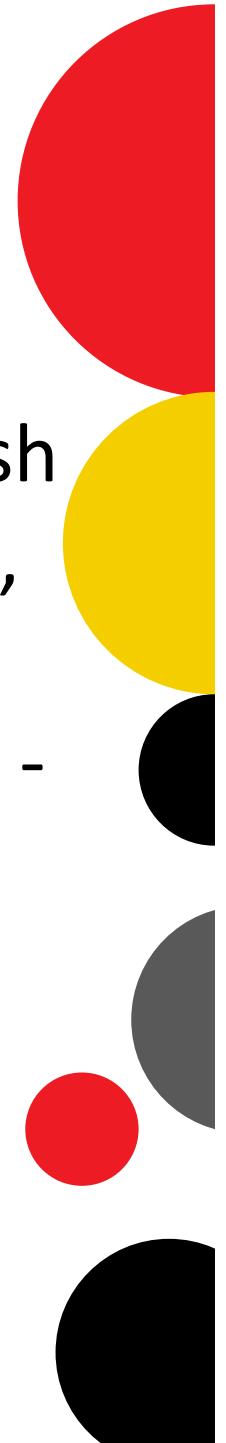
## English courses

- 2 years course of English for 18 selected MSc students of technical specialities and Business faculty “Interpreter in sphere of professional communication”
- 100 hours course for developers of of Joint Master Program (TEMPUS “MPAM” «Double degree program in Mechatronics and Automation»



## Instruments for self-studying English

- Revival and popularization of the English club at NSTU (meetings 2 times a week, leaders - 4 students, participation of native speakers, the online vk.ru group - 257 members)
- Composing a Guide on electronic resources for self-studying the English language (described 61 free electronic resources)



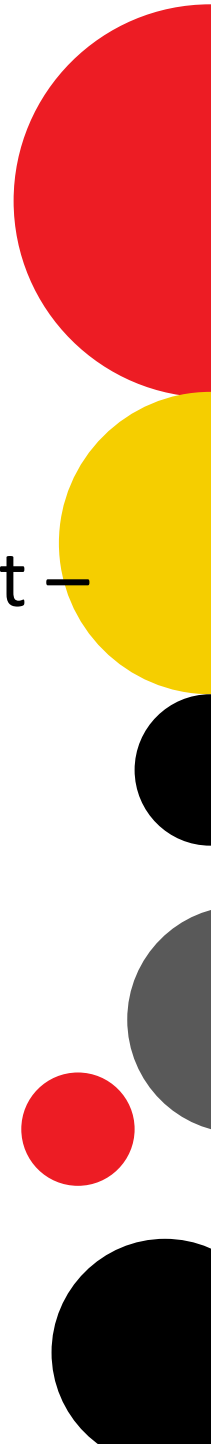
# Creation of Educational and Research Network on the Basis of NSTU Internal and International Partnerships





# New concept of NSTU International Relations

1. Evolution of the contacts with international partners on “bottom-up” principle: personal contact – department – university agreement
2. Selection of most active and potentially promising partners
3. Development of the joint educational programs (including double degree diploma), joint research projects



# Tasks and expected results

## Tasks:

- Creation of a joint educational and research area together with partner universities from Europe, Russia, CIS and Asia. Establishment of the Network Technical University for joint studying of students, MSc and PhD students in priority directions of training.
- Development of Joint Educational Programs (JEP) for selected directions for different levels.
- Opening of NSTU information centers abroad.

## Expected results:

- Agreements, documents and regulations on network activities.
- Joint Educational Programs (JEP) for selected directions for different levels (MSc, PhD students, Postdocs, retraining) – also in English
- Increasing number of foreign students and visiting lecturers and researchers



# Analogs of network universities (consortia)

- TEMPUS consortia
- Erasmus Mundus consortia
- University of Shanghai Cooperation Organization
- University of Commonwealth of Independent States (CIS)



...

# Priority directions of cooperation

- information technologies
- mechatronics and automation
- power engineering
- material science and nanotechnologies
- economics
- ... **YOUR** direction?



# Example 1. IFOST Network University

## Participants of the International Forum on Strategic Technologies (IFOST, since 1996):

- University of Ulsan (Rep. of Korea)
- Novosibirsk State Technical University
- Tomsk Polytechnic University
- Harbin University of Science and Technology (China)
- Mongolian University of Science and Technology (Ulan-Bator, Mongolia)
- Hanoi university of technology (Vietnam)
- Ho Chi Mihn university of technology (Vietnam)



# IFOST Network University

Directions of cooperation (example of sections in 2012)

- **1. Advanced Materials and Nanotechnology**
- **2. Applied Engineering Sciences**
- **3. Biotechnology and Green Development**
- **4. Civil Engineering and Urban Planning**
- **5. Geology and mining Engineering**
- **6. Information and Communication Technology**
- **7. Mechanical Engineering and Non-destructive Testing**
- **8. Power Engineering and Renewable Energy**
- **9. Social and Human Sciences for Engineering**



# Example 2. University Network «East Asia Economic Forum» (since 2004)

Participants:

1. NSTU
2. Harbin University of Commerce (China)
3. Innovation Eurasian University (Pavlodar, Kazakhstan)
4. Naryn State University (Kyrgyzstan)
5. Siberian university of consumer's cooperation (Novosibirsk, Russia),
6. University "Kynar" (Semey, Kazakhstan)

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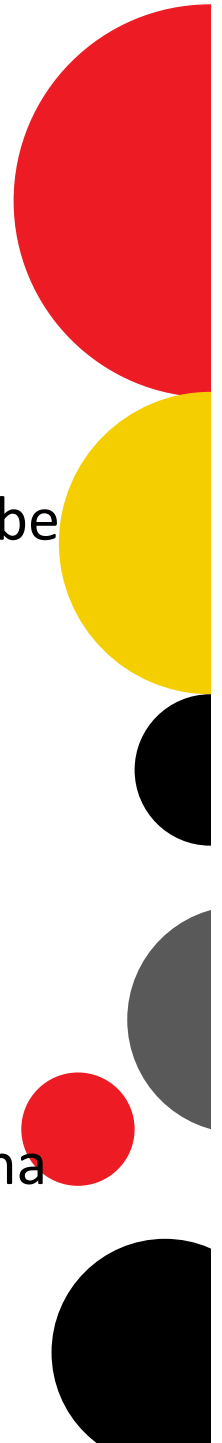


## NSTU Network consists of:

- JEP partner universities
- Information and resource centers(Xian, China; Dushanbe (Tajikistan))

### Potential partners from:

- IFOST
- East Asia Economic Forum
- Association “Joint educational programs and double degree diploma” (NSTU, TPU, RUPF)
- Association of Technical Universities of Russia and China
- CIS network university





# Development of Joint Educational Programs

1. **"Power supply systems and their maintenance"** (Master level, Dpt. of industrial electric supply). Consortium members: Mongolian University of Science and Technology, Karaganda State Technical University, Kazakhstan.
2. **"Global innovation management"** (Master level, Business Faculty). Consortium members: Laaperanta University of Applied Sciences, Finland, University of Warsaw, Poland, East Kazakhstan State Technical University named after D. Serikbaev and University "Kynar", Kazakhstan.
3. **"Chemical Engineering"** (Master level, Dpt of technological processes and apparatus). Consortium members: University of L'Aquila, Italy.
4. **"Electrotechnology"** (Master and Postgraduate levels, Dpt of automation of electrotechnological installations). Consortium members: Silesian University of Technology, Poland, University of Technology Katowice, Poland, University of Padua, Italy.
5. **"Materials Science"** (Master level, Dpt. of Materials Science in Mechanical Engineering). Consortium members: University of Hannover, Germany.
6. **"Mechatronic Systems and Automation"** (TEMPUS MPAM, Master level). Consortium members: Technical University of Liberec (Czech Republic), Technical University of Sofia (Bulgaria), University Blaise Pascal (France), 3 Russian and 4 Ukrainian technical universities.

