

Erasmus+ Capacity Building Projekte der Universität Bremen

Erasmus+ Forum für Partnerschaften und
Kooperationsprojekte

„Von der Idee zum Projekt“

5.-6. November 2019

Dr. Igor Novopashenny

Center for Multimedia in Higher Education (ZMML), University of Bremen

University of Bremen

- Founded in October 1971
- Approx. 19.000 students
- University with 3.500 employees
 - Approx. 2.000 Scientists and Scholars
Approx. 300 Professors
 - Approx. 1200 Administrative and
Technical staff

Technology Park:

- 500 companies
with approx. 7.300 employees
- 20 institutes
with approx. 1.500 employees

Tempus / Erasmus+ Projekte

- 2011-2014: Enhanced three level competency-based curricula in Applied Marine Science / **eMaris** (Tempus).
- 2016-2019: Innovative teaching and learning strategies in open modelling and simulation environment for student-centered engineering education / **InMotion**.
- 2017-2020: Sustainable Natural Resource Use in Arctic and High Mountainous Areas / **SUNRAISE**.
- 2020-2023: Marine Coastal and Delta Sustainability for Southeast Asia / **MARE**.

InMotion*:

Innovative teaching and learning strategies in open modelling and simulation environment for student-centered engineering education

The general aim of InMotion is to continue the reform of the system of higher education in the Engineering in Malaysia and Russian Federation to improve quality of education and teaching in the field of CMSE.

- Improve the level of competences and skills in CMSE by developing new and innovative education approaches and Learning modules.
- Provide relevant learning activities in appropriate contexts for different types of learners, including lifelong learning.
- Ensure a quality higher education system in CMSE and enhance its relevance for the labour market and society.
- Promote a European dimension in higher education for the modernisation, accessibility and internationalisation of the higher education in CMSE in MY and RU.
- Contribute to the cooperation between the EU and PC universities

InMotion*:

Innovative teaching and learning strategies in open modelling and simulation environment for student-centered engineering education

Five countries: Germany, Malaysia, Russia, Spain, Slovenia

Ten partners:

- University of Bremen (UNIHB), Germany, Bremen. Project coordinator.
- Saint Petersburg State Marine Technical University (SMTU), Russia, St. Petersburg
- St. Petersburg State Polytechnical University (SPbPU), Russia, St. Petersburg
- Novosibirsk State Technical University (NSTU), Russia, Novosibirsk
- Universiti Kuala Lumpur (UNIKL), Malaysia, Kuala Lumpur
- Universiti Teknologi Malaysia (UTM), Malaysia, Kuala Lumpur
- National Distance Education University (UNED), Spain, Madrid
- University of Liubljana (UL), Slovenia, Lubljana
- Federal State budget financed Institution of Sciences St. Petersburg Institute for Informatics and Automation of the Russian Academy of Sciences (SPIRAS), Russia, St. Petersburg
- Universiti Teknologi PETRONAS (UTP), Malaysia, Bandar Seri Iskander

InMotion*:

Innovative teaching and learning strategies in open modelling and simulation environment for student-centered engineering education

- Einige Partner sind Mitglieder europäischer Gesellschaften für Modellierung (EUROSIM, COMOD).
- Die Hauptidee ist Verbesserung der Ausbildung im Bereich CMSE und CMSE als fundamentales Fach und nicht fachspezifisch zu unterrichten
- ZMML ist die E-Learning-Einrichtung der Universität Bremen
- Eines der Projektziele ist die Einführung innovativer Lehr- und Lernmethoden (Blended Learning, studierendenzentriertes und forschendes Lernen)
- Alle PC-Universitäten hatten bereits eigene Erfahrungen im Bereich E-Learning und konnten sich synergetisch austauschen

InMotion*:

Innovative teaching and learning strategies in open modelling and simulation environment for student-centered engineering education

Alle Partner profitieren von dem Projekt

- Partner Universitäten: bekommen neue Curricula, Syllabi, TLM, die von allen Partner gemeinsam entwickelt wurden
- EU Universitäten: Vermittlung eigener Verfahren (Curriculum, Syllabi, Textbücher, eLearning Module, etc.). Test Umfeld für neue Methoden und Ansätze. Erfahrungsaustausch mit den anderen Partnern.
- Alle bekommen Internationale Sichtbarkeit
- Es entsteht weitere Kooperation zwischen den Partnern, z.B. Memorandum of Understanding zwischen University of Ljubljana und Novosibirsk State University.

InMotion*:

Innovative teaching and learning strategies in open modelling and simulation environment for student-centered engineering education

Specific objectives of the project

- Updated Curricula in CMSE with new Syllabi and educational content as fundamental educational program for three level educational model and development of guidelines for Long Life Learning.
- Development of a common approach for student-centered learning in the use of modern computer simulation packages and tools for solving innovative engineering problems for various application areas.
- Introduction of eScience approach and research-based learning; development of eLearning Modules based on innovative teaching strategies and creative learning approaches using workflow modelling tools and Blended Learning model based on the best ICT solutions
- Elaboration and implementation of Open Modelling and Simulation Environment platform (OMSE), and online training services of the new generation (MOOC) for qualitative improvement of the engineering education process and academic workflow support among universities and stakeholders across the PC and EU Member States.

InMotion*:

Innovative teaching and learning strategies in open modelling and simulation environment for student-centered engineering education

Target groups of the project

- Bachelor and Master Students
- Doctoral Students
- Specialists already working in the field of CMSE

InMotion*:

Innovative teaching and learning strategies in open modelling and simulation environment for student-centered engineering education

Tasks of the project:

Update Curricula of Engineering Education in the part of the CMSE disciplines

- Develop new Syllabi in CMSE
- Develop new Teaching and Learning Materials - TLM (Textbooks, Guidelines, Virtual Labs, Mini Projects)
- Develop eLearning Modules for Open Modelling and Simulation Environment platform (OMSE/Sakai)
- Teach Bachelor & Master students in the Partner Countries Universities according to new Curricula, Syllabi and TLM during the 2 and 3 Project years and in Summer school (July 2018)

Tipps zu Antragsvorbereitung

- Die Vorbereitung muss lange vor der Veröffentlichung der Ausschreibung beginnen
- Partner Auswahl: Wichtig sind bereits vorhandene Kooperationen zwischen den Partnern, z.B. aus anderen Projekten und Initiativen
- Auswahl von der Prioritäten
- Analyse von der Methoden und Ausbildungsprogramme
- Labour Market Analyse
- Vergleich der Curricula / Syllabi in PC und EU
- Einführung innovativer Lehr- und Lernmethoden



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

MARE: Marine Coastal and Delta Sustainability for Southeast Asia Project Presentation

Five countries: Germany Estonia Italy Malaysia Vietnam

Thirteen partners

Aims of the project

The general aim of MARE is to promote sustainable governance & management of coastal, delta & marine (CDM) socio-ecological systems in MY & VN and adjacent waters through ICT-enhanced tertiary education linked to labour markets & wider stakeholder circles. This aim will be achieved through the following objectives:

- To revise and upgrade selected BSc, MSc & PhD programs in PIs to make them end-user-oriented & policy-relevant, and enhance opportunities for LLL education
- To develop MARE open education environment Platform (E-MARE) and online training services for qualitative improvement of the education process and academic workflow support among universities and stakeholders across the PC and EU Member States
- To create sustainable feedback mechanisms to end-users, ensuring adaptive and practice-relevant teaching contents, knowledge co-production opportunities and stakeholder support to post-project course development and teaching
- To develop capacity for academic mobility, shared experimental facilities and joint research by PIs and beyond

Thank you
for your
attention!

Contact:
novopashenny@zmml.uni-bremen.de