

MMATENG project: consortium meeting.

KNRTU-KAI, Kazan
13-14 April 2016.

Work plan overview

Project Year 1 (Developing Phase)

1. **Review, analyse, upgrade** current curricula in Material Engineering
2. **Develop teaching materials** for 12 new core curricula, 3 transferable modules and on this base a set of curricula and modules.
Develop new practice oriented supporting infrastructure
3. **Begin to develop, publish and purchase** a manual, handbooks and syllabi.
Joint web based platform
4. **Prepare a set of documentation** for MITL and MESO, purchase/install equipment.

Project outcomes:

- Curricula:
 - Course materials are made and distributed during trainings and are available on the website
 - Are still updated with new version: courses 6-9, 2
 - Secured area:
 - User: teachingmaterial
Password: tempus-mmateng-2014

12 +1 core curricula/modules

- ✓ Materials Engineering Basics (BA)
- ✓ Material selection (BA/MA)
- ✓ Light weight materials for transportation (MA)
- ✓ CAD-CAM - CAE CREO (PTC) (BA/MA)
- ✓ Surfacing techniques (MA):
- ✓ Technologies and applications of Superconductive materials (MA)
- ✓ Microstructure investigation techniques (MA)
- ✓ Damage and reliability of materials (MA)
- ✓ Metallurgy and metallic alloys (MA)
- ✓ Materials from Renewable Sources (BA/MA)
- ✓ Nano materials Technologies (BA/MA)
- ✓ Strengthening technologies of materials treatment (MA)
- ✓ Thermodynamics for materials (MA)

3 Transferable curricula/modules

- ✓ Project management (business planning, funding, marketing, performance) (BA/MA)
- ✓ Soft skills for engineers:
 - ✓ Effective communication with groups, presentation techniques (BA/MA)
 - ✓ Survival in Labor Market (carrier managing) (BA/MA)

Project outcomes:

- Teaching materials:
 - Books published: PSTU, MSTU
 - Conference proceedings from methodological conference in CUT
- MITL: (Materials Information Technology Labs)
 - Equipment delivery: overview by D. Bogdanov
- MESO: (Material Engineering Service Office)
 - Equipment delivery: overview by D. Bogdanov
 - Establishing of the MESO-offices is going on
- Media covering: flyers, news covering (on the website)

Work plan overview

Project Year 2 (Work out Phase)

1. **Training courses in EU:** Retrain academic teachers in new curricula, methodology. Tentatively: 3 retraining courses in new curricula/modules (duration each two or three weeks)
2. **Retrain courses** in partner countries for non academic mentors, who will be able to supervise student's practice in their enterprises
3. **Staff training** for MESO offices will take place in TUB, prepared and carried out by ECM Office
4. **Master Classes:** Minimum 14 Master Classes on operation of new labs will be prepared and delivered in target universities.
Complete establishing MESO with stakeholders support

Project outcomes:

- Master classes conducted:
 - In Russia: FEFU, KNRTU-KAI
 - In UA: planned in Kiev during the meeting 25-26 April
 - In KU Leuven during the training
 - In CUT during the training
 - In IL: TAU during the consortium meeting
 - MESO-training at TUB
- Presentations can be found on the website

Work plan overview

Project Year 3 (Implementation Phase)

1. **Pilot teaching /operation:** Teaching students in new curricula/modules. Approximately 20 students from each target university will be involved in the courses offering new curricula/modules
2. **Accredit** a set of curricula and modules on national level
3. **Pilot operation** of MESO involving universities and stakeholders outside the project. This activity targets to ensure the sustainable operation.

Work plan overview

Disseminations & Sustainable Activities

From the first till the last day of project life are planned activities on dissemination of information and ensuring of sustainability of project outcomes. Each target university will work out timetables for publications, information and sustainability ensuring events based on project activities especially by MESO.

It is planned to invite representatives from stakeholders and universities outside the consortium to promote and disseminate the project outcomes.

To involve new participants into the project activities there will be developed the "MMATENG Plus" agreement.

- Conferences & workshops
- Project web portal
- Involving stakeholders
- Finding and attracting sponsors
- Commercialization of results

Consortium meeting:

- Problem: co-financing.
 - Equipment
 - Printing-publishing:
 - Travel
 - ...
- Late registrations for meetings make organization difficult.

- Remember that :
 - All communication should be in English.
 - All documents (scan, signed and stamped) to should be send to Peter Arras, Elena Eyngorn and dr Arnold Sterenharz.
 - Naming of the documents: Pxx_name_document (xx = partner number).

CES Edupack

- Webinar Mike Ashby: introduction to 2016 edition
<https://www.youtube.com/watch?v=tR7c3BVkwS4&feature=youtu.be>.
- About 2016 version on the web:
<http://www.grantadesign.com/education/edupack/edupack2016.htm>
- Release Notes:
http://www.grantadesign.com/download/pdf/edupack2016/CES_EduPack2016_What's_New_Release_Notes.pdf
- Getting Started Guide:
http://teachingresources.grantadesign.com/Getting_Started_Guides/GETSTAEN16

Mem-sticks

- CES stick:
 - Installation guide
 - Software CES-Edupack 2016.
- MMATENG-stick:
 - Presentations of the different masterclasses
 - CES: info
 - Project: this ppt, agenda

Consortium meeting:

- Prolongation of the project:
 - Delay at start of the project (late signing of the contract with EU)
 - Delays because of problems with equipment
- To reach outcomes: prolongation till after end of academic year:
 - Pilot teaching finished
 - More time for extra master classes: Lviv, Magnitogorsk, Rostov
- Final conference: shift a little in time to spring.

Contacts.

Dr ing. Peter Arras

Contact/coordinator tempus MMATENG

Design techniques.

KU Leuven| Faculty of engineering technology

Technology campus De Nayer

J. P. De Nayerlaan 5

BE2860 Sint Katelijne Waver | Belgium

Tel. + 32 (0)15 31 69 44

mob. + 32 (0)486 528 196

Email: peter.arras@kuleuven.be