ANNUAL CONFERENCE
LVIV POLYTECHNIC NATIONAL UNIVERSITY

Lviv 19th -20th of October 2016

TEMPUS MMATENG

“Modernization of two cycles (MA, BA) of competence-based curricula in material engineering according to the best experience of Bologna Process ”

Agenda

Tuesday, 18.10.2016

- Arrival of training participants to Lviv and transfer to the accommodation.

Accommodation:

Note (!): Each participant makes reservation of hotel by himself/herself.

Venue:
Lviv, 79013, St.Bandera street 12, the main building of LPNU, Academic Council Hall

Lviv, 79013, Ustiyanovicha street, 5, educational building №10, lecture hall № 51 and laboratory № 29

October 19th, 2016		
9.30 – 10.00	Registration of the consortium meeting participants	
10.00 – 10.30	Opening of the Tempus MMATENG coordinating meeting and Master Classes at LPNU. Welcome of the conference participants by Rector of LPNU	Dr.-Ing. Peter Arras Prof. Yuriy Bobalo
10.30 – 11.30	Master class: “Corrosion”	Prof Amir Eliezer SCE
11.30 – 12.30	Master class: “Stainless Steels”	Prof Jean Bernard Vogt ENSCL Lille
12.30 – 13.30	Lunch	
13.30 – 15.30	Overview of the project outcomes. Consortium meeting.	Dr. Ing Peter Arras Elena Eyngorn Dr Arnold Sterenharz
	Coffee break	
15.30 – 16.30	Master class: “Soft Skills for Engineers”	Elena Eyngorn TU Berlin
15.30 – 16.30	Master class: “Innovation”	Prof Amir Eliezer SCE
17:00 -19:00	Guided Tour through Lviv	
19.00 – 21.00	Dinner Venue:	

October 20th, 2016		
10.00 – 11.00	Master class: “Next-generation Strengthening technologies of materials treatment”	Prof Oleksandr Cheyliakh PSTU
11.00 – 12.00	Master class: “The basic of knowledge about bio composites and biodegradable materials”	Stanisław Kuciel CUT
12.00 – 13.00	Master class: “Mechanism of Solidification of the metals and alloys”,	Prof Zoia Duriagina (LPNU)
13.00 – 14.00	Lunch	
14.00 – 15.00	Master class: “Anisotropy in metals and plate forming”	Prof Dr ir. Jan Ivens KU Leuven
14.00 – 15.00	Master class: “CREO – virtual prototyping”	Dr.-Ing. Peter Arras KU Leuven
15.00 – 16.00	Master class: “Material selection”	Prof Dr ir. Jan Ivens KU Leuven
15.00 – 16.00	Master Class: “Introduction to Business Plan - useful tools for support market analysis, scheduling and estimation”	Kinga Korniejenko CUT
16.00 – 17.00	Master Class: “ “	Ilan Goldfarb TAU

Friday, 21.10.2016

Departure of participants.

Masterclasses:

"The basics of knowledge about bio-composites and biodegradable materials" , Stanisław Kuciel (CUT)

The main objective of the course is to present new trends and knowledge in the field of environmentally-friendly engineering materials. It is primarily focused on biopolymers and their composites (natural and synthetic or modified) obtained from various kinds of bio-mass feedstock.

"Introduction to Business Plan - useful tools for support market analysis, scheduling and estimation ", Kinga Korniejenko (CUT)

- Business planning
- Market analysis (Elements of market analysis, Methods of market research, SWOT analysis, Porter's 5 Forces, PEST analysis)
- Scheduling and estimation (Create budgets, Methods of time management, Schedules - Gantt chart)

"Next-generation Strengthening technologies of materials treatment" , Prof Oleksandr Cheyliakh. (PSTU)

It integrates the variety of new strengthening technologies, based on application of different physical and chemical phenomena and processes, like thermal, chemical and thermal, mechanical, magnetic, creation of high and super-high impact actions and pressures, material's exposure to sources of highly concentrated energy (plasma, laser or electron beams) ionic flows and also their combinations. Mastering of this course is to help students to come to know very well the particulars of numerous existing technologies, make their right selection and efficiently apply them for strengthening and improving not only mechanical but also exploitation properties, judging by the specific exploitation conditions.

"Anisotropy in metals and plate forming", Prof Jan Ivens (KU Leuven)

The forming limits of metal plates are determined by the anisotropy factor r and the strain hardening coefficient n. This lecture focuses on the definition of both parameters, the experimental determination and their link to the forming limit diagrams. The effect of the material history on the forming will also be defined.

"Material selection" , Prof Jan Ivens, (KU Leuven).

The vast number of materials available for engineering applications is an opportunity and a challenge. It requires a methodological approach to select a material in the early stages of the design process. The lecture presents the materials selection approach, as developed by Prof. M. Ashby (Cambridge University), based on the definition and optimisation of the material index. The method will be illustrated by some examples.

“CREO-Virtual Prototyping”, Dr ing. Peter Arras (KU Leuven)

Modern computer aided techniques changed the world of design towards a world in which virtual prototypes can be used to check and improve the design. These design methods aim to eliminate the use of many physical prototypes.

In a short overview we will explore the different techniques and see how they can be used in teaching engineering students .

“Mechanism of Solidification of the metals and alloys”, Prof Zoia Duriagina (LPNU)

This lab is carried out for bach on the discipline "Materials Science". We demonstrate the process of crystallization of salt solutions. We investigate the mechanism of the normal and dendritic crystallization. Showing the influence of the heat extraction rate on the the size of crystallites.

No.	Organization	Surname	First name	e-mail
1.	KU Leuven	Arras	Peter	peter.arras@kuleuven.be
2.	KU Leuven	Ivens	Jan	Jan.ivens@kuleuven.be
3.	TUB	Eyngorn	Elena	elena.eyngorn@ilr.tu-berlin.de
4.	PSTU	Cheiliakh	Oleksandr	Cheylyakh_o_p@pstu.edu
5.	CUT	Korniejenko	Kinga	kinga@mech.pk.edu.pl
6.	CUT	Mikula	Janusz	janusz_mikula@tlen.pl
7.	CUT	Kuciel	Stanislaw	stask@mech.pk.edu.pl
8.	LNPU	Duriagina	Zoia	zduriagina@ukr.net
9.	ECM	Sterenharz	Arnold	arnold.sterenharz@ecm-office.de
10.	TAU	Goldfarb	Ilan	ilang@eng.tau.ac.il
11.	SCE	Eliezer	Amir	amir@sce.ac.il
12.	SCE	Gabai	Yshai	gabai@sce.ac.il
13.	PSTU	Polupanova	Katherina	polupanova.pstu@gmail.com
14.	KPI	Bogomol	Yurii	ubohomol@iff.kpi.ua
15.	KPI	Loboda	Petro	PetrLoboda@yandex.ru
16.	LNTU	Melnichuk	Mykola	melnuchyk80@gmail.com
17.	ENSCL, Lille	Vogt	Jean Bernard	jean-bernard.vogt@univ-lille1.fr
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