### EVLM – European Virtual Laboratory of Mathematics Leonardo da Vinci Programme, Project No SK/06/B/F/PP-177436

### WORKPLAN

### a) List of Workpackages

Work-package	Timetable	Months	Responsible Partners	Results, Outcomes
WP1 Organisation and management planning Competence enhancement	X – XI 2006	2	P1, P9 - English websites, P2 - P8 - national versions	Project website design 1M. Kick-off meeting – P1
WP2	X – XII 2006	3	all	EVLM portal design
WP3	I – III 2007	3	P1, P3, P8, P9	Database system development 2M. Database meeting – P9
WP4	IV – VI 2007	3	P1, P3, P8	Installation of servers
WP5	VI – VII 2007	2	P1, P3, P8, P9	Testing the functionality Database Operational manual
WP6	VII – IX 2007	3	all	Populating the Central / National Databases and their updates
WP7	X 2007	1	P1 - P7 all	Launching the National centres of Mathematics Production of dissemination booklets and information leaflets
WP8	I – IX 2007	9	P1, P4, P9	Translations Interim evaluation 3M. Dissemination meeting – P4
WP9	X – XII 2007	3	P1 - P7	Training tutorials for teachers
WP10	X– XII 2007	3	all	Teacher's guide – CD 4M. Workshop I – P2
WP11	X 2007 – IX 2008	12	P1 - P8	Assistance to students, expert consultancy
WP12	I – III 2008	3	all	Student's book – CD 5M. Workshop II – P7
WP13	VII 2007 - IX 2008	12	all	Database updates 6M. Valorisation meeting – P6
WP14	VI- IX 2008	6	all	Valorisation results , feedback analysis
WP15	IX 2008	1	P1, P6, P9	Overall evaluation 6M. Valorisation meeting – P6

## b) List of activities and responsible partners

- 1. Project website design (national versions)
- 2. EVLM portal design (national portals)
- 3. Development of the central database system

P1, P9 (P2 – P8) all P1, P3, P8

4.	Installation of Servers – central, webMathematica		P1, P3			
5	– Halional Populating databases		P2 - P8 all			
5. 6	Database Operational manual production		P1. P3. P8. P9			
7.	Testing functionality of the EVLM network		all			
8.	Launching of the National Centres of Mathematics		P1 – P7			
9.	Creating mathematical resources for the Databases		P1 – P7			
10.	Continuous update and maintenance of the Databases		all			
11.	Providing expert consultancy for target groups or individ	duals	P1 – P7, P9			
12.	Teacher's guide book CD production		all			
3. 14	Student's work book CD production		all			
14. 15	Evaluation of the project results		P9 D1 D0			
10.	Production and dissemination of the leaflets booklets		all			
10.						
c) Plan	of meetings					
1.	Kick-off meeting	coordinator P1,	Work-package 1			
		SK (Bratislava)	), November 3 - 4, 2006			
PROGR	AMME: Organisation and management planning					
	Competence enhancement					
	Project website design					
2.	Database meeting – brainstorming	partner P9, Wor UK (Coventry)	rk-package 3 , January 25 – 27, 2007			
PROGR	AMME: Discussion about the database contents Visit to the working Math centre at Coventry Unive Brainstorming and EVLM functionality planning	ersity				
3.	Dissemination meeting	partner P4, Woi FS (Salam	rk-package 8 panca), June 2007			
PROGR	AMME: Discussion about available e-learning materials					
	Dissemination strategies – national translations, re	eports on confere	ences, leaflets and			
booklets, posters, web forum Valorisation keynotes and valorisation strategic plan. Interim reports						
1	Workshon I	nartner D2 Wo	k-nackado 10			
4.	workshop i	BG (Plovd	iv). October 2007			
PROGRAMME: Preparation of teacher's guide book						
5.	Workshop II	partner P7, Wor	rk-package 12			
		ER (Limer	ick), March 2008			
PROGR	AMME: Preparation of student's work book					
6.	Valorisation-Evaluation meeting	partner P6, Wor	rk-package 13			
HU (Miskolc), June 2008						
PROGRAMME: Project Dissemination, Promotion and Valorisation Plan results						
	interim partner's reports, interim evaluation reports					
7.	Last meeting	partner P5, Wo	rk-package 14			
PROGRAMME: Overall evaluation of the project work and results						
Planning of the further activities						
	EVLM functionality and extension					

# d) Calendar of deliverables

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MONTH	DATE	ТҮРЕ	PARTNERS
3rd	January 15, 2006	Project webpages	all
6 <sup>th</sup>	March 15, 2007	EVLM Portals	all
10 <sup>th</sup>	July 15, 2007	Database Operational Manual	P1, P3, P8, P9
11 <sup>th</sup>	August 15, 2007	Dissemination leaflets production	all
12 <sup>th</sup>	September 15, 2007	Collection of consultancy topics	all
13 <sup>th</sup>	October 15, 2007	Launching National Centres of Mathematics	P1 - P7
14 <sup>th</sup>	November, 2007	Overall report 1	P1, P9
15 <sup>th</sup>	December 15, 2007	Teacher's guide book CD	all
16 <sup>th</sup>	January 15, 2008	Electronic questionnaire forms for feedback	Р9
		Information booklets production	all
17 <sup>th</sup>	February 15, 2008	Feedback collection from trained teachers	P1 – P7
18 <sup>th</sup>	March 15, 2008	Student's workbook CD	all
20 <sup>th</sup>	May 15, 2008	Feedback analysis 1	P9
21 <sup>st</sup>	June 15, 2008	Feedback collection from students	P1 – P7, P9
23 <sup>rd</sup>	August 15, 2008	Feedback analysis 2	Р9
24 <sup>th</sup>	September 15, 2008	Updated list of consultancy topics in the databases	all
25 <sup>th</sup>	October 2008	Final report	P1, P9

#### e) Agreement

1. Learning outcomes for mathematical courses in engineering education are clearly described in the material developed by the SEFI Mathematics Working Group

Core Curriculum, Mathematics for the European Engineer – a curriculum for the twenty-first century, 2002

which is available at the SEFI MWG homepage - http://learn.lboro.ac.uk/mwg/core.html

All e-learning materials and consultation topics stored in the project database will be developed with the aim of meeting the main ideas of the cited document, and therefore these will be relevant to meeting the needs of target groups.

2. Results of the previous projects, in which partners were involved, will be summarised and the EVLM portals will be linked to existing free-ware products.

Currently available materials include the following:

Pilot course - Differentiation and Integral Calculus, results from the Xmath project, in English

Geometry in plane - e-learning modules, results from the dMath project, in English

Numerical methods - e-learning modules, results from the dMath project, in English

Ordinary differential equations - e-learning modules, results from the dMath project, in English

MathCentre – e-learning materials, in English

- 3. Special electronic questionnaire forms will be developed and attached to the project official webpage. These forms will be used to receive feedback from EVLM database users (responsible partner P9. The answers will be analysed and the results of the analysis will be incorporated in further work on the project aims. In the attached table of deliverables, dates for feedback from each of the partners are specified.
- 4. Materials stored in the database and presented on the web will be available free for educational purposes to all participating institutions, in accordance with the basic human right of free information, access to knowledge and education. EVLM partner institutions will guarantee quality and original authorship of the materials by including names of the authors and institutions of origin.
- 5. EVLM portals and webpages, National Centres of Mathematics and databases will be maintained by partner institutions after the end of the project, for at least 5 years. Possibilities of partial commercialisation and paid access to the developed and populated databases will be discussed during the project lifetime. A survey will be carried out in order to on EVLM national portal establish potential interest among European universities and educational institutions during partner participation at conferences on mathematics education. All information gathered will be analysed and relevant results will be adopted.

in Bratislava, November 20, 2006, signed by the contact persons:

Contractor - Partner 1, Slovak University of Technology in Bratislava, SR:

Partner 2, Plovdivski Universitet Paisii Hilendarski, BG:

Partner 3, Západočeská univerzita, Plzeň, ČR:

Partner 4, Universidad de Salamanca, ES:

Partner 5, Tilossilos Ltd., FI:

Partner 6, Miskolci Egyetem, HU:

Partner 7, University of Limerick, IE:

Partner 8, Slovenská spoločnosť pre Geometriu a Grafiku, SR:

Partner 9, Coventry University, Faculty of Engineering and Computing, UK: