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MECA PROJECT

TRAINING WORKSHOP FOR TEACHERS ON JOB-LINKED EDUCATION

POLITEHNICA University of Bucharest and Giga Electronic International
30th-31th October 2017

Participants

See the list of participants. The partners from INES, Polito and OUN did not attend the workshop.

DAY 1: 30TH October

Training by the representatives of the enterprises on development of job-linked engineering courses.



- Prof. Paul Svasta, Head of UPB-CETTI: welcome and opening speech.

WP4 Instructional design of courses for training for higher order skills mCloud

Slavka performed training on instructional design of e-learning courses:

- eLearning requires changes in pedagogy/didactics and organisation of teaching and learning emphasising: activity-based and independent learning; development of higher order skills; variation in resources and environments for learning; teacher role shifting from instructor to facilitator/coach.
- Instructional designers have to think in terms of training solutions to performance tasks. The task analysis defines the underlying skills and knowledge that lead to expert task performance.
- The students' assessments are changed in term of well-performed task. Goals and objectives transform the measurement of achieved knowledge and skills to the measurement impact on performance. And the evaluation of this impact will be the required level of performance.



TRAINING OF TEACHERS ON JOB-LINKED EDUCATION Bucharest 30th-31st October 2017

- Instructional designers have to keep in mind the broad variety of factors influencing task performance and their relationships. They will have clear vision about learning settings and be as close to the task activity settings as possible, in time, place and tools. Students have to be acquainted with undertaken movement from learner-oriented to task-performance-oriented learning and to be courage to this direction.
- New knowledge acquisition becomes one of the important parts of educational system life. Different methods, technique and tools, like “notice books” for learner’s experience, discussions, FAQ etc., are used to derive from the individual learning the new knowledge for perspective learners.
- TO DO: Add tasks, questionnaires, practical projects, homework, feedback, face-to-face meetings for each developed course; interactivity between courses.

WP4 Design of courses for job-oriented training of students in the educational mCloud . Training workshop by the representatives of the business.

Four of the business partners developed job-related courses:

- INOMA on : “Electronics maintenance in Renewable energies”
- AMG Technology: “Design, Prototype Fabrication and Challenging Applications of Silicon Microsystems with Piezoresistive Feedback”
- INES: “Silicon Homojunction Solar Cells ”
- ASTEL created a Video Lesson about main criticisms in handling semiconductor devices manufacturing. In this course the design of an optical inspection station of semiconductor wafers is presented.

Vladimir Stavrov, Paolo Astengo and Francisco Javier Leal Juarez performed practical training to the course developers and teachers on how to develop job-related courses. They demonstrated their courses and provided examples from their experience in staff training.

Norocel Codreanu, Mile Stankovski and Slavka Tzanova discussed the support they received from the partners from SMEs: Giga Electronic International, ATRONIKA and MASHO EOOD.

DAY 2: 31ST October

- Prof. Slavka Tzanova, TUS asked to make changes in the agenda and to start with the rules for financial reporting because by the end of the meeting the partners are too tired. The change was accepted.



WP1 Management. Intermediate report results. New requirement for the financial report

Slavka explained that she had a bad experience with already reported and audited Tempus project with additional financial documents required. In order to avoid collection of financial documents and huge paper work after the project end she wants to collect all documents during the project implementation and in a form the document will be sent to the financial evaluators of EACEA.

In the interim report, the staff costs for 105 persons have been reported and more than 70 mobilities. The co-ordinator cannot collect the different documents for each person/partner. That is why the partners should provide the reports in a form to be sent to Brussels in a case of audit.

The necessary documents for each position in the excel table should be combined in one pdf file. The pdf files for staff costs of one institution for the first period (until the interim report) should be in one folder, e.g. "TUS Staff costs", and pdf files for mobility in another folder, e.g. "TUS Mobility reports". In a third folder should be the pdf files with all other expenditures, e.g. mobility for management, dissemination, invoices etc., costs for the project implementation but according to the KA rules, reported only as staff costs.

All folders with the pdf files should be added to one archive, uploaded on some server (through Wetransfer.com or other) and the link sent to the co-ordinator.

The KAs are result driven projects and the project budget for implementation is reported in time-sheets. The reported tasks should be concrete and described in details.

1. Activities reported without results are not acceptable, i.e. "development of the course" without the course available or "development of mClouds" without any activity in setting up mCloud.

2. Concrete and detailed description of each activity in the time-sheet should be done.

Bad example: "Management", "Need analysis"

Good example: "Preparation of the presentation of the project activities for the kick-off meeting.", Preparation of budget transfers to AMG-technology, Atronica, Organisation of the kick-off meeting, Preparation of the presentation for the kick-off meeting of KAs in Brussels, Checking and confirming the timesheets of the staff from TUS" etc.

Bad example: "Course development", "Development of training modules"

Good example: "Development of course content in Microelectronics for ICT. Buffers, Development of course content in Microelectronics for ICT. Shift registers, Design of projects for students' activity etc."

Bad example: "Specification of the mCloud system", "Development of mCloud system"

Good example: "Preparation of the questionnaire for the technical cloud environment, Open VPN setup, tests with viscosity VPN, Tests of master-slave and master-master replication, Exchange of mysql data with BME to synchronize the management servers" etc.

Important: Tasks non-performed must not be reported. INSA did not perform the need analysis and their work load of the staff was reduced. The same will be done with all partners who did not perform the planned tasks.



TRAINING OF TEACHERS ON JOB-LINKED EDUCATION Bucharest 30th-31st October 2017

Staff costs in one folder for all persons reported in the excel table:

Per person and per row in the excel table: all copies combined in one pdf file, and the name of the file:

P(no. of the partner institution) (abbreviation of the institution) (name of the person), for example:

P1 TUS Slavka Tzanova

The documents in the file:

1. Time-sheets with detailed description of tasks performed
2. Employment contract with translation in English if the language is not French or German (formal language in EU: EN, FR and DE)
3. Payslips or payroll with translation

Mobility reports in one folder for all persons and training events reported in the excel table:

Per person and per row in the excel table: all copies combined in one pdf file, and the name of the file:

P(no. of the partner institution) (abbreviation of the institution) (name of the person) (destination), for example:

P1 TUS Slavka Tzanova Berlin

The documents in the file:

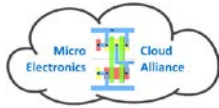
1. Mobility report
2. Plane/train tickets or other reporting documents for travel by car
3. Boarding passes if travel was by airplane
4. Document for the subsistence costs
5. Hotel invoice

Slavka sent to all partners by e-mail the file with the above requirements for the financial reports and examples how to prepare the package of document for reporting.
All partners should prepare and send the financial reports by 01.12.2017.

WP4 Development of job-specific training modules. The courses in the Educational Cloud, Oliver

Oliver has shown the status of educational cloud with the courses. Not all courses are open educational resources and some are only PDF files.

No.	Title	Developed by	Style	OER?
1	Design for Manufacturing of Microsystems	UPB-CETTI	PDFs	Yes
2	Electronic Packaging and Assembling Technologies of Microsystems	UPB-CETTI	PDFs	Yes
3	Technology of Electronics Products	BME-ETT & Lightware	HTML + flash	Yes
4	Assembling and Inspection Technologies	BME-ETT & Lightware	HTML + flash	Yes
5	Virtual Laboratory Support for Microelectronics Packaging Education	BME-ETT & Lightware	HTML + flash	Yes
6	Multi-Media Enhancement of Teaching Sensors and MEMS	BME-ETT & Lightware	HTML + flash	Yes



TRAINING OF TEACHERS ON JOB-LINKED EDUCATION
Bucharest 30th-31st October 2017

7	Silicon Homojunction Solar Cells	INES-LITEN CEA Tech	Video presentation of ppt	Yes
8	Electronics Maintenance in Renewable Energies	INOMA Renovables, S.L.	moodle based	Guests cannot access this course
9	Electromagnetic Compatibility of Integrated Circuits	INSA Toulouse	ppt	Yes
10	Nano CMOS Cell Design with Microwind	INSA Toulouse	ppt	Yes
11	Design and Realisation of Micro-Nano-BioSensors	POLITO	moodle based	Guests cannot access this course
12	Modelling and Design of ULSI Circuits and Systems	POLITO	moodle based	Guests cannot access this course
13	Effective Communication with Groups, Presentation Techniques	TUB Berlin	PDFs	Yes
14	Project Management for the 21st Century	TUB Berlin	PDFs	Yes
15	Superconductive Materials	TUB Berlin	PDFs	Yes
16	The Importance of Soft Skills at the Labour Market	TUB Berlin	PDFs	Yes
17	Nanomaterials for Electronics	TUS Sofia & MASHO	moodle based	Yes
18	Design of Nanoscale MOS ICs	TUS Sofia & MASHO	moodle based	Yes
19	MEMS Sensors and Actuators	UKIM Skopje	ppts within moodle only in Macedonian!!!	Yes
20	Semiconductor Device Modeling	UKIM Skopje	ppts within moodle	Yes
21	Integrated Circuits and Design	UNED-DIEEC	moodle based	Guests cannot access this course
22	Microelectronics Literacy and Technologies	UNED-DIEEC	moodle based	Guests cannot access this course
23	Design, Prototype Fabrication and Challenging Applications of Silicon Microsystems with Piezoresistive Feedback	AMG Technology	moodle based	Yes



TRAINING OF TEACHERS ON JOB-LINKED EDUCATION Bucharest 30th-31st October 2017

TO DO pdf files to be replaced by e-learning courses and all courses should be OERs.

WP4 Raising the interactivity of courses and tutors' support, experiences of distance education universities

Prof. Manuel Castro shared the experience of UNED in providing guidance to their distant students with a network of support centers, virtual laboratories practical work in enterprises. In order to rise the interactivity of courses more activities for students should be added and support by tutors provided.

Slavka suggested all partners to organise the students training with project assignments and different tasks for performance. Feedback should be provided as well.

WP3 Implementation of mClouds

All partners reported the work done after the previous meeting in Berlin.

Slavka has shown the plan and mClouds with all HEIs connected should be done by the end of 2017 in order to start the pilot test. Slavka asked all participants from the higher education institutions if they have got support by Massimo Rio Roch or somebody else from Polito for setting up the clouds around Europe. All declared that no support has been provided by Polito and even Massimo has not replied most of the partners' e-mails related to this support. Those who have joined mClouds did it with support from eWorks.

The conclusion of the PSC is that Polito has not participated in mClouds set up.

Martin Klossek, made a presentation on the status of mCloud (presentation published on the project Web site)

- o CloudStack installations;
- o Add HTTPS/SSL encrypted connection;
- o "basecamp";
- o "mecaadmin" – offers access for all other partners to one partner's courses;
- o There are 6 universities connected to mCloud from all 8 (TUB and INSA are not yet);
- o MECA Global Template Repository MGTR;
- o Store virtual machines on a central server;
- o Obtain official SSL certificate.

TO DO: mandatory virtual meetings; the first/next one in the presence of system administrators/system officers/system managers – on 5 December 2017 at 12.00 CET.

WP1 Management. ToDo list and planning the next meeting

Slavka made an overview of the project progress and tasks for next period.

- Objective 1 – has been achieved.



TRAINING OF TEACHERS ON JOB-LINKED EDUCATION Bucharest 30th-31st October 2017

- Objective 2 – very good status; Networking of project partners for collaboration; we should have many contracts between universities and companies/enterprises to support education; So far, there are four courses developed by partner companies.
- Objective 3 – we haven't received any help from the partner responsible Polito; Thanks to eWorks, 5 of the HEIs are ready. Development of the mCloud, deadline: December 2017.
- Objective 4 – we should conduct a Pilot Test between January 2018 and March 2018 on a small group of volunteers (10/country). We can exchange only free software.
- Objective 5 – between April 2018 and December 2018; 240 students and retrain teachers.
- WP6 – Pilot Test
 - TO DO: usability questionnaires and questionnaires on learning attitudes by 23 December 2017 in order to be delivered to the partners by 8 January 2018.
 - Indicators for impact on target groups (at least 50% with positive feedback).
 - We need training seminars, collaboration between students from different countries – virtual mobility of students.
- Outcomes – 23 shared courses for Master students (in 8 countries) with very active participation of business partners.

ToDo List

- Financial reports by all partners – deadline 1 December
- Contracts between HEIs and business – continuous
- PDF files to be replaced by e-learning courses and all courses should be OERs.
- To develop assignments for different student's activities (projects) for interactivity of courses.
- TUB and INSA to join mClouds until 1 December 2017. If Polito continues not providing support, to work with eWorks
- Plan for the pilot test by each university - 1 December 2017
- Plan for sharing resources and free software – Suggestion by each HEI on 5th December
- Usability questionnaire and questionnaire on learning attitudes to be developed by OUN, TUS and TUB – 23 December and sent to all partners - 8 January 2018
- Next virtual meeting on 5th December at 11:00 CET for planning the hardware and software sharing and accepting the template CloudStack (Adobe Connect, Appear.in).
- Next training seminar for teachers – in Cadiz on 1st - 2nd March 2018