

Train the trainer report

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Activities:

After participating in this program, I was able to do several activities that can be summarized as follows:

- 1. Teaching activities:** This program enabled me to participate in two educational events that took place at FH Bremen, the first one is during the International week from Jun 21 to Jun 28 2015, and the second one is during the orientation week from 28 Sep to 2 Oct 2015.

Event 1 details:

During the first event, I taught a block course in the field of multimedia signal processing, more than 15 students attended the course. Please find below the description of the taught course.

Course title: Multimedia Signal Processing

Instructor: Ala' Khalifeh, GJU, Jordan

Level: 2.+4. Semester, associated with HSB module Math2, Block B

Abstract/Contents: This course will cover several topics related to audio, speech and video signal processing such as the signals basics, compression, and quality evaluation.

Furthermore, the project will include a practical part where students will do small projects related to multimedia encoding and processing.



Figure 1: Dr. Ala' Khalifeh giving a block course on Multimedia signal processing at FH Bremen

Figure 1: ***.

Event 2 details:

In this event, I gave a block course in the field of Voice over IP technology. The course attracted more than 20 students from different levels and backgrounds. Figure 2 shows a group picture of part of the students who attended course. Please find below the course description.

Course Title: Voice over IP and video streaming technologies

Instructor: Dr. Ala' Khalifeh - German Jordanian University, GJU, Amman, Jordan

Target audience: CS and EENG students, i.e. students of informatics and of electrical and electronics engineering 2nd year and above, i.e. 3rd semester and above

Prerequisites: basic computer networking, some familiarity with Linux is preferred

Duration: Sep 28th -- Oct 2nd daily from 1:30 to 3:00 pm

Location: ZIMT

Course description: The course covers the basics of voice transmission over the IP network (VoIP) and video streaming which includes the following topics:

- Voice signal coding
- Voice packetizing and signalling protocols
- VoIP network architecture
- VoIP challenges
- Video signal and coding
- Video streaming basics
- Video streaming network architecture

At the end, the students will be asked to implement simple VoIP network and a video streaming server and test them under lossy network.

Students who attend at least 80% of the lectures will be issued an attendance certificate.



Figure 2: A group picture of the VoIP block course students

2. Research and other activities:

Workshop:

I have also participated in the PS2 – Express yourself/-city EU-Research Workshop and deliver a talk about the use of mobile phones for smart cities and how it can be used as a reporting tool for road defects and problems.

Faculty members and graduate students meetings

I have arranged several meetings with faculty members and graduate students to discuss the possibility of having collaborative projects and proposals. Particular, I have met with the following faculty members:

- Prof. Helmut Erund
- Prof. Thomas Rissie
- Prof. Martin Hering
- Prof. Richard Sethman
- Mr.Martin Koplin
- Ms Anneta Diller-Kemper

As a result of these meetings we decided that we will start writing a joint research proposal on the field of smart cities that will include faculty members from the both universities. We may target a call from DFG or BMBF to receive funding for the proposal.