



Environmental engineering education enhancement

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Since higher education plays a central role in the development of both human beings and modern societies, enhancing social, cultural and economic development, active citizenship, ethical values and expertises for a sustainable growth, environment respectful, the European Commission promotes a wide range of programmes. Among the EC programmes, the TEMPUS – Trans European Mobility Programme for University Studies, with the support of the DG EAC of the European Commission, has contributed to many aspects of general interest for higher education. Curricula harmonization, LifeLong Learning Programme development, ICT use, quality assessment, accreditation, innovation learning methods, growth of networks of institutions trusting each other, are the focused aspects. Such a solid cooperation framework is surely among the main outcomes of the TEMPUS Projects led by the University of Firenze UNIFI (Italy), DEREK - Development of Environment and Resources Engineering Curriculum (2005-2008), and its spin-off DEREL - Development of Environment and Resources Engineering Learning (2010-2013), and VICES - Videoconferencing Educational Services (2009-2012). DEREK and DEREL TEMPUS projects, through the co-operation of Universities in Italy, Austria, Germany, Greece, Macedonia, Albania and Serbia, are aimed at the development of first and second level curricula in “Environment and Resources Engineering” at the Ss. Cyril and Methodius University - UKIM Skopje (MK). In the DEREK Project the conditions for offering a joint degree title in the field of Environmental Engineering between UNIFI and UKIM Skopje were fulfilled and a shared educational programme leading to the mutual recognition of degree titles was defined. The DEREL project, as logical continuation of DEREK, is aimed to introduce a new, up-to-date, postgraduate second level curriculum in Environment and Resources Engineering at UKIM Skopje, University of Novi Sad (RS) and Polytechnic University of Tirana (AL). following the criteria and conditions for setting up a Joint Postgraduate Degree. A second objective foreseen the implementation of a sustainable regional network aimed at: offering lifelong learning seminars for environment and resources engineering education and training of interested stakeholders; organizing workshops focused on strengthening the links in the knowledge triangle: environment education-innovation-research, with participation of postgraduate students, public services, enterprises and NGO’s. The strength of the knowledge triangle implies new educational requirements, stimulated by innovative telecommunication technologies together with novel educational materials and methodologies, and lead the development of distance learning environment. In order to provide the basis of distance learning environments based on video conferencing systems and the methodology of blended learning courses, the TEMPUS Project VICES - Videoconferencing Educational Services (2009-2012) was carried out by UNIFI with the cooperation of consortium members which includes Universities in Italy, Belgium, Hungary, Macedonia, Albania and Serbia. Within VICES, a case study implemented in the framework of DEREK project, confirmed the positive impacts of videoconference systems within the educational context, i.e. intensification of cooperation among different education and research institutions; sharing for students and teachers of educational expertise and methods with foreign colleagues; sharing experiences and case studies as well as objectives and results in the framework of both education and research activities.