

techno TN

Science & Engineering Thematic Network

Archipelago



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“There are five motivations which can stimulate men to science. Some want to know only for the sake of knowing: it is just curiosity. Others want to know to be known: it is nothing but vanity. Some others want to possess science in order to be able to sell it and gain money and honours: their motivation is mean. But others want to know in order to be able to build: and this is charity; others want to know in order to be built: and this is wisdom.”

Bernard de Clairvaux

TECHNO TN 2007 PROJECT

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FOREWORD

The SOCRATES-ERASMUS Thematic Networks (TNS) have been playing a major role in the development of the European Higher Education Area (EHEA).

A further contribution to this goal has been provided by the so-called "TNs Archipelagos" that group experts from TNs working in neighbouring fields.

The first TNs Archipelago "Techno TN" was initiated by TNs existing in the Science and Engineering orientated fields. A European Forum was organised in February 2004 in Brussels at the initiative of 10 TNs active at that time, and with the active participation of representatives from the European Commission (EC), the European University Association (EUA), the European Society for Engineering Education (SEFI), the Board of European Students of Technology (BEST) and the European Access Network (EAN). The success of this first Forum encouraged its partners to continue to organize such a yearly event. The first Forum was organised thanks to the financial support of the European Commission SOCRATES Programme (Accompanying Measures). This first edition was followed by another one, in May 2005.

In fact, amongst the conclusions of these 2004 and 2005 Fora, there was the intention to maintain the TNs structure (in particular its web page) and to amplify the process by the continuation of other Fora, where, in addition to the experts involved in the Science and Engineering fields, personalities from the professional and industrial world would also be involved, as well as policy-makers. This was the case of the Forum organised on 4-5 September, 2006

The proposal of the 2007 was submitted by a consortium of 16 partners, leading higher education institutions/universities coordinating TNs, namely, Biotechunte, Ectn4, Eegecs, Eie Surveyor, Enae, Euceet, Eullearn, Iseki Food 2, Le Nôtre 2, Tree, Usaee TN, Steps by Eupen, Etn-Dec, Estia and Eui-Net, with the European Society for Engineering Education (SEFI) as contractor.

Through these TNs, about 900 European Higher Education institutions have been involved. Considering their links with numerous professional organisations, students, local and national authorities, social partners, this project has a truly pan-European dimension with a lasting and widespread impact on the EHEA.

OBJECTIVES, ORGANISATION AND THEMES

The main objective of the TechnoTN initiative is obviously the organisation of the Thematic Networks in Science and Engineering Forum, bringing together the experts working in the related fields through their respective TN and offering them a unique opportunity to share and exchange views, case studies and experiences, and from there, to enable them all to disseminate the results of the event through their TNs partners and scientific circles.

After each Forum, an Evaluation meeting takes place where the Coordinators of the TNs present at the Forum, discuss and evaluate the result of the forum and propose a set of themes for the next edition.

The TechnoTN web site (www.upv.es/TechnoTN) is one of the most important tool for the dissemination of the results of the Forum. It informs those interested in the activities of the Archipelago, and it is a communication tool with all participating TNs, about future programmes, reimbursement procedures, contact instructions and methodology for running the discussion sessions at the Forum. The web site is maintained by the EEGECS TN under the coordination of the Universidad Politecnica de Valencia (UPV).

Several themes have been treated since 2004. In 2004 and 2005, the themes were the TUNING methodology, the Bologna process, the introduction of Bachelor-Master programme in German-Industry's perspective, the Access in European Higher Education and the Employability of graduates, the Human resources for sciences and technology in Europe and How to learn for innovation.

The 2006 Forum topics were: The 3rd level of Engineering Education (PhD), Student views on the change occurring in EE in Europe, and Multilingualism. The multilingualism theme provided a first attempt to introduce collaboration between TechnoTN and the Humanistic TNs Archipelago, in particular with the TNP3 dealing with linguistic aspects emerging from the former Fora.

In 2007, the Forum was articulated on topics related to Qualification and Accreditation, Industry/Innovation/Impact, and How to attract students from secondary level to scientific studies.

In addition to the 2007 Forum (4-5 May) the European Commission, in the context of a project's extension, also agreed that a part the grant could be used to organise and enable the partners to participate in the Workshop entitled "The Scientific and Technical Education and the Bologna Process". The Workshop took place in Rome at Università di Roma "La Sapienza", on 14 November 2007, and was organised prior to the 2nd European Quality Assurance Forum the following day. Sebastião Feyo de Azevedo, University of Porto, held the keynote speech on the theme "Technical Education from

London 2007 to Leuven/Louvain-La-Neuve 2009 and beyond.” The speech is available at www.enaee.eu. The other speakers were Jürgen Rienks (EC, DG EAC), Iring Wasser (ASIIN), Philippe Wauters (FEANI), Carlo Parietti (EUROCADRES) and Francesco Maffioli (TechnoTN and TREE). The workshop was well attended with about 50 participants from higher engineering education from Europe and abroad.

METHODOLOGY

The 2007 Forum was held in Brussels. It was attended by 70 participants from the TNs mentioned above. A number of invited speakers delivered pertinent presentations. Rolf Heusser (ENAE) talked about Challenges and Trends for External Quality Assurance in the European Higher Education Area. Richard Whewell (ECTN) gave a presentation on Quality Labels: The Chemistry Eurobachelor and Euromaster. Emile Arts (Phillips) spoke on Educating for Innovation. Philippe Ruffio (EC, DG EAC) held a presentation about the European Institute of Technology. The theme of Michele Antonio Floriano (ECTN) was “Progetto Lauree Scientifiche”, a programme supporting hard science degrees in Italy. Collin J Kerr’s (EUCEET) presentation was on the theme How to attract students from secondary level to scientific studies, and Gozard Planinsic (Univerza v Ljubljani) presentation had the title Sciences on the Buses.

All discussion groups had the task of debating the presentations. After a brainstorming, each participant was asked to identify the most important issues according to his/her judgement. Finally took place the reporting phase from each group to the plenary session of the Forum.

The Archipelago web site www.upv.es/TechnoTN has been effectively kept up-to-date by the EEGECS group in Valencia. The presentations of the Forum (as well as the other Fora organised the previous years) are available from the site, together with reports of discussion groups, guidelines for organising the discussion, administrative forms, the questionnaire for the evaluation, and links to TN/Associations members of the Archipelago.

Like the previous years, and considering its expertise in this kind of activities in general and in the Thematic Networks (since 1996) in particular, SEFI, the European Society for Engineering Education, based in Brussels, was in charged of the organisation and administrative support of the Techno TN Forum.

MONITORING OUTCOMES AND DISSEMINATION

Each TN participating in the Forum has been asked to answer the evaluation questionnaire, distributed immediately after the Forum.

The most relevant outcomes of the Techno TN are :

- »An informative web site quoted above ;
- » High quality plenary presentations available from the web site ;
- »Guidelines for discussion ;
- »Report from the discussion sessions (also downloadable from the web site) ;
- »Evaluation results ;
- »An updated information folder.

The Techno TN Archipelago has fulfilled its “mission” for 2007 by offering to the TNs representatives an opportunity of enhancing networking of technological/scientific orientated TNs dealing with “hot” transversal issues in Higher Education. Some suggestions for improving the impact/satisfaction of the Forum have also emerged and will be implemented in the future

The dissemination activity is mainly ensured by the Techno TN web site, but also by the visibility provided by other major european events, like the SEFI Annual Conferences, all TNs meetings, seminars and workshops, and by the Techno TN Workshop organised in Rome. Another disseminating tool will be a CD-Rom, containing all the TechnoTN Fora’s presentations.



BIOTECHUNTE

(Biotechnology University Formation for Enterprises Development)

Coordinator : Prof. Mariapia Viola Magni ■ Contractor : Prof. Francesco Bistoni ■

Website : www.biotechunte.net

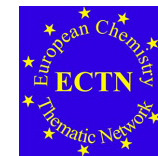
Biotechnology is an innovative discipline which interests many different sectors like biology, agriculture, veterinary, medicine, bioengineering and has a relevance for many industrial activities. Many industries were created in USA and in Japan, less in Europe. This difference is probably due to the absence of co-ordination between different universities and enterprises with consequent loss of deeping and energy loss.

This project aims at implementing the development of Biotechnological Industries by creating synergies between Institutions and Enterprises.

THE SPECIFIC OBJECTIVES

- » The relationship between education and research activities of European Institutions and Enterprises growth ;
- » The improvement of this relationship for mutual benefits ;
- » The evaluation of the didactic approaches already developed on potential job creation ;
- » The identification of good practical methodology in developing this area ;
- » The favouring of the economical development of disadvantaged areas across Europe.

The direct target groups are the students, postgraduates, post-doctors and other personnel of Institutions, research centres and Enterprise employers. Indirect target groups are the Institutions, the Industries, the Trade Unions and Education and Labour Ministries.



ECTN4

(European Chemistry Thematic Network)

Coordinator : Anthony Smith ■ Contractor : CPE Lyon ■ Website : www.ectn-assoc.net

The Thematic Network project "ECTN4: Chemistry in the European Higher Education Area" aims to bring together all actors in the chemistry sector to enhance the employability of chemistry graduates at all levels but particularly at the first cycle level ; to enhance the professional/generic skills of doctoral level students ; to report on and evaluate innovative teaching methods ; to develop a European qualifications framework for the chemistry sector ; to identify best practices in the creation of study programmes combining chemistry and chemical technology ; to create an Internet-based test in biological chemistry ; to develop links with other networks, for example through participation in the organisation of the archipelago of science and technical thematic networks and organising a joint summer school with a chemistry research network ; to enhance the value of previous Leonardo and Socrates projects involving chemistry ; to continue full participation as a core subject area in the Tuning project ; and to enhance the public image of chemistry. The project is targeted at all actors in higher education in chemistry in Europe (students, teachers, the chemical industry and workers in that industry, and professional organisations).

THE ACTIVITIES AND OUTPUTS TO ACHIEVE THESE OBJECTIVES :

- » A study of the employment of chemistry first cycle degree holders, with conclusions drawn for chemical education policies ;
- » A report on best practices on employability enhancement in chemistry programmes at all levels ;
- » A website for university and industrial placement opportunities for chemists ;
- » Internet-based tests in biological chemistry ;
- » A report on innovative teaching of chemistry ;
- » The development of the website for improving the image of chemistry ;
- » The report on best practices in chemistry and chemical technology programmes ;
- » A series of summer schools for students and recently appointed university teachers ;
- » Participation in the organisation of the TechnoTN forums for the archipelago of science and engineering thematic networks ;
- » Student-led workshops leading to reports on the benefits of mobility in chemistry and on the benefits of chemistry to the public ;
- » The formation of a group of Leonardo and Socrates project coordinators of chemistry projects in order to enhance the dissemination and valorisation of the projects ;
- » The organisation of a conference to disseminate, evaluate, and valorise the ECTN4 project.

(European Education in Geodetic Engineering, Cartography and Surveying)

Contractor : Universidad Politecnica de Valencia ■ Coordinator : Luis A.Ruiz Fernandez ■
 Website : www.top.upv.es/eegecs

The main reason for creating EEGECS was to reach a collaboration and co-operation system of most Higher Education Institutions which offer these studies, to meet the objectives and recommendations of the Bologna and Prague Declaration of the Ministers of Education in Europe.

EEGECS started its project in 2002, and has a partnership of 101 institutions from 25 different European countries. The organisms involved are universities as well as private institutions and associations.

AIMS AND OBJECTIVES

The general aim of the Dissemination Project is to make the achievements and essential results obtained by EEGECS available to the students, teachers and researchers, faculty managers, public and private sectors that are involved in professional activities related to Geomatics, through a number of permanently active and open Working Groups that use these results on everyday basis.

It is our aim to promote the specific co-operation among the partners that compose the TN, facilitating the creation of new agreements in the frame of projects such as Erasmus Mundus, Tempus, Socrates, etc. Additionally, to propose and apply measures for ensuring long-time sustainability, is a basic goal of this period, so the network will be further consolidated.

Our objective with the development of this Dissemination Project is to make the Bologna and Prague Declarations objectives ours :

- » Improve quality in education and enhance its European dimension ;
- » Increase mobility and improve transparency and credit recognition ;
- » Foster co-operation, dialogue, exchange of information and experience between Institutions and other sectors of society ;
- » Improve and extend among all the European universities an e-learning system as a transfer of ideas, education, important aspects and points from all the different institutions in Europe ;
- » Adopt a system of easily readable and comparable degrees (ECTS) ;
- » Move towards the adoption of a two-tier degree ;
- » Move towards the establishment of a single quality accreditation system and unified criteria for quality assurance ;
- » Increase the attractiveness of the European Area of Higher Education in Geodesy, Cartography and Surveying ;

The objectives of the network are classified by areas of action :

WG1 : Undergraduate ■ WG2 : Research ■ WG3 : Continuous Education, E-learning and European dimension of studies ■ WG4 : Enterprises-private sector ■ WG5 : Mobility, languages, culture, citizenship, social cohesion, etc. ■ WG6 : Quality assurance.

(Reference Point for Electrical and Information Engineering in Europe)

Contractor : Université Henri Poincaré Nancy 1 ■ Coordinator : Jean-Marc THIRIET ■
 Website : www.eie-surveyor.org

This Thematic network has been accepted in October 2005 for a three-year period. This project followed a former project called THEIERE (Thematic Harmonisation in Electrical and Information Engineering in Europe). The beneficiary institution of EIE-Surveyor is Université Henri Poincaré Nancy 1 and the coordinating institution is Université Joseph Fourier Grenoble. The project is composed of 111 institutions representing 29 countries. This project can be seen as a reflection frame about harmonisation in Europe, in the disciplines of Electrical and Information Engineering.

OBJECTIVES

- » Reflection on generic and subject-specific competences in Electrical and Information Engineering (EIE) ;
- » Reflection and proposition of a methodology for accreditation, in order to enhance comparability and common certification procedures ;
- » Implementation of quality assessment methodologies on some educational resources available in EIE ;
- » Proposition of a census of the existing curricula in EIE in Europe, the multinational degrees, and the situation of the implementation of the Bologna-process in EIE, at the bachelor, master and PhD levels.

TARGET GROUPS

- » Professional engineering associations, Life Long Learning institutions, Students, teachers and learners, Accreditation boards.

THE MAIN ACTIVITIES OF THE PROJECT ARE

- » Application of the TUNING methodology to EIE, to identify competences ;
- » Analysis of existing accreditation procedures, proposition of a methodology ;
- » Quality assessment of some resources in EIE available through internet ;
- » Observatory on the degrees available in EIE in Europe, state of the implementation of the Bologna-process.

THE EXPECTED OUTPUTS ARE THE FOLLOWING

- » Guidelines for contents as generic and subject-specific competences in EIE ;
- » Guidelines for a proposition for an accreditation methodology, together with a census on accreditation board and methodology ;
- » Mediatheque of selected pedagogical resources available in EIE, with a quality assessment ;
- » Update of the monograph on the degrees available in EIE in Europe.



European Network for Accreditation of
Engineering Education

ENAAEE

(European Network for Accreditation of Engineering Education)

Coordinator : Prof. Giuliano AUGUSTI ■ Website : www.feani.org/ENAAEE/ENAAEEhomepage.htm
(temporarily hosted by FEANI website)

ENAAEE stems out of ESOEPE (European Standing Observatory for the Engineering Profession and Education), which was established on 9 September 2000 with the purpose of “building confidence in systems of accreditation of engineering degree programmes within Europe”, and facilitating “exchange of information”, “voluntary agreements on accreditation of engineering educational programmes and recognition of engineering qualifications” and “the development of standards on the competence requirements of graduate engineers”. To pursue these aims, ESOEPE took the initiative of proposing to the European Commission (DG Education and Culture) the EUR-ACE project (“Accreditation of European Engineering Programmes”), approved in August 2004. Between September 2004 and March 2006 EUR-ACE has elaborated a proposal for an European system of accreditation of engineering programmes at the First and Second Cycle level (including programmes leading directly to a SC degree): in the envisaged system, “national” engineering accreditations agencies should continue to award their certificates, and the common EUR-ACE quality label be added to them. Then ESOEPE decided to transform itself into a formal International Non-profit Association, denoted ENAAEE (European Network for Accreditation of Engineering Education). ENAAEE has been formally established on 8 February 2006 by 14 associations concerned with engineering education throughout Europe. The Permanent Secretariat of ENAAEE has been entrusted to FEANI.

OBJECTIVES

ENAAEE is committed to implementing the EUR-ACE proposals and creating the EUR-ACE system of accredited engineering educational programmes. ENAAEE has also promoted and sponsored the presentation of three new grant applications to the EC (DG EaC), namely:

- » Under the “Socrates” Programme, a project (EUR-ACE IMPLEMENTATION), that aims at making the EUR-ACE proposals operational by initiating the award of EUR ACE labels; promoting accreditation processes throughout Europe; arranging training for international accreditors; setting up the essential administrative structure;
- » Under the “Tempus-Tacis” Programme, a project (PRO-EAST: Promotion and Implementation of EUR-ACE Standards), aimed at disseminating and applying the EUR-ACE standards in the Russian Federation;
- » Under the “Tempus-Meda” Programme, a project (LEPAC: Creation of a Lebanese Engineering Programmes Accreditation Commission) aimed at using the EUR-ACE approach for establishing a national system of accreditation of engineering programmes in Lebanon.



EUCEET

(European Civil Engineering Education and Training)

Contractor : Ecole Nationale des Ponts et Chaussées ■ Coordinator : Prof. Marie-Ange Cammarota from ENPC ■ Management Committee Chairman : Prof. Iacint Manoliu (Technical University of Civil Engineering of Bucharest) ■ Website : www.euceet.utcb.ro

The European Civil Engineering Education and Training (EUCEET) Network was established in July 1997 in Barcelona, at a meeting of partners involved in Tempus projects coordinated by the Technical University of Civil Engineering of Bucharest, Romania, and was granted a 3-year contract (1st September 1998-31st August 2001) within the third round of applications for Thematic Networks under the SOCRATES programme, followed by a one-year dissemination project (1st October 2001 - 30th September 2002). Another 3 year contract (1st October 2002 - 30th September 2005) was granted for the Thematic Network Project EUCEET II. From 1st October 2006, another 3-year project, named EUCEET III, started. It brings together really all existing communities in the civil engineering field and includes 106 partners from 29 countries : 75 higher education institutions, 20 professional associations, 3 international associations, 4 research centres and 4 construction companies.

OBJECTIVES

- » Implementation of the two-tier study programmes in civil engineering education across Europe, following the Bologna process;
- » Enhancement of the cooperation between civil engineering faculties in Europe by the development of joint degrees;
- » Doctoral programmes - 3rd cycle - and research in civil engineering faculties;
- » Best practice in establishing and running multi-disciplinary programmes of education, involving civil engineering and other fields;
- » Implementation of the framework for qualifications in civil engineering based on learning outcomes and competences;
- » Approaches to teaching and learning, assessment and performance in civil engineering education;
- » Making the European civil engineering education better known and more attractive outside Europe;
- » Developing a synergy between academic and professional worlds.

The main activities are represented by the organization of 10 workshops and three General Assemblies, in which the findings of the Working Groups in charge with the eight themes will be discussed.

Expected outputs are four new EUCEET volumes containing the proceedings of the 10 workshops and other reports prepared for the project. They will be added to the six volumes prepared under EUCEET I and EUCEET II.



EUI-NET

(European University - Industry Network)

Contractor: Transilvania University of Brasov ■ Co-ordinator: Prof. Prof. dr. ing. Doru TALABA ■ Website: www.eui-net.org

OBJECTIVES

EUI-Net aims to create a European network of universities and industrial partners in the field of education, research and services. The EUI-Net Thematic Network approaches the transversal theme of the university role in a knowledge-driven society, namely the University Industry cooperation.

The main objectives are to define and update generic and specific competences relevant to the industrial sector using the Tuning methodology, in particular for the practical stages of the students as part of the curriculum and to promote synergies between teaching learning-research in the European Higher Education for a better integration of research results in teaching.

MAIN ACTIVITIES

The main activities are related to the setting up of the network as a legal body at European level active in the University-Industry cooperation sector, promoting synergy between teaching and research in the relevant areas for industry, research and training cooperation and structuring the university curricula including student practical stages, professional insertion, dissemination, etc.

The main outputs include publishing of books, organizing European workshops and the EUI-Net conference, web databases for graduates, available jobs in industry, promotion of research and innovation etc.

TARGET GROUP

The target groups are graduates, students and learners in European universities, academic and research staff in European higher education institutions, university leadership, university stakeholders; professional staff from industrial companies, managers and policy makers etc.



EULLearnN

(European University Lifelong Learning Network)

Coordinator: Prof. Petras Barsauskas, ■ Website: www.eullearn.net

A cross-disciplinary European University Lifelong Learning Network (EULLearnN) was established in 2003 in response to the Commission's Communication: "Making a European Area of Lifelong Learning a Reality" and as the continuation and the development of an earlier successful Thematic Network THENUCE, which run between 1996 and 2003. It serves as a core element to partner institutions to develop lifelong learning (LLL) in European co-operation.

The EULLearnN mission is to be the forum of networking to share and test relevant and actual issues, experiences and challenges of university lifelong learning in Europe, and the platform for developing new innovative European tools, learning materials and environments to support university lifelong learning as well as to be the centre of expertise to support European dimension and European policies in university LLL initiatives.

OBJECTIVES

Enhance the quality of university lifelong learning and to promote European-wide actions that would develop LLL in the society; to make the target groups managers/providers of LLL; and create the added value by positioning LLL in Europe as a normal activity of universities recognised at internal and external levels.

The EULLearnN, with 112 partners from 31 countries including European universities and non-university partners, supports the exchange of good practices and experiences and the identification of common problems, ideas and priorities through the work of three targeted thematic groups (TTGs):

- » TTG A - LLL methods and environments, common core references, lifelong learning materials;
- » TTG B - national university lifelong learning networks and European co-operation;
- » TTG C - accreditation, tuning (developing agreement and harmony structures), APEL (Accreditation of Prior Experiential Learning) and ECATS (European Credit Accumulation & Transfer Systems) in LLL.

The main outputs of the three-year EULLearnN activities are university lifelong learning "Managers' e-Handbook", Joint Masters Programme "LLL for Regional Development", and the WELL - a web-based tool for exchange in lifelong learning (TTG A); EULLearnN International Survey on the development of national LLL networks and seminars (TTG B); and "Recognising Experiential Learning" - the book on the recent issues regarding APEL in Europe providing an opportunity to widen the knowledge and usage of APEL in different European countries; seminars and a conference on APEL supporting European and national policies on LLL (TTG C).



ESTIA-NET

(Opening up Electrical Engineering, Computer Technologies and Applied Sciences to Successful Women in Engineering)

Contractor : National Technical University of Athens, Greece ■ Co-ordinator: Prof. Maria Ioannides ■ Website : www.estiatn.net

OBJECTIVES

The main objectives are to build up a thematic network, focused in creating women-friendly interdisciplinary postgraduate education in Electrical Engineering, Computer Technologies and Applied Sciences.

The network aims at increasing awareness about gender bias issues in education, informing and motivating young women, leading women to their educational and career paths, and studying the potentials for implementing a new interdisciplinary-based postgraduate curriculum.

MAIN ACTIVITIES

ESTIA's main activities include research into the number of women students and academic staff in Universities, building relationship with career women, development of a mentor's curriculum, organisation of a mentor's seminar and info days, identification of existing interdisciplinary courses and assessment of their impact, implementation of a Web site and an information system for perspective students, design of the interdisciplinary postgraduate women-friendly curriculum and dissemination.

ESTIA includes 64 participants from 30 European countries in total.

TARGET GROUP

ESTIA-Net mainly targets female students, young women deciding their future education and career, women executives who need postgraduate education on new technologies, women who start a new career, women immigrants who graduated from Universities.



ETN-DEC

(European Thematic Network for Doctoral Education in Computer Education)

Contractor : University of Rousse ■ Co-ordinator: Prof. Angel Smrikarov ■ Website : www.ecet.ecs.ru.acad.bg/etndec/

OBJECTIVES

The main goal of the Project is to help acknowledge doctoral studies as an important "third" cycle of education, to define a framework for increasing the quality of all doctoral studies and to develop tools and methods for assessment, validation and certification of the knowledge and skills of PhD students.

The overall objectives of the network are to establish the principles of effective, high quality, Europe-valid doctoral studies and to create the tools for doing this through analysing the existing systems, exchanging experiences and disseminating good practices among all partners.

MAIN ACTIVITIES

- » Creating a European Thematic Network Doctoral Education in Computing (ETN DEC), preparatory phase ;
- » Developing the "third" cycle of education - the doctoral degree in Computing ;
- » Developing a Quality Assurance System in Doctoral Education ;
- » Evaluating and disseminating project results. Planning the future activities of ETN DEC.

ISEKI_FOOD 2

(Integrating Safety and Environment Knowledge In Food towards European Sustainable Development)

Contractor: Universidade Católica Portuguesa/Escola Superior de Biotecnologia ■
Coordinator: Cristina L. M. Silva ■ Website : www.esb.ucp.pt/iseki

The main objective of the TN is to contribute to the realisation of the European Higher Education Area in the field of Food Studies. This Network is operating since 1998.

More specific objectives are :

- » Work towards the quality assurance of European Food Studies;
- » Tuning curricula in Food Studies, taking into consideration safety and environmental aspects;
- » Develop teaching materials and methods in the field of Food Studies;
- » Promote synergies between research in Food Science and Engineering with Education/Teaching and Industry;
- » Establish communication with the general public and the consumers.

HORIZONTAL ACTIVITIES

- » Work towards the sustainability of the network ;
- » Development of a virtual community of experts in the field of food, with communication with the general public ;
- » Establish a framework of agreements between partners ;
- » Stimulate the development of further related projects between partners (e.g. Erasmus Mundus, Tempus, and Archipelagos).

The achievements of this project are mainly directed to the academic world and also to the other public (enterprises and public in general).

This network (2005 - 2008) includes a total of 113 institutions (74 universities, 2 EU Students Associations and 37 industrial and research partners), 95 coming from EU and 18 from non-EU European countries.

The main expected outputs of this Thematic Network are: critical analysis reports, guides, workshops, web databases, teaching materials and methods (including books, e-learning courses and a training network), information websites and a virtual community, related to the working subjects above described.

LE:NOTRE TWO

(Landscape Education : New Opportunities for Teaching and Research in Europe)

Coordinator : Richard Stiles from Vienna University of Technology ■ Website : www.le-notre.org

"Towards Wider Objectives", title of the new LE:NOTRE Thematic Network in Landscape Architecture, which has now been approved by Brussels with co-funding of some €600,000 over a three year period, starting in October 2006.

LE:NOTRE was set up in 2002 under the auspices of ECLAS, the European Council of Landscape Architecture Schools. Since then three project years and one dissemination year have been accomplished. Important achievements of the LE:NOTRE Project so far include the founding of JoLA, ECLAS's new peer-reviewed "Journal of Landscape Architecture" (www.info-jola.de); the first steps in the establishment of a "European Urban Landscape Partnership", aimed at linking universities and municipal authorities (www.urban-landscape.net) and the development of a large and interactive website as the main focus for communication, information sharing and collaboration between project partners from all corners of Europe. The website (www.le-notre.org) includes a "Who is Who" of universities and their staff, details of degree programmes and the course units of which they are composed. A literature database and multi-lingual glossary are further important features, as is a database on European environmental policy. Further resources on landscape plans and landscape projects are under development and an image library is planned.

THE NEW PROJECT

It will involve over 100 European universities as well as other partner organisations. It has identified five themes in addition to the continued development of the interactive nature of the website in the direction of the so-called "Web 2.0" :

- » Tuning - from Product to Process : further coordination of degree programmes;
- » Stakeholders into Education : involving a wider range of groups in the education process, especially students and offices ;
- » Research into Teaching - Teaching for Research : creating closer links between teaching and research, including the recruitment of research institutions to the Network ;
- » The Wider Context of Landscape Architecture : investigating the historic, geographic and academic context of the discipline, in particular inviting selected universities from other continents to participate in the project ;
- » Broadening the Basis of Landscape Architecture Education looking at, amongst other things, lifelong- and e-learning needs.

LE:NOTRE will also continue to work closely to support the implementation of the European Landscape Convention, which as well as calling for signatory states to educate specialists in the field of landscape, also calls for them to raise awareness of the importance of the landscape, something which will be taken up by LE:NOTRE TWO through the creation of a new European web portal.

(European Society for Engineering Education)

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Founded in 1973, SEFI, the largest network of engineering education institutions and educators in Europe, is an international non-governmental organisation under Belgian Law. SEFI's aims and objectives are to contribute to the development and the improvement of engineering education and of the position of the engineering professionals, to provide appropriate services and to promote information about engineering education, to improve communication and exchanges between teachers, researchers and students in the various European countries, to develop co-operation between educational engineering institutions and establishments of higher technical education, to promote co-operation between industry and those engaged in engineering education, to act as an interlocutor between its members and other societies or organisations and to promote the European dimension in higher engineering education.

The diversity of courses, teaching methods and the freedom of choice for those involved are fundamental qualities and valuable assets that must be preserved. SEFI serves as a European Forum and a service provider to its 380 institutional members, academic staff, related associations and industry.

This is done through a series of activities such as the Annual Conferences organized every year in a university member of the network, or via ad hoc seminars and workshops, held on the initiative of SEFI's working groups and task forces on specific themes of engineering education: Curriculum development, Continuing engineering education/Lifelong learning/Continuing Professional Development, Ethics and Engineering Education, Information and Communication technologies, Mathematics and engineering education, Physics and engineering education, Women in engineering, Accreditation of Engineering programmes, the Bologna process, etc.

SEFI also publishes the European Journal of Engineering Education (a bi-monthly scientific journal), the News@SEFI (monthly electronic information bulletin presenting recent facts and stories about engineering education in Europe and in the world), SEFI-Guides on Engineering Education, SEFI Documents (Monographs), Proceedings of Conferences and Annual Reports.

SEFI participates in, or coordinates international projects in the field of higher engineering education, notably in the frame of the Socrates and Leonardo EU Programmes (new LLP EU Programme), or in cooperation with other international bodies and associations.

A large part of SEFI's activities is also dedicated to the cooperation with other European and international bodies such as FEANI, CLAIU, CESAER, ASEE, IFEEES, ASIBEI, JSEE, UNESCO and others. The cooperation with the student's community is ensured through very active exchanges with BEST.

(European Physics Education Network)

Contractor: Ghent University/Universiteit Gent, Belgium ■ Co-ordinator: Hendrik Ferdinande ■ Website: www.eupen.ugent.be

OBJECTIVES

- »To enhance the training of physicists by helping universities to improve their degree course through considering the views of all stakeholders;
- »To help university physics departments to adapt to the changes required by the Bologna Process and to adopt the Tuning Methodology;
- »To develop and support projects to encourage school pupils to take an interest in physics and hence to improve the future supply of physicists and teachers.

TARGET GROUPS

- »Staff and students in university Physics Departments;
- »Teachers and pupils in schools;
- »School teacher and professional associations;
- »Research organisations.

MAIN ACTIVITIES

- »Meetings and surveys to discover and disseminate examples of good practice in course design and teaching methods;
- »Investigation of multi-media techniques in physics teaching;
- »Discussions with stakeholders on the implementation of the Bologna reforms and the Tuning methodology;
- »Interacting with existing projects concerning the popularisation of physics amongst school pupils.

EXPECTED OUTPUTS

- »Production of tools, documents and publications designed to help physics departments;
- »The use of the above tools in universities and an appraisal of the benefits obtained;
- »A short workshop on uses of multi-media;
- »A network of enthusiasts for working with schools to popularise physics.



TREE

(Teaching and Research in Engineering in Europe)

Contractor : Prof. Claudio Borri Un. di Firenze/School of Engineering, Italy ■ Co-ordinator : Prof. Francesco Maffioli Politecnico di Milano, Italy ■ Website : www.unifi.it/tree

PRESENTATION OF THE THEMATIC NETWORK

Contributing to the development and the enrichment of the European dimension in Engineering Education (EE) constitutes the global goal of TREE. In other words to enhance the compatibility of the many diverse routes to the status of Professional Engineer which exist in Europe and, hence, to facilitate greater mobility of skilled personnel and integration of the various situations throughout Europe. It must be emphasised that, according to the spirit of the Bologna Declaration, enhanced compatibility does not imply uniformity, and is certainly not intended to lead to a reduction of standards to the best common level that can be found. This was also the goal of the two TNPs dedicated in the recent past to EE in general: H3E (supported under Socrates I) and E4 (supported under Socrates II). The activities of these TNPs constitute the “roots” of TREE. It is then natural to remember the contribution of these previous experiences to the global goal, giving for granted that, because of the continuous evolution of higher education in Europe, it would be naïve to consider such a goal as already reached. Looking in particular at E4, the box of volumes (one for each Activity plus two general ones and a CD-rom) collecting the results of the three years of activity of this TNP is providing evidence of many areas in which TNPs can contribute to the development of the European dimension in higher education: networking, tuning, life-long learning, use of ICTs, quality assessment and assurance, are some of the areas which come to mind.

THE OVERALL STRATEGY OF TREE has been to blend study activities, forum organisation and pioneering exercises, keeping as a main target the production of all sort of TOOLS for enhancing the European dimension. The activity of TREE has been organised in about 30 Special Interest Groups (SIG), each one with a very specific task, and will be made available to all stakeholders in EE both as a CD Rom with a companion volume, as well as on the website of the TNP.

THE SIGS HAVE BEEN SUBDIVIDED IN FOUR LINES

- » Line A: the tuning line (new curricula for the two-tier structure of higher education, tools for quality assessment and assurance, accreditation, extension of ECTS);
- » Line B: the education and research line (status and promotion of doctoral studies, role of research activity in EE, value of research oriented project work);
- » Line C: the attractiveness of EE line (for young people, especially women, extra-EU students, by special initiatives such as joint/double degrees);
- » Line D: the sustainability line (sustain EE institutions by e.g. developing continuing education, and/or open and distant learning opportunities).



USAEE-TN

(University Studies of Agricultural Engineering in Europe)

Contractor & coordinators : Prof. Demetres Briassoulis (AUA) ■ Website : www.eurageng.net/usaee-tn.htm

During the last four years the TNP was operational with the fundamental goal of improving and harmonizing the Engineering content of Agricultural/Biosystems Engineering curricula in European universities. The USAEE Thematic Network, has been working towards the restructuring of the University Studies in its field in Europe through the development of a basic core curriculum in Agricultural/Biosystems Engineering. For the first time a representative group of European Institutions/Universities offering such programmes of studies has been mobilized in a systematic way, carrying out an effort to establish basic core curricula to be used as benchmark and recognised/accredited at a European level. USAEE-TN has carried out two sets of basic tasks:

MAPPING AND ENHANCING EDUCATION

The development of benchmarks for basic European core curricula in the relevant subject area was based on the following requirements: meet the FEANI criteria for being a Engineering programme of studies and have the support of EurAgEng. To date, USAEE TN has developed in a report a benchmark core curriculum that establishes a set of minimum requirements against which any curriculum can be tested and evaluated with regard to meeting the criteria for its admission as a particular programme of Agricultural/Biosystems Engineering studies. Currently in most of Europe, Agronomy and Agricultural Sciences prevail in the programme of studies and “engineering” is a weak, mostly application oriented, component. In contrast, the Agricultural and/or Biosystems Engineering curricula are basically Engineering curricula where the biological and agricultural sciences components are only supporting these curricula in terms of basic science-based knowledge. The proposed USAEE core curriculum report was resubmitted to the FEANI in June 2006, in order for the European Monitoring Board of FEANI to decide on the proposed curriculum. In parallel, the European Society of Agricultural Engineers (EurAgEng) has decided to formulate, in cooperation with USAEE TN, an initiative for formally recognizing those university level curricula that adhere to the Guidance report contents.

FACILITATING EUROPEAN COOPERATION

Another objective was the mapping of the diversity and the structure of the programmes of studies and research activities in Agricultural Engineering in Europe. Therefore a European wide survey was initiated so as to investigate the current situation. For this purpose a continuously updated web-based data base has been developed. The previous project also set the basis for the assessment of the state-of-art in the European programme of studies as well as the identification of the needs for the creation of a common core curriculum to be used as a benchmark around Europe. It also set up the tools for the harmonization of studies in order to fit into the Bologna scheme some human resources were also targeted to promote non-academic stakeholders.



Education and Culture DG

Culture Programme

techno Tn Archipelag
Science & Engineering Thematic NetwOrks



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