Ethics in the Built Environment (EiBE)

- A Challenge for European Universities -

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SUMMARY

The SOCRATES Intensive Project „Ethics in the Built Environment - A Challenge for European Universities -“ shall bring together students and teaching staff of 14 European universities from South (Porto, PT; Valencia, ES; Patras, GR) to North (Tampere, FI; Tallinn, EE; Kaunas, LT) and from West (Galway, IR; Groningen, NL; Cachan, FR; Oldenburg, DE) to East (Stettin, PL; Prag, CZ; Budapest, HU; Moscow, RU).

The three years programme offers a forum to dicuss the different approaches to define „Ethics in the Built Environment“ from both the teaching and learning sides and in connection with professional bodies. Its aim is to provide a sound platform of common understanding about ethics in this context and to work out a common module as part of the education of young civil and construction engineers at the involved universities.

1. BACKGROUND

At least there are two backgrounds, the student‘s and the employed engineer’s view.Students of the FH OOW who go to a foreign country and foreign students who come to Oldenburg now not only realize, that there are different sociological and cultural conditions in the host countries and different teaching and studying conditions at the partner universities. Meanwhile this is European student´s knowledge, which has been given to them by their predecessors. And so, it is well known by students of other universities, too.

But what students of civil and construction engineering are stating especially during their practical placements in a growing amount and with sharper contours is the other way of working and solving the problems of daily work on the construction site and in the offices. It is not the technical aspect but the intercourse with partners and clients, but it is

- the co-operation with colleagues and the public,
- the liability in contracting and
- the thrilling field between technical possibilities and demands of the environment etc.

which causes disbelief or even uncertainty.

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Young future civil/construction engineers and managers are seeing themselves in a situation on which they cannot react in a proper way because of their up to now only technically oriented education.But also experienced civil/construction engineers, supervisors of building sites and building or project managers are envisaging above their normal technical requirements numerous demands of different culture, working moral, ethical values, environmental responsibility etc.

The mentioned forcing requirements will be overtaken individually depending on the personal status and behaviour. But in a uniting Europe with corresponding european-wide working possibilities it is necessary to do the job apart from pure individual solutions but on a strong basis of commonly respected measures of higher education, practical experience, continous professional development and, not at least, of professional conduct.

2. THE STATUS QUO

The EU has partly opened and intends to open the borders between the member states to all professionals, especially to civil/construction engineers (see Proposal for a Directive of the European Parliament and of the Council on the recognition of professional qualification, 2002/0061 (COD), Brussels, 07.03.2002). A civil engineer who wants to settle down and to make up his own professional office in a foreign country has to undergo the national restrictions and professional requirements of the national bodies or civil/construction engineering associations. And at least, he or she has to sign regulations of professional conduct as developed by the national professional institutions. In this IP it is this topic to deal with.

The „European Council of Civil Engineers (ECCE)“ is an association of about 25 national civil/construction engineering associations which can be treated as the voice of the European civil/construction engineers. When working in the ECCE Task Force „Professional Recognition“ it turned out that the subject „Ethics in the Built Environment“ is understood in a very diverging manner, has many different facettes of regional, cultural, geographical, lingual aspects etc. but is a necessary part of a european-wide mutual recognition of professionals.

In the whole field of education of engineers in Europe there exists a very detailed description of equivalency of the status of an engineer (see FEANI) and the necessary education and training demands, but it concerns only the technical aspects.

Concerning civil/construction engineering there is the European Council of Civil Engineers (ECCE) which states some few general requirements on the education and expertise profile of engineers in the built environment. But ECCE places aside a code of professional conduct the recognition of which is the basis for acceptance to be a member of a proposed Register of European Engineers of the Built Environment and, thus, gives the supposition for a european-wide work permit.

3. GENERAL AIMS AND PURPOSES OF THE IP

The herewith described Socrates Intensive Project Ethics in the Built Environment (EiBE) does not deal with the technical aspects of engineering education. But it comes up with the idea of

ECCE in that way that the participating partner institutions shall form a catalogue of codes or contents of conducts according to a given frame at home which shall be summarized during the IP-meetings into a common catalogue.

The idea behind this project, too, is that young civil/construction engineering students shall discuss this topic on a stage before employment and, thus, before beeing too much engaged in companies' and employers' strategies and - sometimes - economic and social restrictions. To get a better European aspect this project brings together about 50 students and lecturers from about 14 different European partner universities, their respective civil/construction engineering departments, employed engineers of construction companies and members of engineering societies and the public.

It is obvious that the students will have different thoughts about ethical rules in their future job, that they have different understandings of words and their contents. So, it is necessary to collect the variety of understandings and to put it in a common vocabulary and catalogue.

The common catalogue which has to be created will be used as the basis of a common module "Ethics in the Built Environment". The module has been roughly formed or shaped during the first IP-meeting which took place at FH OOW in Oldenburg in September 2001 and has got much sharper contours in the Prague 2002 and Porto 2003 meeting.

In the third project year this module has to be revised by the partner institutions in co-operation with national institutions of engineers and the building industry to finally produce a module together with ECCE which will be offered to all partner institutions with civil engineering departments to be used as part of the obligatory teaching programme – and hopefully to other EU institutions of higher education, too.

4. COURSE CONTENT

Using the ECCE paper and adding as the first point the German VDI terminology (VDI 3780 Regulation) the discussion platform for ethical rules in the Built Environment should involve the following points and ethical values in technical actions:

1. Definition of terms
2. Behaviour of the engineer in the public
3. Behaviour of the engineer facing the environment
4. Behaviour of the engineer during employment
5. Behaviour of the engineer facing clients and the employer
6. Behaviour of the engineer to colleagues
7. Values in technical action
    - functionality
    - economy
    - prosperity
    - safety
    - health

- environmental quality
- personality development and societal quality
- relationship among values

7. Development of European/international ethical rules

The IP contains not less than 10 working days. At least 20 contact hours in the whole assembly are assigned and 30 further hours are assigned for working in groups; this amounts to a number of 50 working hours. Taking into account also cultural arrangements, intercultural events and work in the public (podium discussion etc.) the IP would come up to about 2 ECTS credit points. The participants are given a certificate for successfull completion of the project. Some of the participating institutions are granting this paper with the above mentioned 2 credit points.

Before the meetings all participants have prepared a paper on one of the subnumbers of the above mentioned ECCE code of professional conduct and/or values in technical actions. This code has been sent to them or to their lecturers some months/weeks before the meeting. The students have been invited to participate in the project but only after having worked out a paper of about 6 DIN-A4 pages on the selected topic. This paper has been judged by the respective colleagues and has been sent to the coordinator via e-mail or by letter. The best authors out of this group (2 up to 4 students) participated in the projects in Oldenburg in 2001 and in Prague 2002 and will participate in 2003 in Porto, PT.

To gain a better continuity in the project it is intended to involve mostly students of the first (undergraduate) study years and of the former project year to have the possibility of letting them work also in the following project year(s). In addition it is clearly an aspect of quality and equivalence of the project to have an diversified European composition. But as it happens always in international projects between institutions of higher education there are more or less active and interested students and more or less active and financially interested and supporting cooperation partners.

Year	**Programme**
1. Project year 2000/2001	Creating a list of ethical rules and an international vocabulary 1. version of the module in coordination with national engineering associations and building industry partners
2. Project year 2001/2002	Evaluation and revision of rules and module 2. version of the module in coordination with national engineering associations and building industry partners
3. Project year 2002/2003	Production of the final version of the module“Ethics in the Built Environment (EiBE)”to be used in the civil engineering course work - in the institutions of the participating partners and - in other institutions of higher education of the EU as a module with example character or hopefully of “excellence” in education of civil/constructon engineers

Table 1. Overview of the three years work programme and its proposed results:

At the first two meeting the papers are presented and discussed in the plenum. In working groups specific thematic points have been worked out and presented twice during the project period. The presentations are usual paper presentations but they have to be "completed" by power point presentatons, video role play presentations and case studies performed in front of the audience. The developed material for the IP will consist of a 30-page booklet at least in the working languages English and German. It includes thesis, working sheets, question and answer lists, video recordings and role playings, multilingual vocabulary, CD-presentations etc.

The final meeting took place at the University of Porto (where the president of ECCE is lecturing as a professor in the civil engineering department).

5. CO-OPERATION PARTNERS

Each of the universities taking part in this European Socrates Intensive Project are working closely together with the building industry, building authorities, engineering associations and chambers of engineers, which will be involved especially in the third project year as partners. In the two project years up to now members of these institutions have been involved in personal consultings, but not yet the institutions themselves.

The following institutions of higher education are involved in this programme:

Name	**Short**	**Country**	**Tasks and responsibilities**
Fachhochschule Oldenburg/ Ostfriesland/ Wilhelmshaven	FH OOW	DE	Co-ordinator, organisation, scientific work, international organisation, pedagogical care, translation care, communication, video-recording, homepage
Hanzehogeschool van Groningen	HvG	NL	University co-ordinator, TN
University of Wolverhampton	UoW	UK	University co-ordinator, TN
Galway Mayo Institute of Technology	GMIT	IRL	University co-ordinator, TN
Hogeschool Halmstad	HH	SE	University co-ordinator, TN
Tampere Technical Institute	TT	FI	University co-ordinator, TN
Technical University of Stettin	TUoS	PL	University co-ordinator, TN
Czech Technical University of Prague	CVUT	CZ	University co-ordinator, TN
College Technical Engineering Tallinn	TCET	EE	University co-ordinator, TN
Kaunas Technical University	KTU	LIT	University co-ordinator, TN
Gödöllö University Ybl Miklos, Budapest	YMMF	HU	University co-ordinator, TN
Ecoles Superior de Traveaux Public, Cachan	ESCIT	FR	University co-ordinator, TN
TEI Patras	TEIPAT	GR	University co-ordinator, TN
University of Valencia	UPV	ES	University co-ordinator, TN
University of Porto	UoP	PT	University co-ordinator, TN

Fig. 2: Participating universities and their tasks (TN means participant)

6. RELATIONSHIP BETWEEN "EIBE" AND EXISTING COURSES

At all partner-universities, which are involved in this project, civil engineers, building and project managers (at national and international courses) and building economy engineers are educated as full-time- or part-time-students. The problem of envisaging other social values and working conditions and socio-economic and ethic working attitude at foreign places in the Built Environment and of employment, applies to all the students from all partner universities.

All partner universities are see the necessity of a corresponding preparation and education of "other" values and are preparing and using such modules as optional modules, but some also put them in the compulsory sector of the civil/construction engineering study programme.

7. ACTIVITY, METHODOLOGY AND PEDAGOGICAL ASPECTS

The participating lecturers are responsible for the local co-ordination, they adressed this topic to the students of their courses and made them interested in the project. The interest in the project has been and will be intensified by the possibility for the students with the most extensive, very original and initiative or otherwise excellent results to take part in the common concious work during the project meetings at foreign partner institutions.

The pedagogic aspect of the preparing sections consists of the importance of ethical questions in the later employment of the students. Students will ask civil engineers and building managers for their opinions, the results will be prepared as homework and students will report on them. The preparation will be completed by a common result of the group at the partner university, which has been or has to be done in the home language and in English (and/or German).

The common IP at the FH OOW comprises the results of the single partner universities and works out a compendium of ethical rules of engineers in the built environment. As the most important part of the project the module" Ethics in the Built Environment" will be composed out of these instructions and working outcomes**.** This module will be based on European views and experience of the different partner aspects and, thus, shall show these during the course work which should need at least 14 weeks per semester and 2 or 4 hours per week. It will not be a lectured module only, but an interactive and student organised and oriented lecturing event.

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Further project information:
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