

Academic and Professional recognition of UK Engineering Degrees in Cyprus

Marios KASSINOPOULOS

Higher Technical Institute, P.O.Box 20423, 2152 Nicosia Cyprus, marios.hti@cytanet.com.cy,
<http://www.hti.ac.cy>

Spyros P SPYROU

Higher Technical Institute, P.O.Box 20423, 2152 Nicosia Cyprus, spspyrou@cytanet.com.cy,
<http://www.hti.ac.cy>

Melvyn DODRIDGE

University of Derby, Kedleston Road, Derby, DE22 1GB, United Kingdom, m.dodridge@derby.ac.uk,
<http://www.derby.ac.uk>

KEYWORDS: *academic, professional, recognition, degrees, Cyprus*

ABSTRACT: *Cyprus is a small European country with a high rate of foreign engineering degree holders. This results from the fact that many Cypriots follow higher studies abroad, mainly in Greece and UK.*

In order to assure that the foreign degrees "imported" in Cyprus from the different countries and the various Institutions abroad, have a satisfactory academic and professional level, the Cyprus government established a local system of assessment and accreditation. This system operates in two directions: The Council for the Recognition of Higher Education Qualifications (KYSATS) which examines the academic standard of a degree and the Technical Chamber of Cyprus (ETEK) which examines the professional standard of the engineering degrees in order to grant a professional license to it's holder.

The main problems, which are met for the academic and professional recognition of the foreign degrees are: The duration of studies for the first and postgraduate degrees, which are not the same from country to country, the analytical program of studies which again varies from institution to institution and the case of students which are transferred from one institution to another.

This paper considers in general the regulations and the methodology applied by KYSATS and ETEK for the academic and professional recognition of engineering degrees, and examines how they are applied for Cypriot graduates of UK Universities seeking to work in Cyprus.

1 INTRODUCTION

Cyprus is a small European country with a population of around 800,000 people. Until recently there were only certain governmental and private higher education institutions offering two-year programs and awarding certificates and diplomas in various fields. The only governmental institution, the Higher Technical Institute (HTI), delivered three-year engineering programs at Technician Engineer level but it wasn't until the University of Cyprus formed an engineering school that university level education became available. The new school received its first students in the academic year 2003-04. A second university, the Technical University of Cyprus is expected to open its doors and receive its first students in the next two to three years. Besides these difficulties, a large number of young Cypriots continued their studies in higher education at home and abroad, in private and other governmental institutions [1]. The number of Cypriots students studying in Cyprus and abroad is given in Table 1.

The favourite countries for studies are Greece, UK and USA. But it is not unusual to find Cypriot students studying in France, Germany, Hungary and other places in the world. Table 2 gives the distribution of Cypriot students in some of these countries. The majority (64.7 %) take up studies in Greece because there is no language problem, they don't have to pay any fees at the universities and the Greek educational system is very similar to the local system. A further 17% Cypriots study in the UK and the two main reasons for this choice is the fact that most Cypriots speak English and that UK degrees and diplomas are considered in Cyprus of high standard and are very well respected in industry and in the local employment market. A further factor is that Cyprus is an ex British colony and for years the whole administration system of the Republic was based on the British system. This allowed UK degree holders

to have an advantage in the work placement compared with the degree holders from other countries. Of course, the fact that higher studies in UK are among the most expensive in the world limits this choice in general to Cypriots who can afford it or to those who have relatives living in UK and can find support regarding accommodation and part time work.

Table 1. Number of Cypriot students in 2002-03

Year	Students, % of total population	Students studying in Cyprus (%)	Students studying abroad (%)
2002-03	4	43	57

Table 2. Cypriot students studying abroad

Year	Greece (%)	UK (%)	USA (%)	Other countries (%)
2002-03	64.7	17	8.5	9.8

2 THE PROBLEM OF ACADEMIC AND PROFESSIONAL RECOGNITION OF DEGREES IN CYPRUS

The fact that many Cypriots study abroad and return to Cyprus to work, holding engineering degrees from different countries, created a serious local problem regarding the assessment and correct academic and professional recognition of these degrees. For example, in the UK the duration of studies is three years for the Bachelors with honours degree and an additional trimester year for a Masters degree. In some other countries, such as the USA, the Bachelors degree is four years, with a further two years for a Masters degree whereas in France the first engineering degree is of five years duration. As a result of these differences there was a permanent conflict among engineers seeking a job in the private or in the public sector. In addition to these, for promotion purposes in the public sector the duration of studies and the possession of a postgraduate degree is an advantage. It is obvious that a solution needed to be found to solve this problem in the most appropriate way.

Besides to the problem of recognition of foreign degrees another problem appeared recently in the local higher education system. The only recognized, higher education, institutions in Cyprus were the governmental institutions, which were fully financed by the Government and operated as non-profit establishments and their academic levels were beyond question. In last few years several private higher education institutions offering certificates or diplomas until now, have created engineering schools offering degrees and have applied to the Government for academic and professional recognition of them. Therefore there was an absolutely necessity to establish an official and reliable system of academic and professional recognition. The solution taken by the Cyprus government was the creation, by law, of two bodies, which have the responsibility for examining all degrees and giving accordingly the academic and professional recognition. In the next paragraphs the methods used by these two bodies will be analysed and how they are applied today for UK degrees and diplomas will be examined. The policy now adopted by these two bodies in light of the Bologna Declaration [2] regarding higher Education studies is also examined.

3 ACADEMIC RECOGNITION

In Cyprus the academic recognition of degrees and diplomas, of local and foreign Higher Education Institutions (HEI's) is under the responsibility of the government of Cyprus. In this regard there are two laws, which deal with the examination and recognition of private HEI's in Cyprus, and with the recognition of foreign and local degrees. As a result two bodies were created: The Council for the Examination and Approval of Educational Programs of Institutions or SEKAP, which has the responsibility of examination and approval of private HEI's in Cyprus, and the other is the Council for the Recognition of Higher Education Qualifications or KYSATS, which, as explained earlier, has the responsibility of the examination and recognition of foreign and local degrees.

According to the law SEKAP is expected to examine institutions in order to see if they satisfy all the conditions required relating to the level of studies they intend to offer. The criteria, which are examined by SEKAP, are given below.

- Objectives of the Academic Institution
- Educational programs
- Academic staff
- Services (Buildings, Laboratories, Library, and equipments)
- Administration and Organization
- Financial resources

As far as KYSATS is concerned, the law states that a degree or diploma under examination is recognized if it is considered equivalent to another degree which is used as a reference. As references degrees or diplomas are considered the ones given by the local governmental HEI's. For example, references in engineering are considered to be the degrees given by the University of Cyprus and for the diplomas those given by the Higher Technical Institute.

Besides the recognition of a degree or diploma as it was explained before, KYSATS has the responsibility to approve also the specialization of the degree under consideration. Here again a specialization is approved or recognized only if it is associated with a certain specialization of an existing governmental institution, which again is considered as reference. In case that such a degree or specialization is not offered in Cyprus, a reference is taken from an appropriate institution in Greece or another country in the European Union. The main criteria, which are considered for the recognition of a degree or diploma, are the number of years of studies and the complete analytical program of the subjects taught. The same applies for the recognition of the specialization of a degree.

Applicants holding degrees of universities, which have been already recognized by KYSATS, just have to make a typical application. But candidates holding a degree from a university not previously approved need to provide with their application all necessary documents in relation to their studies. Unfortunately, it is not always simple to decide for all cases whether recognition must be given or not and a great debate takes place very often whether this system should be changed or not.

4 PROFESSIONAL RECOGNITION

The professional recognition in Cyprus is under the responsibility of the Technical Chamber of Cyprus, ETEK. ETEK examines the professional standards of the engineering degrees in order to grant a professional license to its holders. An engineering degree holder, who wants to work, as a professional engineer, particularly in the public sector or in other semi-government organizations, must be registered with ETEK and fulfil all resulting obligations. For the time being only persons holding recognized engineering degrees can become members of ETEK. Engineers holding diplomas or engineering degrees not recognized cannot become members and thus they cannot work as licensed, professional engineers.

To be registered to ETEK a candidate must satisfy two main criteria. First, to possess an engineering degree with academic recognition and second the program that the applicant has followed at the university must satisfy minimum requirements. These requirements have mostly to do with the choice and the number of engineering subjects included in the program of studies because in some cases there are degrees or specializations, which are not considered of satisfactory level for a professional engineer. In these cases ETEK can reject the application for membership or it can demand from the candidate to complete his/her studies by taking up additional subjects in a recognized institution. The registration procedure steps followed by ETEK [3] are given below.

- The application is received and the necessary supporting documents are checked (authenticity of degree and transcript, grades obtained, additional paper work, practical experience required, etc).
- A subcommittee examines the material and advises the membership committee.
- The committee examines once more the material and makes a recommendation to the Executive council.

- The executive council decides about the membership and if the university is unknown or appears for the first time, recognition from the Council of Ministers is sought. (This last procedure is to be stopped after 1 May 2004).

For applicants from recognized universities holding engineering degrees, which have already been approved, membership application follows a normal procedure. But for applicants with degrees from non-approved engineering institutions the application procedure is more complicated. They need to submit a full documentation of their studies. Special interest presents the case of applicants who have graduated from recognized universities after being transferred from non recognized institutions. In these cases ETEK examines the duration of studies in both institutions and the program of studies that the applicant has followed. If the program of studies satisfies the requirements of ETEK the application is approved. Otherwise it can be rejected or the ETEK committee can ask the candidate to make up some extra courses in recognized institutions in order to get the approval to be registered. In any case it is required that the applicant in such cases does a minimum of two years of studies (or the equivalent in subjects) in the recognized institution in order for their application be examined by ETEK.

Recently things became more complicated not only in Cyprus but also in many other European countries. According to the EU policy, as expressed in the Bologna Declaration, studies of not less than three years duration should lead to a first degree. The Bologna Declaration does not make any statement explicitly about requirements for professional recognition. It defines in general a policy that is related to the academic consideration of studies. In countries with a tradition of engineering degrees of four and five year's duration e.g. France, Germany and Italy, short cycle degrees of three-year duration do not receive professional recognition. The same policy is followed in Cyprus now although there is not a tradition of long studies in engineering. ETEK does not accept members with engineering degrees of three years duration. Here again there is a significant local debate whether ETEK should modify its regulations and accept engineers with these short cycle degrees or continue only to accept engineers with a minimum of four years study. The problem of short cycle degrees has created confusion in the engineering community of Cyprus and other countries where recognition has not been possible and where the same degrees may receive professional recognition in the UK by professional institutions licensed by the Engineering Council and also by FEANI. The most probable is that a third solution will be found. ETEK will create a second category of engineers similar to the status of the Incorporate Engineer in UK. Of course, everything depends also on the policy that the EU will follow on this problem.

In the next chapters the case of UK engineering degree holders regarding academic and professional recognition as it is applied in UK and Cyprus will be examined.

5 RECOGNITION OF ENGINEERING DEGREES IN UK

The Engineering Council in the UK, now referred to as EC^{UK}, was established by Royal Charter and is the body that ensures national recognition of the engineering profession. The Charter empowers the Engineering Council to set the standards of engineering education and training and to maintain the UK Register for qualifications and corresponding designatory letters at three levels:

- Chartered Engineer (CEng)
- Incorporated Engineer (IEng)
- Technician Engineer (EngTech)

The first two levels require the educational base of a degree and therefore fall into the category of 'higher' education. There are three stages in the route to registration as a professional engineer at chartered and incorporated level. To qualify as a professional engineer in either case the candidate has to satisfactorily complete:

- The educational base: an accredited degree programme or equivalent learning

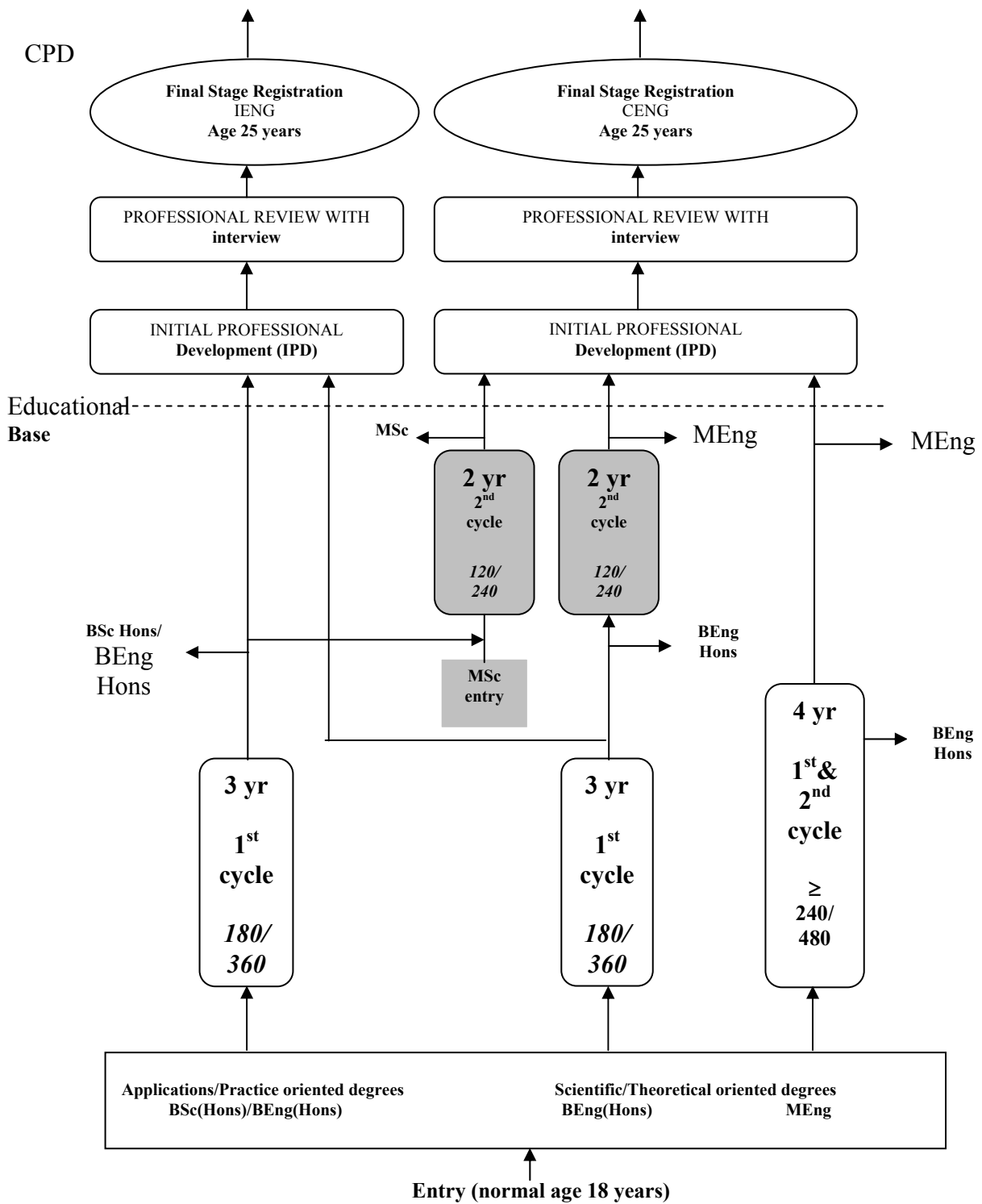
- Initial Professional Development (IPD) which is designed to improve the acquisition and development of skills, specialist knowledge and competence needed to practice in a specific area of engineering and preferably undertaken by means of an accredited programme.
- Professional review in which the competence achieved through IPD is demonstrated and assessed by the requirement for the candidate to write a report and to undertake an in-depth interview by two suitably qualified professional engineers. The review also requires the candidate to demonstrate a commitment to Continuing Professional Development (CPD) and to Code of Conduct and Codes of Practice.

The requirements for registration have up until now been laid down in what is referred to as Standards and Routes to Registration (SARTOR). The third and last edition was published in 1997 (SARTOR 3) and has now been replaced by new requirements referred to as the UK-SPEC [4], published in January 2004 and which came into force on March 1.

There has been significant criticism of SARTOR 3, particularly in respect of input standards and the routes available in the educational bases required for both Chartered Engineer and Incorporated Engineer status. The UK-SPEC is much simpler in its approach. Input standards have been removed and there is no mention of 'time served'. The requirements are based upon the assessment of competence and what needs to be demonstrated. Threshold standards, laid down in the form of outcome statements, are listed separately for Chartered Engineers and Incorporated Engineers in the section referred to as UK Standard for Professional Engineering Competence. Each outcome statement is preceded by the wording 'must be competent throughout their working life, by virtue of their education, training and experience'. The statements are assembled into five areas, which cover knowledge, understanding and skills. This model is similar to the one employed by the Quality Assurance Agency in the Engineering Benchmark [5]. Each statement is expanded into a number of 'ability to' statements which could be used to demonstrate the overall outcome. This approach was no doubt influenced by the Engineering Professors' Council (EPC) Key Abilities model [6].

Formal education is the starting point for most engineers/technologists seeking professional status. The UK-SPEC simplifies the requirements without compromising standards. Chartered engineers require an accredited Bachelors degree with honours in engineering or technology, plus either an appropriate Masters degree accredited or approved by a professional engineering institution, or appropriate further learning. An alternative route is an accredited MEng degree, which was in fact the benchmark route in SARTOR 3. This in effect should widen participation to include many MSc degrees. Incorporated engineers require an accredited Bachelors degree in engineering or technology. In practice many accredited programmes are and will continue to be honours degrees. An alternative route is through a Higher National Diploma/Foundation degree plus appropriate further learning to degree level.

The Bologna Declaration [2] refers to 'time served' and the first cycle (Bachelor) not lasting less than three years. The declaration also refers to credit and the European Credit Transfer System (ECTS). Whilst the UK-SPEC does not mention program duration or credit volume/level safeguards are ensured, for example, in respect of quality by the QAA. Figure 1 shows possible routes to Chartered Engineer and Incorporated Engineer status in light of the UK-SPEC highlighting comparison with the Bologna Declaration cycles, duration and credit. The routes to registration take typically seven years with about three years of professional development being required beyond the educational base. In the UK registration is not required by law but cannot be facilitated at the end of the academic base whereas in Cyprus and many other countries the opposite is true.



Notes

Numbers in italic type represent typical credit volume UK/ECTS

Grey shading in the educational base shows the 2-cycle BSc (Hons)/BEng and MSc route, where the bachelor degrees are accredited at Incorporated Engineer (IEng) level, accumulating 600 credits in total. In practice the second cycle via the BEng(Hons) route may require less than 600 credits

Figure 1 Routes to becoming a professional engineer in the UK

6 RECOGNITION OF UK DEGREES IN CYPRUS

Traditionally the majority of practicing engineers in Cyprus received their university first degrees in the UK. This was very convenient for the employers and the employees because the applicable engineering standards were based on the various British Standards and Practices. A classic example of this is the adoption and incorporation into the legal system of the Republic, of the IEE Wiring Regulations as the only standard for the wiring of buildings. As a consequence of the above, all UK degree holders of engineering degrees were automatically recognised. Furthermore, until recently, the Government and the major semi-governmental organisations; mainly the Electricity Authority and the Telecommunications Authority, demanded from those seeking employment to be registered with the Engineering Council of the UK as Chartered Engineers. Whenever an engineer with a non-UK university degree applied for employment he/she had to prove that the degree in question would qualify the holder to register as a Chartered Engineer. The Engineering Council was thus acting as an accreditation body. When ETEK was established, the Chartered Engineer status was no longer required; it was replaced by ETEK membership status, a situation that exists today.

There is a fairly close relationship between ETEK and the Engineering Council, especially regarding accreditation matters. ETEK seeks advice, on an official level, about the degrees of the applicants originating from British universities, and invariably, once an institution licensed by the Engineering Council accredits a program, ETEK endorses it without further investigation.

The above procedure is rather straightforward for the cases where the degrees were obtained from a single institution. Here accreditation of courses at Chartered Engineer level is the most important check and as a result a degree holder from such university can automatically be registered with ETEK and take the status of engineer in Cyprus.

However, the whole process becomes more complicated where degrees exist as a result of twinning of universities, franchising or where there is a combination of college/university work. In these cases the relevant committees look at the program in far more detail. Usually, apart from the accreditation of the individual degree, ETEK requires programs that will satisfy both basic engineering plus a minimum number of specialized courses.

7 CONCLUSIONS

Cyprus is a small European country with a high rate of engineering students and engineering degree holders. Although until recently there wasn't an engineering school in the country, the engineering degrees "imported" by Cypriots originated from different institutions from various countries. This fact created the need of a reliable academic and professional recognition system for the foreign degrees. The creation of the two bodies KYSATS and ETEK for the academic and professional recognition respectively, was a wise decision and has proved very efficient although some problems appear from time to time regarding mostly the professional recognition of transfer students. During the last ten years the two bodies have limited to a satisfactory level the problem of doubtful degrees from unknown universities. At the same time they gained the confidence of the local industry. In addition to this there was a positive effect among students and community regarding their studies and their professional career. Motivation was given to prospective students going for studies abroad, to make better decisions regarding the country and the institution to study. In this way the problem of recognition of 'unknown' degrees has decreased substantially.

The most important problem facing ETEK now is with regard to the recognition of short cycle degrees. As already noted, ETEK follows the policy applied by similar professional institutions in Europe and does not recognize these degrees. This decision was reached in order to safeguard and maintain the status of the engineering profession at a high level. A possibly satisfactory solution would be to adopt the policy applied in UK where the short cycle degrees are associated with the status of Incorporated Engineers, whose progression to the status Chartered Engineer is possible provided with further learning to. The European Union needs to take the lead and offer an appropriate solution clarifying the minimum duration required for professional recognition of engineers, which should be applied to all member countries. Similarly, there is a need for an international body dealing with the academic recognition of the

engineering degrees universally. Action is urgently required, because globalization is here and the mobility of engineers is expected to increase significantly in the coming years.

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