UDC 378

Accreditation of Applied Bachelor's Programmes in Lithuania

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This article is to some extent a sequel to the notes on organization of accreditation process of Study Programmes in the field of technology in Lithuania [1]. In 2015 one of the article's authors took part in conducting independent external evaluation of 5 Study Programmes of Applied Bachelor level in 4 universities of Lithuania. Together with the earlier publications this material allows to assess the level of development of the system for Study Programmes' (SPs) accreditation and the specifics of its execution in the country.

Key words: accreditation, educational program, nanotechnology, criteria.

Organization of the SP Accreditation Process

According to the Law on Higher Education and Scientific Research [2], Lithuanian HEIs can only carry out Study Programmes of higher professional education that had been successfully accredited. Starting from 1999 the SP accreditation process has been based on external evaluation of SPs.

Accreditation of Study Programmes conducted by Lithuanian universities is organized by a governmental agency – Lithuanian Center for Quality Assurance in Higher Education – SKVC[1] that was founded by the Ministry of Education and Science of the Republic of Lithuania and is a state-financed organization. HEIs seeking for Study Programmes' accreditation have an opportunity to choose: either execute Programme evaluation process by efforts of the SKVC expert teams or exploit services of some other (foreign) accreditation agency, but only from amongst those registered in the European Quality Assurance Register - EQAR[2].

In the first case it is the SKVC agency that comprises the international team of experts. Based on the author's experience, only one of the experts is a representative of a Lithuanian university; all the rest are invited experts from different European countries. In the latter case the chosen agency leads the expert team selection process. In both cases this, inevitably, minimizes the probability of influencing the accreditation result by personal or professional ties and experts' preferences. Obviously, in both cases the working language is English – self-evaluation materials, SKVC and Ministry's standards, specifications and guidelines, expert team reports – all is written and presented in English. English is also the language for expert team communication when visiting HEIs and holding meetings with administration, SP managers, students, teaching staff, graduates. That still causes certain troubles to the HEIs members – process participants.

It should be taken into account that expert teams present solely an explicit conclusion on the results of independent external evaluation of Study Programmes, but the final decision on the accreditation of an SP is taken by SKVC based on the expert team's reports.

Programmes can be accredited for 3 years (partial time period) or 6 years. At this, all new SPs, proposed by HEIs, can get accreditation only for 3 years. Negative result is also possible, i.e. the rejection to accredit an SP.

The technology of decision-taking is the following. When conducting independent external evaluation of an SP six criteria are used:

- Programme Aims and Learning Outcomes.
- Curriculum Design.
- Teaching Staff.
- Facilities and Learning Resources.
- Study Process and Student Assessment.
- Programme Management.

Each criterion is assessed with a grade/point:

- 4 (very good) – the requirements of the criterion are met explicitly.
- 3 (good) – this sphere is being constantly developed, in some aspects it is assessed as excellent.
- 2 (satisfactory) – minimal requirements are met, enhancement is needed.
- 1 (dissatisfactory) – substantial drawbacks that need to be eliminated.

Accreditation for the full period (6 years) is given in case if the total sum of points is 18 or more, while there is no criterion with a grade lower than 3. Accreditation for the partial time period (3 years) is given if the total sum is no less than 12 points and there is no criterion with a grade lower than 2. A negative decision (rejection to accredit an SP) is taken if the total sum is lower than 12 points and there is at least one criterion with a grade lower than 2.

The external evaluation procedure of SPs in Lithuanian HEIs is regulated by a special document – "Procedure for the External Evaluation and Accreditation of Study Programmes", enacted by an order of the Ministry of Education and Science [3]. As noted in the introduction to this document, the accreditation procedure of SPs is developed in line with the ENQA European Standards and Guidelines[3]. The process itself is well-structured and reasonably regulated. There are some supporting materials developed for experts (for instance, standard questionnaires for meetings with HEI managers, students, etc.). Besides, it is notable that SPs are evaluated by a "package" method – one expert team is assessing a set of similar SPs in different universities. This allows exploiting professional expertise of team members in their field of pedagogical and scientific competency to a maximum extent, although it requires relocations to different cities in order for experts to visit different universities[4]. However this does not cause sufficient problems since transfer from Vilnius to another cities (Kaunas, Šiauliai, Utena) on a minibus takes only 2-3 hours.

Requirements towards Study Programmes of Applied Bachelor Degree

Study Programmes of Applied Bachelor Degree are executed in Lithuania at universities of applied sciences (for instance, Utena University of Applied Sciences) or colleges (for instance, Vilnius College of Technologies and Design, Siauliai State College) – these are, in their essence, two similar types of educational organizations aiming at training applied bachelors. Starting from June, 2010, the Ministry has set the following requirements towards such Programmes of the first cycle (according to the classification given in the Bologna Process documentation):

- Programme volume – no less than 210 and no more than 240 ECTS.
- Number of disciplines per one semester – no more than 7, including internships.

[1] http://www.skvc.lt/en/?id=0
[2] http://www.eqar.eu/
[3] http://www.enqa.eu/
[4] In contrast to accreditation held by one team of experts to accredit several education programmes within one university (for example, AEER (Russia) and CEAB (Canada)

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- Total volume of general courses – no less than 15 ECTS.
- Total volume of general professional and specific professional courses – no less than 165 ECTS.
- Workload for thesis preparation (including its defense and final exam, if outlined) – no less than 12 ECTS.
- Total volume of specific courses (including elective courses) – no less than 60 ECTS.
- Total volume of internships within the study period – no less than 15 ECTS.
- At least half of teaching staff should hold an academic degree.

Programme Evaluation According to the Accreditation Criteria

What are the requirements of each accreditation criterion and how are they executed in real life?

Criterion 1. The aims and learning outcomes of the Study Programme. In the context of this criterion the following requirements are set for SPs of Applied Bachelor Degree.

1. The programme aims and learning outcomes are well defined, clear and publicly accessible. Study Programme's aims should be achieved, possibly not by all students, in some time after finishing the study of the programme. On the other hand, the achievement of learning outcomes should be assessed at the end of study period, and the learning outcomes should be achieved by all the graduates.

Lithuanian HEIs preset 5 general aims for each Programme of Applied Bachelor Degree that characterize typical types of graduates' activities. For instance, for a Programme in the field of Power Engineering such aims could be:

- Ability to design electrical distribution networks and networks for distribution of power supply to machinery.
- Ability to conduct assembling of power grids, power stations and substations.
- Ability to maintain power grids, stations and substations for power distribution and power supply to machinery.
- Ability to organize teamwork in the field of design, assembling and maintenance of distribution tools for power and power supply to machinery.

Each aim of a Study Programme clearly defines what and under which conditions Programme's graduate should be able to do. Such description of aims should help prospective students to choose a Study Programme most compatible with their life's interests.

Intended learning outcomes, in their turn, have a more precise meaning. There are about 13-15 of them. Outcomes of a Study Programme describe those particular knowledge and skills in the field of study, both of professional and personal character, that have to be achieved by all students by the end of the study period.

Obviously, both aims and learning outcomes of certain Study Programmes are formed in line with the labor market requirements. Most of Lithuanian HEIs have a so-called "Programme Committee" for each Study Programme (Study Programme Committee) that mandatorily includes a representative of employer enterprises among its members. It is worth mentioning here, that such committee necessarily has a representative of students studying on a particular Programme.

It is interesting that information on each Programme's aims and learning outcomes is disseminated not only through HEI's website, but also on the website of the Ministry of Education, which makes it easier for enrollees to choose a Programme (in Lithuania, like in Russia, prospective students are allowed to submit applications for admission to several HEIs at a time).

2. The programme aims and learning outcomes are based on the academic and/or professional requirements, public needs and the needs of the labor market. First of all, it should be noted that formulation of Study Programme's aims and learning outcomes in Lithuania is necessarily based on the European norms and regulations – those are the Bologna Process documents on the structure of educational system in Europe, the results of the Tuning Project [4], Dublin Descriptors [5] for all cycles of higher education, EUR-ACE Framework Standards and Guidelines for accreditation of engineering education programmes [6] – and are compatible with them. Of course, the norms and recommendations of the national Ministry of Education and Science in a particular field are also taken into account [7]. It is interesting to note that some of the Programmes in the field of Power Engineering, that were assessed during the last visit, presented aims and learning outcomes closely tied with both the National Energy (Energy Independence) Strategy of the Republic of Lithuania and the regional development plans for 2014-2020.

3. The programme aims and learning outcomes are consistent with the type and level of studies and the level of qualifications offered. In our case, the chosen Programmes were of Applied Bachelor Degree, and that has resulted in the evident orientation of SP's graduates on managing and maintaining power facilities on regional and local levels, i.e. on very specific types of professional activities.

4. The name of the Programme, its learning outcomes, content and the qualifications offered are compatible with each other. Undoubtedly, this universal requirement is suitable for Programmes of any type and any cycle. It can only be noted that Lithuanian HEIs are indeed "fighting" for prospective students; and for the Programmes in the field of Power Engineering (which are not among the most prestige or most demanded Programmes in this country) HEI administration is doing its best to assure that enrollees get the most precise (and at the same time attractive) information on a Programme, where he/she is planning to study. Therefore, there is a well-adjusted compliance of the name of the Programme, its intended learning outcomes, content of study and qualification that will be given to the graduates.

Criterion 2. The Curriculum Design. This criterion sets the following requirements for the Programmes of Applied Bachelor Degree:

1. The curriculum design meets legal requirements. Main requirements towards the curriculum design set by legal documents of the national governing bodies in the field of education have been mentioned above. It should only be added that the volume of SP's courses should be equal for both intramural and extramural forms of study.

As can be seen from these requirements, most of them are similar to the requirements set by the AEER accreditation criteria. However, it is prominent that there is a restriction "from above" for the volume of specific professional courses – Programme developers should not get too involved in "narrowing" Bachelor's education to a very precise professional field.

2. Study courses and/or modules are spread evenly, their themes are not repetitive. It is a good and a very practical requirement allowing to even students' workload. Expert teams traditionally ask students during the accreditation visits, whether their workload is evenly spread between semesters (and the answer is usually positive). At the same time, the practice of visiting Russian HEIs shows that it is common to have certain courses of the final year of study repeat the material of first years' courses in order to "refresh what had been learned a long time ago to better understand new material". That has never been the case for Lithuanian HEIs.

3. The content of the courses and/or modules is consistent with the type and level of studies. It seems to be a very logical requirement since it is a frequent finding that developers of Master Programmes promise in preset learning outcomes to ensure knowledge and skills based on the latest achievements of science and technology, however the content of particular disciplines does not rely on

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these achievements; and for Bachelor Programmes it is common for them to get carried away with the theoretical aspects of study material at the expense of achieving practical knowledge and skills.

4. The content and methods of teaching specific courses/modules are appropriate for the achievement of the intended learning outcomes. Introduction of practice-oriented learning approaches, based on the CDIO ideas [8], which have become widespread over the past years, recommends, on the one side, to implement active teaching and learning forms and methods, and on the other side, to assure teachers' knowledge based on their practical experience, which should be reflected in the contents of the courses taught. In the case of Applied Bachelor Degree and the orientation of training students for their professional activity, this requirement seems to be an essential one.

5. The content and methods of teaching SP courses facilitates the achievement of the intended learning outcomes. This requirement to a great extent strengthens and develops the previous requirement.

6. The scope of the Programme is sufficient to ensure learning outcomes. As can be noticed, this requirement corresponds to the requirement 3 of this criterion. The content of the Programme should not be too wide, but it also should not be too specific and narrow. In the authors' opinion, successful fulfilment of these requirements allows to develop a Programme that would be explicitly focused on a particular segment of labor market and its demands.

7. The content of the Programme reflects the latest achievements in science, art and technologies. It is essential for a graduate of an Applied Bachelor Degree to walk out of the university and be acquainted with what is happening in his field of economy and/or business. Master level of study may require some volume of new theoretical knowledge (any theory needs time to get validated on practice), but the Applied Bachelor Degree intends that graduate's practical knowledge and skills are as similar as possible to the ones he would need at his future workplace. During the visits to Lithuania it had been noticed that accreditation experts criticized laboratory supplies of Bachelor Programmes due to their outdated equipment – any graduate of an Applied Bachelor Programme, who is thought to be maintaining and managing complex equipment, has to be familiar with modern un-to-date tools, devices and mechanisms. Undoubtedly, an HEI can only solve such a problem if it has a close-tie partnership with industry and with potential employers of the Programme's graduates.

Criterion 3. The teaching staff.

1. The study Programme is provided by the staff meeting legal requirements. The core requirement towards the teaching staff for Applied Bachelor Programmes is that at least half of the faculty holds scientific degrees or scientific titles [9]. A Study Programme is considered sustainable if most of the teaching staff works at the university full-time.

2. The qualifications of the teaching staff are adequate to ensure learning outcomes. In order to meet this requirement Lithuanian HEIs pay great attention to the professional development programmes for teaching staff (mobility to foreign HEIs, participation in executing research and development projects, etc.).

3. The number of the teaching staff involved in SP realization is adequate to ensure learning outcomes. It is a natural requirement allowing, on the one side, to assure sustainability of the Programme, and on the other side, to prevent teachers' overload.

4. Teaching staff turnover is able to ensure an adequate provision of the Programme. It should be noted that a similar requirement in a stricter form (no more than 40% turnover during the period analyzed) exists in the AEER accreditation criteria [10]. In comparison with Russian universities, teaching staff turnover in Lithuania is a bit higher, which can be explained, in the authors' opinion, by more open selection procedures for vacant staff positions in this country.

5. The higher education institution creates conditions for the professional development of the teaching staff necessary for the provision of the Programme. It is again a very natural requirement. It should only be noted that Lithuania's inclusion in the European Union gives teaching staff an opportunity to participate in various staff mobility programmes. One of the constraints here is the level of proficiency of "main" European languages. However open borders of the European Union will inevitably lead to dissolving this constraint.

6. The teaching staff of the Programme is involved in research (art) directly related to the Study Programme being reviewed. As of today it is hardly possible to state that all of the teaching staff of the examined Programmes is actually taking part in research and development projects and activities. State funding of scientific research so far is quite limited. At the same time, a certain percentage of staff takes active part in executing projects financed by European resources (for instance, the EU Framework Programme), and this makes a positive impact on the development of their HEIs.

Criterion 4. Facilities and learning resources for the educational process:

1. The premises for studies are adequate both in their size and quality. It is an apparent requirement. The authors are not familiar with the process of funding premises' maintenance, however in all 5 HEIs that authors were able to visit during the 2015 audit in Lithuania universities pay sufficient attention to the maintenance process. This issue concerns not only the premises used for the educational process of the accredited Programmes.

2. The teaching and learning equipment (laboratory and computer equipment, consumables) are adequate both in size and quality. First of all, it should be mentioned that many Lithuanian HEIs receive special funding for the enhancement of technical equipment used for the educational process. This, to a great extent, concerns the equipment for laboratories utilized for natural sciences (physics, chemistry, etc.). Conspicuous is the noticeable number of breadboard specimen and equipment for these courses made in China – authors have not had an occasion to see such equipment in Russian HEIs. At the same time, the equipment for courses of specialty is not always up-to-date. This has been mostly brought to attention by the recent graduates, who participated in the audit meetings for all of the accredited Programmes. As a solution to this problem a number of universities have a practice of using production equipment of industrial companies for conducting lab research. It is important that outdated laboratory equipment and passive position of the management of two Study Programmes in two different universities have resulted in a negative decision on their accreditation in 2012.

3. The higher education institution has adequate arrangements for students' practice. As has been previously noted, students' internships have to have a total volume of no less than 15 ECTS for the Programmes of Applied Bachelor's. Universities frequently face problems with signing agreements for students' practices, the same as in Russia. And for Lithuania, where the production industry mostly consists of small and medium enterprises, this problem is especially vexed. It is common that an enterprise is ready to invite for internships only a limited number of students, whom it is planning to employ later. All of these require SP managers to invest a lot of efforts, especially since students' opinions on the quality of educational process (including students' practices) are collected and analyzed mandatorily and on a regular basis by the Programme Committees and the administration of HEIs. Besides, such an attention to organizing students' practices

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for Programmes of Applied Bachelor Degree is, obviously, necessary.

4. Teaching materials (textbooks, books, periodical publications, databases) are adequate and accessible. Perhaps, it is quite hard today to amaze someone with just an existence of a university library – most universities have accessible and well-equipped libraries. It is a different story if an HEI has a policy on library fulfillment in the interest of the study process and particular Study Programmes. At least half of library collections in Lithuanian HEIs consists of technical literature in Russian language (it has a reason behind it – a number of Programmes have "Technical Russian Language" as a mandatory course). Another 25% of the collections are the publications in English. Study books in Lithuanian mostly support the general university courses on science and economics. Providing students with an access to the electronic sources (data bases of full-text periodicals, educational portals' materials) under these conditions gains particular significance. It had been a pleasure to notice that practically each Lithuanian university has its own educational portal; that teaching staff pays a lot of attention to filling the portal with study materials. As a result of the accreditation visits to Lithuania there have been no complaints about HEI libraries on this criterion.

Criterion 5. Study process and students' performance assessment:

1. The admission requirements are well-founded. The rules for admission to Bachelor Programmes in Lithuania are quite similar to the Russian ones – standard framework requirements set by the Ministry of Education and Science and their certain specification set by HEI's Council (Senate). In order to enroll as a state-funded student, the enrollee has to have a certain total of grades received at high school final exams, which are similar to the Russian Unified State Exam. The minimal amount of these grades differs from Programme to Programme according to its popularity. Besides, an HEI may enroll a number of fee-funded students, who pay for their education themselves. It is interesting to mention that on some Programmes average grades of fee-funded students during their education are higher than those of the state-funded students.

2. The organization of the study process ensures an adequate provision of the Programme and the achievement of the learning outcomes. First of all, it should be noted that a number of Lithuanian HEIs run a special 10-hour course "Introduction to Studies" prior to the Bachelor Programmes. The aim of such course is to get the new-coming students acquainted with the structure of an HEI, the core study materials, the Code of Conduct and Students Code of Ethics, library, e-learning services, and various other student services.

As a rule, a student may request to form an individual Study Plan for his whole Study Programme or for its part (semester). Students have a vast choice of elective courses, and this, in its turn, allows students to choose whichever specialty within a certain Study Programme.

Some HEIs offer an opportunity for students to receive two Diplomas within their Bachelor's education – a major specialty and a minor specialty (in Economics or Management). Such an opportunity is provided by means of increasing their study period of the Applied Bachelor Degree.

3. Students are encouraged to participate in research, artistic and applied research activities. It is rather unfair to state that Applied Bachelor's students are massively involved in research activities. However, during the visits to the Lithuanian HEIs good practices of such involvement had been seen, majorly, the involvement in applied research conduction and development projects demanded by industry.

4. Students have opportunities to participate in student mobility Programmes. As known, the EU HEIs have a certain standard set for them – it is recommended to have 15% of students taking part in the programmes of academic mobility, as a rule, in the Erasmus Programme. Most of the HEIs of this country are registered as Erasmus Programme's participants and have a sufficient number of partners for the academic mobility. Overall, in Lithuania and in Applied Bachelor Programmes in particular, the number of Programmes' participants is by far lower than the recommended number. Of course, students are well-informed on their opportunities; the system for organization of their mobility is well-functioning, but, according to the feedback from students their participation is limited due to the economic reasons – many of them align studying with part-time work and simply cannot afford to quit their job.

5. The HEI ensures an adequate level of academic and social support. There are various forms of such support in Lithuania – these are the traditional introductory courses, group tutoring, individual consultations, catch-up classes for low-performing students, and also granting loans to students for covering the tuition fees and living costs. Students' active participation in research, sports, and social events may also be financially supported. As a rule, any student in need is provided with a room in a dormitory. Specific helping devices for students with disabilities are the law, not just a pleasant exception. At the same time some SPs (for instance, in the field of Electrical Engineering) a number of students receiving state tuition is quite low due to their low grades for previous semester.

6. The assessment system of students' performance is clear, adequate and publicly available. As a rule, HEIs use a common system for all the courses to accumulate grades for various types of course tasks within a semester. The methodology for applying such system is approved by the HEI's Scientific Council and an order within an HEI. At the beginning of each course the professor has to explain students the rules for their academic progress evaluation relevant to the particular course. In case a student disagrees with the grade received, he/she has a right to file an appeal to the Faculty Dean, who should then make an order to appoint a board to evaluate student's academic progress.

7. Professional activities of the majority of graduates meet the Programme providers' expectations. As in Russian HEIs, students get acquainted with their future profession and possible workplaces long before the end of their studying. Both Russian and Lithuanian HEIs necessarily organize "Career fairs" and companies' presentations. Special departments of HEIs conduct monitoring of graduates' professional careers. Achieving an 80% level of graduates employed in line with their major and qualification is considered an indicator of SP's successfulness and relevance.

Criterion 6. Programme management.

1. Responsibilities for decisions and monitoring of the implementation of the Programme are clearly allocated. As has been stated previously, the core department responsible for SP realization is the Programme Committee. All decisions relevant to many or even all of the SPs are taken by the Scientific Council and top management of an HEI, and all decisions concerning a certain SP are taken by its Committee. However, critical decisions, concerning a Programme, have to receive an approval of the Faculty Council, and then an approval of the HEI Scientific Council. As noted, the Programme Committee includes representatives of the Faculty and Department, one or two representatives of the students studying on the SP, and one or two representatives of the employers. A system of decision-taking on Programmes' realization and their contents is usually approved by an HEI order.

2. Information and data on the implementation of the Programme are regularly collected and analyzed. It is a common thing for Lithuanian HEIs to have a system of regular surveys for students

and teaching staff to collect their opinions on the quality and the conditions of SP execution. Obviously, the working party for analyzing this data and taking decisions based on it is the Programme Committee. At the same time, as seen from the meetings with students and teaching staff, it has been far from always when the information on taken decisions reached the respondents. This situation seems to be quite similar to the one in Russian HEIs.

3. The outcomes of internal and external evaluations of the Programme are used for the improvement of the Programme. It should be noted that most Lithuanian HEIs, with which the authors had a chance to get acquainted with during the accreditation visits, do have a closed cycle of feedback from all interested parties, discussion of the received data, decision-taking on SP modernization and execution. In this context, it is worth for Russian HEIs to apply Lithuanian best practices.

4. The evaluation and improvement processes involve stakeholders. As has been noted previously, all stakeholders (students, teaching staff, and employers) are involved in the process of SP modernization in Lithuanian HEIs – they are involved in the feedback system and take part in the discussion of the outcomes, as well as in the decision-taking within the Programme Committee. There can be found some examples of such mechanisms for constant SP modernization in Russian HEIs; however it is hardly a large-scale process so far.

5. The internal quality assurance measures are effective and efficient. It is probably one of the hardest requirements in terms of its examination. What should be taken as a measure of effectiveness and efficiency? It is likely that the evaluation depends on the expert's expertize – and experts taking part in the audit process are invited from different countries with different backgrounds, techniques and cultures of the educational process. On the other hand, the applied grading scale "good – satisfactory – unsatisfactory" and the evaluation procedure by a consensus of Committee members' opinions ease the procedure to some extent. In the authors' opinion, the existence of such criterion allows to set a high bar of international (all-European) requirements towards the quality of SP management.

Speaking of the criteria and their evaluation, it is necessary to mention one more aspect of the expert team work in Lithuanian HEIs. The teams have to note in their reports the examples of the outstanding compliance of the SP execution with one or another criterion (Examples of Excellence), that are then recommended for dissemination within the system of higher education as best practices. This, in its turn, works for the reputation of HEIs and the attractiveness of their SPs.

Technological Aspects of Expert Team Work at Lithuanian HEIs

First of all, the audit process is built to use both experts' and HEIs' time in the most efficient way. The self-evaluation reports on SPs are prepared beforehand and are sent to the experts no less than one month prior to their visit. The Chair of the expert team usually appoints a primary expert on each Study Programme and two secondary experts. The main aim for these experts is to thoroughly analyze self-evaluation reports, address questions to the SKVC and, after all, prepare first draft of the Study Programme evaluation report. Besides, these three team members prepare and coordinate approval of the list of follow-up questions to be asked during the visit. It should be taken into account that each expert team member plays the role of primary expert for one Study Programme and the role of secondary expert for one or two more Programmes. Thus, during the monthly visit there is a very active exchange of expert opinions.

The expert visit to an HEI lasts only one day – it has a very busy schedule in comparison to the audit procedure realized by the AEER at an HEI, although during this visit the same amount of meetings and events is held. Of course, this requires an HEI to prepare the self-evaluation report very thoroughly and to follow the audit schedule precisely.

Preparation of the final report of an expert team on each Study Programme is a very time-consuming and intensive process. A very exhaustive description of the state-of-art on each criterion has to be provided on the evaluated Study Programme. All the conclusions and recommendations of the expert team have to be thoroughly justified and be based on facts collected by the team members from self-evaluation reports and during the visit to an HEI. A special technical coordinator of the Lithuanian Center for Quality Assurance in Higher Education conducts a thorough reading of the draft report and expert team conclusions from the point of the justification of the conclusions. The formation of the final report may end up in multiple iterations. In case of a negative review the Center committee revising the results of Study Programmes' evaluation may return it for altering.

Conclusion

By getting acquainted with the system for accreditation of educational programmes in Lithuania it is possible to conclude that the system works in full compliance with the approaches designed by the Bologna Process documents and the ENQA. The system is focused on talking into account the opinions and roles of all stakeholders, and is acknowledged by both teaching staff and students of Lithuanian HEIs. At the same time, the system is quite strict – the approval of this statement is that there is a big number of Programmes that receive accreditation only for a partial time period. It is quite natural, since the higher education system of the Republic of Lithuania is aiming to become an equal partner of the European Higher Education Area and pays specific attention to the issue of engineering education quality.

REFERENCES

1. Shaposhnikov S.O. Notes on Accreditation of Engineering Education Programs in Lithuania. Engineering Education, – 2012. – № 9. – pp. 40-45.
2. Law on Higher Education and Scientific Research in the Republic of Lithuania. Available at: http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_l?p_id=366717.
3. Procedure for the External Evaluation and Accreditation of Study Programmes. Available at: http://www.skvc.lt/files/teises_aktai/akreditavimo_tvarka.pdf
4. Tuning Project. Available at: http://www.unideusto.org/tuningeu/
5. Shared 'Dublin' Descriptors for Short Cycle, First Cycle, Second Cycle and Third Cycle Awards. Available at: http://www.hrk.de/fileadmin/redaktion/hrk/02-Dokumente/02-03-Studium/02-03-02- Qualifikationsrahmen/dublin_descriptors-1.pdf
6. EUR-ACE Framework Standards for Accreditation of Engineering Programs. Available at: http://www.enaee.eu/eur-ace-system/eur-ace-framework-standards
7. Regulations on General Technological Sciences (Engineering) Field Approved by the LR Minister of Education and Science. 29th April, 2005. Order NO ISAK-734
8. Perspectives of Engineering Education Development: CDIO Initiative. Information and Methodological Publication / Translated from English and edited by Kutuzov V.M. and Shaposhnikov S.O.: Saint-Petersburg: Saint Petersburg Electrotechnical University "LETI" Publisher, 2012. – 17p.
9. Approving the General Requirements of the First Degree and Integrated Study Programmes. Order of the Minister for Education and Science of the Republic of Lithuania. April 9, 2010 No. V-501. Available at: http://www.skvc.lt/uploads/lawacts/docs/151_b40ce691ece49cbb74c2694f21b27b65.pdf
10. Criteria and Procedure for Professional Accreditation of Educational Programs on Technology. Available at: http://www.ac-raee.ru/new_kriterii.php.

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