EVALUATION REPORT OF THE UNIVERSITY OF PRISHTINA
Faculty of Mechanical Engineering

EXPERT COMMITTEE FOR EVALUATION OF THE UNIVERSITY OF PRISHTINA
H. Grogger, T. Otto, P. Sturm, R. Tuokko, D. Martsinkevichus

In charge of KOSOVO Accreditation Agency

June 30, 2016

1. FOREWORD

The evaluation of higher education institutions is still in the initial stages of the Kosovo academic community. We should accept cognition that the implementation of quality assurance on a regular basis is an inseparable part of "Bologna reform" of higher education.

For the high level of professionalism, we express our appreciation to the organizer of the activities - Agency for Science and Higher Education, the NCQ president of the Kosovo Accreditation Agency, Expert for Evaluation and Accreditation, Acting Director Furtuna Mehmeti, and Fisnik Gashi, who both organized the work and guided the entire procedure**.**

If on any matter related to this particular report, the need for special explanation or amendment is felt, the members of the Expert Committee (hereinafter: E.C.) are prepared for answers and explanations.

June 30, 2016.

On behalf the E.C.:

Prof. Dr. Herwig Grogger *Prof. Dr. Peter Sturm* *Dionis Martsinkevichus*

Prof. Dr. Tauno Otto *Prof. Em. Reijo Tuokko*

2. MEMBERS OF THE EXPERT COMMITTEE (E.C.)

Pursuant to official paper regarding Scientific Activity and Higher Education as well as the Ordinance on Measures and Criteria for the Evaluation of Quality and Efficiency of Higher Education Institutions, the National Council for Higher Education of Kosovo appointed an Expert Committee in charge of quality and efficiency evaluation of the University of Prishtina, Faculty of Mechanical Engineering as follows:

Prof. Dr. Herwig Grogger, professor at the University of Applied Sciences FH Joanneum,

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Dionis Martsinkevichus, European Students Union,

E-mail: dionismart@gmail.com

3. PROTOCOL OF THE EXPERT COMMITTEE´S WORK

Before the protocol was made, the documents which provide the basis for the evaluation procedure had been delivered to the members of the E.C., that is: Self-Evaluation Reports (hereinafter: SER), documents on implementation of recommendations and procedures and instructions for accreditation in Kosovo. The Expert Committee and the leaders of the Faculty were acquainted with the protocol in advance and they accepted it as the content and time framework of their work.

Monday, 30th May 2016

TIME	AGENDA
19.45	Meeting in the Reception of the Hotel AFA
20.00	Working dinner for the experts (Sturm, Grogger, Martsinkevichus) with Furtuna Mehmeti (Acting Director KAA) and Fisnik Gashi (Officer for Evaluation and Monitoring, KAA)

Tuesday, 31st May 2016 – University of Prishtina, Faculty of Mechanical Engineering, Prishtina

TIME	AGENDA
08.45	Meeting in the Reception of the Hotel AFA
09.00 – 09.30	Meeting with the management of the institution
09.30 – 10.30	Meeting with the management of the institution: presentation of he current status and progress by Prof. Doci (Vice Dean for Teaching Affairs)
10.30 – 12.00	Visit of each expert to facilities and discussion with the management of the assigned study programme
12:00 – 12:30	Visit of the E.C. To the laboratories, faculty library and students learning rooms
13.00 – 14.30	Lunch and discussion of E.C. and coordinator KAA (F. Gashi)
14.45 – 16 00	Meeting with the teaching staff
16.00 – 17.00	Meeting with the students
17.00 – 17:15	E.C: and Coo. KAA consultation
17.15 – 17.30	Closing meeting with the management of the Institution
17:30 – 18:00	Visit to laboratories of Manufacturing and Automation
18.00	The end of the site visit
20.00 – 22:00	Discussion among E.C.

According to the above mentioned protocol, the Expert Committee performed a site visit to the Faculty of Mechanical Engineering during which they held separate meetings with the leaders of the Faculty of Mechanical Engineering, head of the councils of study department “Mechanical Engineering”, members of the committee in charge of the elaboration of Self-Evaluation Reports, students and teaching staff, and thus gained a direct insight into the activities, conditions and quality of work.

Mr. Fisnik Gashi, officer for Evaluation and Monitoring, (Kosovo Accreditation Agency) assisted the site visit.

Based on the implementation of the described procedure, the expert team submits the following report:

4. MEETING WITH THE FACULTY MANAGEMENT

There is a new management at Faculty of Mechanical Engineering, having been in charge for approximately two months. The Dean of the Faculty Prof. Dr. Ahmet Shala and Vice Dean for Teaching Affairs Dr. Ilir Doci gave a presentation of FME comprising study programmes, infrastructure, academic staff, registered students and financial situation of the faculty. Further, recommendations from the previous evaluation process and their implementation were presented. Based on this presentation we discussed following items.

4.1.1. Mission Statement

Though in the current SER there is no mission statement, it is assumed, that the mission has not changed in comparison with the accreditation 3 years ago. A response of FME made clear that the template of SER does not provide a mission statement. Nevertheless, a mission statement is given in the handed-out presentation of the Dean during the site-visit.

4.1.2. Self-Evaluation Report (SER)

During the presentation of Vice-Dean Dr. Doci, the role and form of the self-evaluation report (=: SER) was discussed. The report comprises round 500 pages and was supplied to the E.C. Approximately 4 weeks before the site-visit. The SER describes each study-program – both on bachelor's and master's-level, if applicable. For each study programme it lists tediously each taught subject, filling many pages with less important information. On the other hand, very important information as there was given by the presentation at the site-visit was not included, and was not even available in advance. Further, very important information as applied recommendations and milestone-plans of changes are not enclosed in the SER, but hidden in several subdirectories. At the site-visit it was understood that this mix-up was mainly due to the change of management and the rather short period of time for preparing all documents. Nevertheless, for the next time, the information should be given in clear form, and in proper time in advance.
A response of the Faculty of Mechanical Engineering made clear that the SER has to follow a template. Its form cannot be freely chosen.

Recommendation: the E.C. recommends to straighten the SER, or its template, respectively. It should include descriptions of the study programs, their syllabus, etc. Detailed information on each subject could be put into the appendix. Further, important information, as it was handed out at the site-visit should be compiled in the SER, as well as milestone-plans, implementation of recommendation, evaluation of lectures, etc. All that relevant information should be given in one document to make sure, that the evaluators will find it.

4.1.3. Academic Programmes and Student Management

The following study programmes of the Faculty of Mechanical Engineering were evaluated for re-accreditation. Due to time-restrictions, the evaluation of the programs was distributed amongst the E.C. according to their individual expertises, the study programs were distributed as follows:

	Bachelor level	Master level
Manufacturing and Automation	R. Tuokko	R. Tuokko
Thermoenergetics and Thermotechnology	P. Sturm	P. Sturm
Construction and Mechanization	P. Sturm	P. Sturm
Systems of Renewable Energy	H. Grogger	---
Industrial Engineering and Management	T. Otto	---
Mechatronics	H. Grogger	H. Grogger

The student representative was present at the visit of Mechatronics study programme.

The academic programmes for re-accreditation will be treated in detail separately later in the report. Remarks and recommendations of the programs can be found there.

4.1.4. Quality Management

FME has a vice dean responsible for the quality which is supervised by UP. The internal evaluation is based on several questionnaires: for students, teaching staff, administrative staff. Templates of the questionnaires are in the report.
A key point for the assessment of the quality of teaching is a student survey, according to the experience in the world and in Kosovo, a survey shows the best, the most objective and realistic picture of the teacher's work. It monitors the assessment of each individual and defines when to react if the assessment of a teacher is insufficient. Surveys are done by the quality responsible people on an anonymous base. Results goes to the rector and if there are problems they are discussed with the responsible lecturer. Students see only results when the next survey is done.
In the FME, students are represented through their representatives in the teaching council (2 representatives), in commissions for teaching (4 representatives) and student organizations which are established by statute of UP. Through the office of students' council, which functions within the FME, students have the opportunity to elect their representatives, who follow the issues and suggestions to the managing authorities, the academic and administrative staff of the Faculty.
There was self evaluation of the faculty which resulted in the "Self Evaluation Report".

Recommendation of the E.C.: *Questionnaires are published in the self evaluation report. Results of the evaluation procedure are missing. E.C. asks for the questionnaires, the results and a list of actions which resulted from the evaluation procedure. In general, in future SER shall have a comprehensive section of the evaluation of courses, lecturers and other relevant substances including the questionnaires, the results and the actions which resulted from the evaluation procedure.*

4.1.5. Recommendations based on earlier reports

Based on the table of content of the SER recommendations based on the evaluation in 2013 should be in section V (quality assurance) under subsection 6. However, there are only a few very vague sentences. Even the request stated in the last evaluation report 2013 for more details and dates have not been touched. However, there exists a separate report in the Annex dealing with the recommendations and the actions resulting from them. In addition, during the site visit a short and comprehensive summary of the

actions was given by the responsible vice-dean Prof. Doci. The commission concludes that most of the remarks given in the report 2013 are treated, some of them are still in progress.

Recommendation of the E.C.: *the commission advices the management in the future to include condensed summary of the recommendations from the previous evaluation report, the progress and the resulting actions as well as the status of implementation already in the main body of the SER.*

5. RE-ACCREDITATION OF STUDY PROGRAMS

The structure of the chapters follows the 'guidelines for experts (Academic Programs) from KAA. The questions raised in this guideline are printed in the following chapters in *italics*.

5.1. STUDY PROGRAM *THERMOTECHNICS AND THERMOENERGETICS* - bachelor and master

BACHELOR Program

5.1.1. Academic programs and student management BSc

Question: Does the academic program correspond to the institution's mission statement and principles of operation?

The academic program corresponds with the mission statement of the faculty.

Question: Are the programs quality, range and academic aims appropriate to the academic degree?

In general, a BSc program shall aim at providing a solid base for the proposed scientific area, i.e. mechanical engineering. Having this solid foundation would allow a further deepening of knowledge within appropriate MSc programs.
The current BSc program is established already over a couple of years. In our opinion a shift into the direction of broadening of the basic knowledge within the BSc program is required.
The current situation of having two profiles (Thermoenergetics & heating techniques and Processing equipment) seems not to be appropriate for the general layout of the BSc program 'Thermoenergetics and Thermotechnology'. Due to the fact that the whole curricula lacks somewhat on a broader basic knowledge a shift of the existing specialization in the 3rd year to the MSc program is proposed.
We recommend that in a longer term separations should be made on the level of a MSc program and not already on BSc level.

Question: Is the program based on an overarching didactic concept that has been adequately communicated to and adopted by the teaching staff?

The overarching didactic concept was defined by FME as lecturing and teaching exercise, supported by seminars were appropriate. This concept seems to be clear to the staff. The exercises are done within groups of students.

Question: Does the academic degree correspond to international standards?

Generally spoken yes, but there are some deficits which should not appear in a BSc in the framework of a FME. This concerns general knowledge about:

- Applied thermodynamics (which is currently an elective subject only)
- Applied fluid mechanics (which is currently an elective subject only)
- Applied mathematics including statistics
- Basics in chemistry
- Basic knowledge in Economics

Some of the compulsory courses from the 3rd year (5th and 6th semester) concerning machines and devices would fit better in the MSc. However, taking the requirements of the economic sector in Kosovo into account there seems to be a need of having some applied topics already at BSc level. Nevertheless, during the discussion with the staff as well as with the students a request for a deepening in basic knowledge as e.g. applied mathematics was mentioned.

The implementation of foreign languages is given (mainly English), however a further deepening would be preferable (e.g. BSc theses in English language).

Question: Does the structure of the program give sufficient opportunity for independent study, reflection and analysis? (e.g. what is the proportion of independent study time compared to online/distance teaching and classroom units?)

Based on the Hours of Study and the ECTS written in the SER sufficient opportunity should be given. Moreover, it has to be mentioned that the distribution of ECTS points to the individual courses is quite generous compared to an international level. Hence there should be sufficient time for the students for self-learning activities.
The resources provided for the students (e.g. computers, working places) have improved since the last evaluation however more computer based workplaces but also more equipment in the workshops would be favorably. The digitalization of the library, including access to e-journals is very important. Although this has already been started further improvements are necessary. In any way there is a remarkable improvement compared to the site-visits undertaken in the years before.

Question: Is the allocation of ECTS appropriate and justified?

The FME defined the workload for the students. However, a detailed insight into the various calculation tables shows deficits in the calculation of the workload. In addition, it is not clear whether the numbers given in the ECTS calculation tables reflect reality.
Compared to international level the ECTS credits reflect less hours in classroom, although the basis value of 25h per 1 ECTS is similar.
An update of the individual course descriptions (Syllabus) including a more realistic allocation of ECTS points is required. Even the students claim that the more or less equal distribution of ECTS over the different courses do not reflect the efforts needed to study the different subjects and to pass the exams. In involvement of the students when updating the ECTS allocation is strongly proposed.

Question: Is the workload required for the academic program manageable for students?

Based on the Hours of Study and the ECTS written in the SER the program seems to be manageable for the students. Concerning the general ECTS topic see above.

Question: Are the teaching methods and content of teaching units sufficient for the successful achievement of the programs goals and outcomes (competences and qualifications, knowledge and skills)?

The teaching methods are in general appropriate. Group sizes with max. 30 students per group in exercises would be appropriate; however, for complex topics tutorials – partly supported by students in higher semesters – would be beneficial in order to reduce the quite high number of students which fail the exam in the first attempt.

Question: Is the overlap of academic content between the various parts of the curriculum comprehensible and transparent?

The different lessons are well linked and integrated. The curriculum is transparent and comprehensible. On bases of the existing curriculum a split into two profiles in the 3rd year is not really justified. This is reflected also in the fact that sometimes there are too few students to run both profiles.

Question: How do the admission criteria and admission procedures measure up to international standards?

Up to now there is no pre-selection of new students beyond the requirement of having the appropriate high school grade (Matura).
SER shows the total number of students per academic year. Remarkable is the high dropout rate throughout the years. In order to optimize resources appropriate admission procedures like pre-exams might be helpful.
We recommend the limitation of the students to the available resources like lecture rooms, computers, laboratories and staff.

Question: Is the ratio of academic/artistic staff to students appropriate?

Following the SER there is a wide range in the ratio of academic staff to students from the 1st semester to the final semesters. According to the SER (page 431) currently 37 regular academic staff (full time) and 19 external academic staff (part term) are allocated to the FMW. For this BSc program 13 full time and 7 external teachers are planned. The ratio between no. of staff and students is 0.055 (SER page 436). Compared to the number of enrolled students it would be sufficient, however, the SER doesn't give information about other activities/courses which have to be covered by the academic staff. Hence a definite answer to this question cannot be given.

5.1.2. Staff Bsc

Question: Does the institution have an adequate proportion of permanent staff and appropriate proportions of permanent and external staff?

Following the SER there is no staff from 'outside the academic world' teaching. We hardly recommend including external practical knowledge in the lessons and exercises from industry, authorities and private business.

Question: Does the academic staff demonstrate proven ability at a high academic and didactic level and are their qualifications appropriate to the positions they hold within the institution according to the basic criteria?

Many CVs show expertise in teaching. Following the recommendations given in the previous Evaluation Reports staff took part in several specific programs in this field. We recommend continuing this way.

5.1.3. Research and International Cooperation BSc

Question: Is the teaching staff involved in research activities inside or outside the institution, and do these research activities feed back into teaching/course contents?

During the meeting research papers done in the area of traffic and transport were handed over, those show research in these fields. Following the SER FME is active in international research programs and in cooperation with European universities. We strongly recommend the continuation of these activities.

Question: Are the extent and the quality of international cooperation in research and teaching adequate?

There are outgoing initiatives for teachers and researchers but no incomings. During the interviews with the staff a clear intention to involve foreign teachers for short term lectures into the study program was declared. Such an initiative would be fully supported by the EC.

Question: Are students involved in research and cooperation projects?

Following the SER students are included in student research projects, mainly seminar works. Internship and BSc theses are quite often connected which is a positive development since the last evaluation.

5.1.4. Finances and Infrastructure/Space and Equipment BSc

Question: Does the institution have an adequate budget plan?

The FME is part of the University of Prishtina and has an annual budget plan within the University. There is quite little possibility for the FME to influence the budget allocation. Clear plans for the allocation of the available budget were presented on an oral basis. A plan of future development we presented during the site-visit (and distributed), however time-lines and budget allocation for fulfilling the plans were missing. A more detailed plan for further development including time-lines and required budget allocation is requested for further SERs.

Question: Does the institution have adequate buildings and specialized infrastructure for the requirements of the program?

We recognize the engagement in redesigning and upgrading class rooms and recommend continuing this way especially with invest in IT equipment, presentation technology and laboratories like workshop facilities for practical exercises. Some of the labs would need more basic equipment in order to come closer to international standards. However, it has to be mentioned, that new managing group (dean, vice-deans, etc.) seems to be very active in improving the current situation.

5.1.5. Quality management BSc

Question: Are the institution's programs assessed regularly within the context of internal evaluation processes?

There is an evaluation process of the lectures at the University of Prishtina. This process covers all courses. According to the information provided during the site visit, the results of these evaluations are presented only to the faculty members but not to the students (except those students sitting in the appropriate committee). However, it was not possible to see any of these evaluations or any result from the evaluation procedure.
In the interview with the representatives of the rectorate it was mentioned that recently an electronic evaluation process for the individual lectures has been started. The FME provided some electronic

evaluation results for lectures of the last semester. For further reporting periods such results need to be included into the QA section of the SER.

In addition, the various course descriptions should be checked and adjusted to fulfill the formal requirements of a course description, e.g. clear description of subject and expected result. E.g. the description of mathematic III is vacuous in the sections description of subject as well as in target of subject.

5.1.6. Recommendations BSc

The current BSc programme is established and runs now already for a couple of years. After this successful implementation period a careful adjustment to current needs and international standards is proposed. This concerns the following items:
Implementation of additional subjects (proposals):

- Basic knowledge:
  - Deepening in Applied Thermodynamics and Applied Fluid mechanics
  - Applied mathematics including statistics
  - Basics in Chemistry
- Economics and project management
  - Implementation of Basics in Economics as compulsory lesson
  - Project management
- Foreign languages
  - Writing the BSc thesis in English
- Didactic concept:
  - Smaller units in exercises and labs are proposed.
- Reevaluation of the ECTS points per subject
  - The general handling of the calculation of the workload for students seems to be quite generous. A more strict calculation – according to international standards - would most probably reduce the current ECTS credits per subject. As a part of the QA procedure a check of the ECTS tables should be performed including the students as they know quite well the efforts needed to pass the individual courses.
  - A more realistic allocation of ECTS would give much more flexibility in the design of the curriculum, e.g. improving the basic knowledge in the BSc program. In addition it would make it easier for BSc students of Prishtina University to be accepted in MSc courses outside Kosovo.
- Different profiles:
  - A differentiation in the two BSc profiles should be reconsidered as it restricts the flexibility for BSc students in general. If not possible already in the next period that at least on long term
- Infrastructure:
  - Further extension of workplaces with PC would be beneficial.
- Financing:
  - In increase in budget for more site visits and exchange with industry is proposed
- Quality assurance
  - A compilation of the results of the student evaluations for teaching and courses need to be documented also in the SER and to be published to the students.
  - A compilation of the results of the questionnaires for academic staff, administration and supporting stuff need to be published in the SER.

MASTER Program

5.1.7. Academic programs and student management MSc

Question: Does the academic program correspond to the institution's mission statement and principles of operation?

The academic program corresponds with the mission statement of the faculty.

Question: Are the programs quality, range and academic aims appropriate to the academic degree?

In general, a MSc program shall aim at enlarging and deepening the knowledge for the proposed study area. The current MSc program is now running quite some time. It follows two profiles already from the first year on. In general, it is deepening the knowledge gained in the BSc program concerning Thermoenergetics and Thermotechnology.

Question: Is the program based on an overarching didactic concept that has been adequately communicated to and adopted by the teaching staff?

The overarching didactic concept was defined by FME as lecturing and teaching exercise, supported by seminars were appropriate. This concept seems to be clear to the staff. The exercises are done within groups of students.

Question: Does the academic degree correspond to international standards?

Generally spoken yes, however a stronger involvement of English as a working language would be beneficial. An involvement of external lecturers from industry would be preferably.

Question: Does the structure of the program give sufficient opportunity for independent study, reflection and analysis? (e.g. what is the proportion of independent study time compared to online/distance teaching and classroom units?)

Based on the Hours of Study and the ECTS written in the SER sufficient opportunity should be given.
The resources provided for the students (e.g. computers, working places) should be increased.

Question: Is the allocation of ECTS appropriate and justified?

This question has to be answered similar to the BSc program evaluation. The FME defined the workload for the students. However, a detailed insight into the various calculation tables shows deficits in the calculation of the workload.
Compared to international level the ECTS credits reflect less hours in classroom, although the basis value of 25h per 1 ECTS is similar. A reassessment of the ECTS should be performed.

Question: Is the workload required for the academic program manageable for students?

Based on the Hours of Study and the ECTS written in the SER the program seems to be manageable for the students.

Question: Are the teaching methods and content of teaching units sufficient for the successful achievement of the programs goals and outcomes (competences and qualifications, knowledge and skills)?

The teaching methods are in general appropriate.

Question: Is the overlap of academic content between the various parts of the curriculum comprehensible and transparent?

The different lessons are well linked and integrated. The curriculum is transparent and comprehensible. Some lessons from the BSc curriculum would fit better to the MSc program (e.g. concerning devices and equipment.). Some topics like "Hydraulic Machines" are elective and only in one profile although it would also be profitable to have them in both, and compulsory. In addition, it is not clear why overlapping courses like "power plants (C)" and "combined power plants (E)" in the same semester are really required.

Question: Is the ratio of academic/artistic staff to students appropriate?

Following the SER there is a quite reduced number of students within the MSc. program (compared to the BSc. program). According to the given number of students the ratio between academic staff and students seems to be appropriate. However, see remarks BSc program

5.1.8. Staff

(See BSc program)

5.1.9. Research and International Cooperation

General statements see BSc program. On MSc level the involvement of international cooperation is even more important and should be increased.

5.1.10. Finances and Infrastructure/Space and Equipment

(See BSc program)

5.1.11. Quality management

(See BSc program)

5.2. Recommendations MSc

The curriculum for an accredited MSc program in 'Thermoenergetics and Thermotechnology' exists already some time. Based on the current experience some adjustments are proposed:

(1) Moving some more advanced subjects from the BSc. program into the MSc. curriculum.
(2) Introduction of English as a working language in at least a few of the courses
(3) Implementation of external lecturers from industry/administration and private business in order to increase the practical relevance of the subjects.
(4) Re-evaluation of the ECTS points per subject._Similar to the BSc. Program the general handling of the calculation of the workload for students seems to be quite generous. A more strict calculation – according to international standards – would most probably reduce the current ECTS credits per subject and allow more flexibility in the configuration of the curriculum.

(5) *Based on the number of students the split into two quite different profiles has to be questioned. With less ECTS per lessons it would be possible to concentrate on one engineering profile in this field, having the compulsory lessons of both currently existing profiles and still enough space for elective subjects.*
(6) *More financial support for software, site visits, international student exchange, etc. would be required*

5.3. STUDY-PROGRAM *CONSTRUCTION AND DESIGN* - Bachelor & Master

BACHELOR Program

5.3.1. Academic programs and student management BSc

Question: Does the academic program correspond to the institution's mission statement and principles of operation?

The academic program corresponds with the mission statement of the faculty.

Question: Are the programs quality, range and academic aims appropriate to the academic degree?

In general a BSc program shall aim at providing a solid base for the proposed scientific area, i.e. mechanical engineering. Having this solid foundation would allow a further deepening of knowledge within appropriate MSc programs.
The current BSc program is established already over a couple of years and attracts quite a high number of students. In our opinion a shift into the direction of broadening of the basic knowledge within the BSc program is required.
The current situation of having two profiles in the 5th and 6th semester seems not to be appropriate for the general layout of the BSc program 'Construction and Mechanization'. Due to the fact that the whole curricula lacks somewhat on a broader basic knowledge a shift of the existing specialization in the 3rd year to the MSc program is proposed.
This study program covers the "core subjects" of the education of an engineer, namely construction and design of mechanical equipment. Having this basic knowledge normally opens the market for students in almost all fields of mechanical engineering. Hence a strong curriculum with basic knowledge in mechanical engineering is preferable for the BSc program We recommend that in a longer term separations should be made on the level of a MSc program and not already on BSc level

Question: Is the program based on an overarching didactic concept that has been adequately communicated to and adopted by the teaching staff?

The overarching didactic concept was defined by FME as lecturing and teaching exercise, supported by seminars were appropriate. This concept seems to be clear to the staff. The exercises are done within groups of students.

Question: Does the academic degree correspond to international standards?

Generally spoken yes, but there are some deficits which should not appear in a BSc in the framework of a FME. This concerns general knowledge about:

- Applied mathematics including statistics
- Basics in chemistry
- Basic knowledge in Economics
- Topics like "machine dynamics or theory of construction" should be in both profiles in case the profiles can not be eliminated at all

Some of the compulsory courses from the 3rd year (5th and 6th semester) concerning machines and devices would fit better in the MSc. However, taking the requirements of the economic sector in Kosovo into account there seems to be a need of having some applied topics already at BSc level. Nevertheless, during the discussion with the staff as well as with the students a request for a deepening in basic knowledge as e.g. applied mathematics was mentioned.

The implementation of foreign languages is given (mainly English), however a further deepening would be preferable (e.g. BSc theses in English language).

Question: Does the structure of the program give sufficient opportunity for independent study, reflection and analysis? (e.g. what is the proportion of independent study time compared to online/distance teaching and classroom units?)

Based on the Hours of Study and the ECTS written in the SER sufficient opportunity should be given. Moreover, it has to be mentioned that the distribution of ECTS points to the individual courses is quite generous compared to an international level. Hence there should be sufficient time for the students for self-learning activities.
The resources provided for the students (e.g. computers, working places) have improved since the last evaluation however more computer based workplaces but also more equipment in the workshops would be favorably. The digitalization of the library, including access to e-journals is very important. Although this has already been started further improvements are necessary. In any way there is a remarkable improvement compared to the site-visits undertaken in the years before.

Question: Is the allocation of ECTS appropriate and justified?

The FME defined the workload for the students. However, a detailed insight into the various calculation tables shows deficits in the calculation of the workload. In addition, it is not clear whether the numbers given in the ECTS calculation tables reflect reality.
Compared to international level the ECTS credits reflect less hours in classroom, although the basis value of 25h per 1 ECTS is similar.
An update of the individual course descriptions (Syllabus) including a more realistic allocation of ECTS points is required. Even the students claimed in the interviews that the more or less equal distribution of ECTS over the different courses do not reflect the efforts needed to study the different subjects and to pass the exams. An involvement of the students when updating the ECTS allocation is strongly proposed.

Question: Is the workload required for the academic program manageable for students?

Based on the Hours of Study and the ECTS written in the SER the program seems to be manageable for the students. Concerning the general ECTS topic see above.

Question: Are the teaching methods and content of teaching units sufficient for the successful achievement of the programs goals and outcomes (competences and qualifications, knowledge and skills)?

The teaching methods are in general appropriate. Group sizes with max. 30 students per group in exercises would be appropriate; however, for complex topics tutorials – partly supported by students in higher semesters – would be beneficial in order to reduce the quite high number of students which fail the exam in the first attempt.

Question: Is the overlap of academic content between the various parts of the curriculum comprehensible and transparent?

The different lessons are well linked and integrated. The curriculum is transparent and comprehensible. On bases of the existing curriculum a split into two profiles in the 3rd year has to be questioned.

Question: How do the admission criteria and admission procedures measure up to international standards?

Up to now there is no pre-selection of new students beyond the requirement of having the appropriate high school grade (Matura).
SER shows the total number of students per academic year. Remarkable is the high dropout rate throughout the years. In order to optimize resources appropriate admission procedures like pre-exams might be helpful.
We recommend the limitation of the students to the available resources like lecture rooms, computers, laboratories and staff.

Question: Is the ratio of academic/artistic staff to students appropriate?

Following the SER there is a wide range in the ratio of academic staff to students from the 1st semester to the final semesters. According to the SER (page 431) currently 37 regular academic staff (full time) and 19 external academic staff (part term) are allocated to the FMW. For the BSc program 19 full time and 6 external teachers are planned. The ratio between no. of staff and students is 0.116 (SER page 437). Compared to the number of enrolled students it would be sufficient, however, the SER doesn't give information about other activities/courses which have to be covered by the academic staff. Hence a definite answer to this question cannot be given.

5.3.2. Staff BSc

Question: Does the institution have an adequate proportion of permanent staff and external staff?

Following the SER there is external staff (part time), however it is not clear whether this external staff comes from industry or other higher education services. In any way a strong inclusion from external staff from industry would be preferable, mainly for the "applied" courses.

Question: Does the academic staff demonstrate proven ability at a high academic and didactic level and are their qualifications appropriate to the positions they hold within the institution according to the basic criteria?

Many CVs show expertise in teaching. Following the recommendations given in the previous Evaluation Reports staff took part in several specific programs in this field. We recommend continuing this way.

5.3.3. Research and International Cooperation BSc

Question: Is the teaching staff involved in research activities inside or outside the institution, and do these research activities feed back into teaching/course contents?

During the meeting research papers done in the area of traffic and transport were handed over, those show research in these fields. Following the SER FME is active in international research programs and in cooperation with European universities. We strongly recommend the continuation of these activities.

Question: Are the extent and the quality of international cooperation in research and teaching adequate?

There are outgoing initiatives for teachers and researchers but no incomings. During the interviews with the staff a clear intention to involve foreign teachers for short term lectures into the study program was declared. Such an initiative would be fully supported by the EC.

Question: Are students involved in research and cooperation projects?

Following the SER students are included in student research projects, mainly seminar works. Internship and BSc theses are quite often connected which is a positive development since the last evaluation.

5.3.4. Finances and Infrastructure/Space and Equipment BSc

Question: Does the institution have an adequate budget plan?

The FME is part of the University of Prishtina and has an annual budget plan within the University. There is quite little possibility for the FME to influence the budget allocation. Clear plans for the allocation of the available budget were presented on an oral basis. A plan of future development we presented during the site-visit (and distributed), however time-lines and budget allocation for fulfilling the plans were missing. A more detailed plan for further development including time-lines and required budget allocation is requested for further SERs.

Question: Does the institution have adequate buildings and specialized infrastructure for the requirements of the program?

We recognize the engagement in redesigning and upgrading class rooms and recommend continuing this way especially with invest in IT equipment, presentation technology and laboratories like workshop facilities for practical exercises. Some of the labs would need more basic equipment in order to come closer to international standards. However, it has to be mentioned, that new managing group (dean, vice-deans, etc.) seems to be very active in improving the current situation.

5.3.5. Quality management BSc

Question: Are the institution's programs assessed regularly within the context of internal evaluation processes?

There is an evaluation process of the lectures at the University of Prishtina. This process covers all courses. According to the information provided during the site visit, the results of these evaluations are presented only to the faculty members but not to the students (except those students sitting in the appropriate committee). However, it was not possible to see any of these evaluations or any result from the evaluation procedure.
In the interview with the representatives of the rectorate it was mentioned that recently an electronic evaluation process for the individual lectures has been started. The FME provided after the on-site visit some electronic evaluation results for lectures of the last semester. For further reporting periods such results need to be included into the QA section of the SER.

In addition, the various course descriptions should be checked and adjusted to fulfill the formal requirements of a course description, e.g. clear description of subject and expected result. E.g. the description of mathematic III is vacuous in the sections description of subject as well as in target of subject.

5.3.6. Recommendations BSc

The current BSc programme is established and runs now already for a couple of years. After this successful implementation period a careful adjustment to current needs and international standards is proposed. This concerns the following items:
Implementation of additional subjects (proposals):

(1) Basic knowledge:
   a. Applied mathematics including statistics
   b. Basics in Chemistry
   c. Basics in economics

(2) Foreign languages
   a. Writing the BSc thesis in English

(3) Didactic concept:
   a. Smaller units in exercises and labs are proposed.

(4) Re-evaluation of the ECTS points per subject
   a. The general handling of the calculation of the workload for students seems to be quite generous. A more strict calculation – according to international standards – would most probably reduce the current ECTS credits per subject.
   b. As a part of the QA procedure a check of the ECTS tables should be performed including the students as they know quite well the efforts needed to pass the individual courses.
   c. A more realistic allocation of ECTS would give much more flexibility in the design of the curriculum, e.g. improving the basic knowledge in the BSc program. In addition, it would make it easier for BSc students of Prishtina University to be accepted in MSc courses outside Kosovo.

(5) Different profiles:
   a. A differentiation in the two BSc profiles should be reconsidered as it restricts the flexibility for BSc students in general. If not possible already in the next period than at least on long term

(6) Infrastructure:
   a. Further extension of workplaces with PC would be beneficial.

(7) Financing:
   a. In increase in budget for more site visits and exchange with industry is proposed

(8) Quality assurance

a. A compilation of the results of the student evaluations for teaching and courses need to be documented also in the SER and to be published to the students.
b. A compilation of the results of the questionnaires for academic staff, administration and supporting stuff need to be published in the SER.
c. Some ‘subject descriptions’ need a more serious description of ‘subject’, ‘target’ and ‘expected results’

MASTER Program

5.3.7. Academic programs and student management MSc

Question: Does the academic program correspond to the institution's mission statement and principles of operation?

The academic program corresponds with the mission statement of the faculty.

Question: Are the programs quality, range and academic aims appropriate to the academic degree?
In general, a MSc program shall aim at enlarging and deepening the knowledge for the proposed study area. The current MSc program is now running quite some time. It follows two profiles already from the first year on. In general, it is deepening the knowledge gained in the BSc program concerning construction and Mechanization.

Question: Is the program based on an overarching didactic concept that has been adequately communicated to and adopted by the teaching staff?

The overarching didactic concept was defined by FME as lecturing and teaching exercise, supported by seminars were appropriate. This concept seems to be clear to the staff. The exercises are done within groups of students.

Question: Does the academic degree correspond to international standards?

Generally spoken yes, however a stronger involvement of English as a working language would be beneficial. An involvement of external lecturers from industry would be preferably.

Question: Does the structure of the program give sufficient opportunity for independent study, reflection and analysis? (e.g. what is the proportion of independent study time compared to online/distance teaching and classroom units?)

Based on the Hours of Study and the ECTS written in the SER sufficient opportunity should be given.
The resources provided for the students (e.g. computers, working places) should be increased.

Question: Is the allocation of ECTS appropriate and justified?

This question has to be answered similar to the BSc program evaluation. The FME defined the workload for the students. However, a detailed insight into the various calculation tables shows deficits in the calculation of the workload.
Compared to international level the ECTS credits reflect less hours in classroom, although the basis value of 25h per 1 ECTS is similar. A reassessment of the ECTS should be performed.

Question: Is the workload required for the academic program manageable for students?

Based on the Hours of Study and the ECTS written in the SER the program seems to be manageable for the students.

Question: Are the teaching methods and content of teaching units sufficient for the successful achievement of the programs goals and outcomes (competences and qualifications, knowledge and skills)?

The teaching methods are in general appropriate.

Question: Is the overlap of academic content between the various parts of the curriculum comprehensible and transparent?

The different lessons are well linked and integrated. The curriculum is transparent and comprehensible. Some lessons from the BSc curriculum would fit better to the MSc program.

Question: Is the ratio of academic staff to students appropriate?

Following the SER there is a quite reduced number of students within the MSc. program (compared to the BSc. program). According to the given number of students the ratio between academic staff and students seems to be appropriate.

5.3.8. Staff

(See BSc program)

5.3.9. Research and International Cooperation

General statements see BSc program. On MSc level the involvement of international cooperation is even more important and should be increased.

5.3.10. Finances and Infrastructure/Space and Equipment

(See BSc program)

5.3.11. Quality management

(See BSc program)

5.3.12. Recommendations MSc

The curriculum for an accredited MSc program in 'Construction and Mechanization' exists already some time. Based on the current experience some adjustments are proposed:

Program structure

Moving some more advanced subjects from the BSc. program into the MSc. curriculum.

Didactic concept

a) Implementation of external lecturers from industry/administration and private business in order to increase the practical relevance of the subjects.

b) Introduction of English as a working language in at least a few of the courses

Re-evaluation of the ECTS points per subject.

a) Similar to the BSc. Program the general handling of the calculation of the workload for students seems to be quite generous. A more strict calculation – according to international standards – would most probably reduce the current ECTS credits per subject and allow more flexibility in the configuration of the curriculum.

b) Based on the number of students the split into two quite different profiles has to be questioned. With less ECTS per lessons it would be possible to concentrate on one engineering profile in this field, having the compulsory lessons of both currently existing profiles and still enough space for elective subjects.

Financing:

More financial support for software, site visits, international student exchange, etc. would be required

5.4. STUDY PROGRAM *MECHATRONICS* – Bachelor & Master

BACHELOR Program

5.4.1. Academic program and student management

The visit at 2013 and the current visit to the Mechatronics program and its administration show a quite encouraging progress and a very good status. The program now runs for three years; first Bachelor-graduates are expected in September. Most of the recommendations of the evaluation in 2013 have been successfully implemented. It is great to see students working at specific problems in the labs.
The answers to the asked points (Guidelines for Experts) are given very concisely. Where there appears some space for improvement, a more detailed description is given.

Question: Does the academic program correspond to the institution's mission statement and principles of operation?

The Bachelor's program "Mechatronics" does comply with the mission of Faculty of Mechanical Engineering (University of Prishtina) insofar that by using contemporary teaching methods students are educated in the field of Mechatronics and are prepared for demands of the open market, and also for further studies (Master's program). The mission also comprises collaboration with other professional and scientific institutions in Kosovo as well as abroad, which is also fulfilled by the Departments of the Faculty of Mechanical Engineering concerning the study course in Mechatronics, demonstrated by several international projects. Since the Bachelor program is now successfully running for three years, it appears to be a well-established study course.

Question: Are the programs quality, range and academic aims appropriate to the academic degree?

The academic curriculum is properly designed and well-balanced for the education of engineers in Mechatronics.
As a possible improvement or complement, an elective or optional subject in the field of economics could be mentioned, namely "Entrepreneurship". It should give students a guideline how to start a spin-off or their own small company: which legislative presumptions are necessary, which forms of small business is possible, how to make a business-plan, how accounting works, etc. Of course, not all students are interested in founding their own business, but for a certain percentage it may be an option. On a broader view, this would also be beneficial to Kosovo's economy. It is understood that a similar compulsory subject *(Quality, Costs, Business, Management)* is offered in the Master's program, but one economics-related subject should also be placed in the Bachelor's program.

Question: Is the program based on an overarching didactic concept that has been adequately communicated to and adopted by the teaching staff?

Talking to the management and some representatives of the teaching staff, the didactic concept, based on lectures, home-works and exercises seems to be well adopted by the staff and transported via their lectures.

Question: Does the academic degree corresponds to international standards?

The academic degree corresponds to international standards.

Question: Does the structure of the program give sufficient opportunity for independent study, reflection and analysis? (e.g. what is the proportion of independent study time compared to online/distance teaching and classroom units?)

The work load based on 30 ECTS (compulsory plus elective) corresponds to a work load of 50 hours/week, which in real time might be higher. Provided that students do not have any other duties, e.g. part-time work, there is enough space for reflection and independent studies. That work-load for students is high, though under the assumption, that students can also use vacations for studying and preparation for exams, the workload is manageable.

Question: Is the allocation of ECTS appropriate and justified?

In general, the ECTS-points are properly distributed. In the SER it is found, that in the first semester the subject Mathematics I (2 hours lectures + 2 exercises) have 7 ETCS points, whereas for the same hours in the second semester, only 6.5 ECTS are given for Mathematics II. Since both subjects are taught for all students of the evaluated study-programs together, this applies for the other programs as well.
In comparison with other universities, the distribution of the ECTS-points for both subjects appear too generous, or, if expressed the other way round, more lectures and exercises could be placed within the accounted ECTS-points. For example, Bachelor study programs of Mechanical Engineering (Graz University of Technology, Austria) and Mechatronics (Johannes Kepler University Linz, Austria):

	Mechanical Engineering (Bachelor) Graz Univ. Techn.			Mechatronics (Bachelor) Joh. Kepler Univ. Linz (Austria)		
	Hours / week		ECTS (Factor)	Hours / week		ECTS (Factor)
	Lecture	Exerc.		Lecture	Exerc.	
Mathematics I	4	2	6 + 2 = 8 (1.5 / 1.5)	4	2	6 + 2.5 = 8.5 (1.5/ 1.25)
Mathematic II	4	2	6 + 2 = 8 (1.5 / 1.5)	5	1	7.5 + 1.25=8.75 (1.5/1.25)

Additionally, there are some more subject of mathematics in the Bachelor's programs, which are not listed (partial differential equations, numerics, probability and statistics).
For the evaluated study courses at University of Prishtina, there are only 2 lectures + 2 exercises in both subjects, for which 7 (factor 1.75) and 6.5 (factor 1.625). This appears to much.
It is well accepted at all University programs for technical studies, that mathematics plays a key role. If students are good in mathematics, they make better progress in other subjects since they can concentrate on the essentials. If students fail, very often the basic reason is lacking mathematical skills. Mathematics is the main subject for the enrollment test for technical studies at University of Prishtina, just to show the importance of this subject. In fact, it is applied mathematics, a tool to which is needed by engineers. It is the calculation capability to tackle technical problems. It is not necessary for engineers to proof theorems and lemmas. But it is necessary to be completely familiar with integrals, differential equations, some statistics, vector algebra and analysis.
During the site visit it was understood, that lecturers of the Faculty of Natural Sciences teach this subject. Usually, mathematicians have a different approach to this subject than engineers. Engineers themselves know best what mathematical tools are necessary in their respective subjects.
For that reason, it is recommended, that the subject “Mathematics I and II” should rather be understood as “Engineering Mathematics” and, as a consequence, should be taught by lecturers with a certain background in engineering.
Furthermore, it is recommended, to increase the lecture hours and exercise hours of both subjects within the proposed ECTS-points, for example (3+2) for each subject.

Question: Is the workload required for the academic program manageable for students?

see e).

Question: Are the teaching methods and content of teaching units sufficient for the successful achievement of the programs goals and outcomes (competences and qualifications, knowledge and skills)?

The form of teaching by traditional lectures and exercises in the classrooms and applying the gained knowledge on practical problems in the labs are very effective and the basis for an excellent education. It is a pleasure to see students working in the labs of FME to create something useful. Apparently, this combined method of teaching is very appropriate for the Mechatronics study course. Based on the information given in the SER, the content of the subjects is appropriate to achieve the goals.

Question: Is the overlap of academic content between the various parts of the curriculum comprehensible and transparent?

The overlap of the academic content is obvious, in the curriculum there is no apparent gap in the course of successive complexity of the subjects.

Question: How do the admission criteria and admission procedures measure up to international standards?

Generally, it is a good approach to have limited study places, and hence an admission procedure. It can serve to keep the quality of the education high. The enrollment of students is based on an admission test, which mainly focuses on mathematical skills. This is in accordance with international standards, since mathematics not only play a key role in technical studies, but also reflects the capability of solving problems abstractly.
If this admission procedure is in work for some years, statistics can be established to correlate the ranking in the enrollment with the study progress of the student. This is a matter of many years, but it helps to evaluate the admission procedure and, in case, helps to improve it.

On the opposite of the admission procedure, is recommended to establish an alumni system. It is a good practice to keep track with the graduates they leave university. During their career they gain a lot of experience, which could be very useful for the institute and for students. One way to make advantage of the alumni's experience is a job fair, where successful graduates give short presentations how their career evolved. Further, important feedback from them concerning the study program is gained to the responsible persons of lectures and the whole study course. As a side effect, the institute can establish some statistics how many graduates are employed, if they are employed in the field of Mechatronics, how high are salaries, etc. This statistics will be very useful for advertising the study program.

Question: Is the ratio of academic staff to students appropriate?

Currently, 118 students are enrolled for the Mechatronics study program. The SER reports 17 regular professors, 4 regular assistants, and 12 external professors and lectures. Hence, the ratio of academic staff to students is very appropriate. It should guarantee a very good supervision of each student, especially in the second and third year of the program.

5.4.2. Staff

Question: Does the institution have an adequate proportion of permanent staff and external staff?

The SER says 17 regular professors, 4 regular assistants, 8 external professors, 4 external lecturers and 1 external assistant. For the number of currently 118 students, this number of teaching staff is very appropriate. Even, if the Master's program starts in September 2016, this number is appropriate.

The ratio permanent and external professors / lecturers is also in order. Two thirds of the staff is employed regularly; external lecturers and professors bring new ideas and the possibility of common projects beyond

the institute. It is recommended, to employ also lecturers from industry for subjects, which are near to industry.

Question: Does the academic staff demonstrate proven ability at a high academic and didactic level and are their qualifications appropriate to the positions they hold within the institution according to the basic criteria?

In short, the academic staff is well prepared to fulfill the high standards of academic education of students. Their qualifications are out of doubt.

5.4.3. Research and International Cooperation

Question: Does the institution have an adequate proportion of permanent staff and external staff?

Apparently, the academic staff is well involved in research projects. Many international projects are documented. Amongst them there are project with partner universities.

Question: Are the extent and the quality of international cooperation in research and teaching adequate?

Hence, the extend of international cooperation is adequate.

Question: Are students involved in research and cooperation projects?

It is assumed that students currently are and will be involved in research- and cooperation projects. This applies mainly for students of higher semesters, who can work on diploma works within the frame of a research- or cooperation project with industry. Since the study program is rather young, this situation will come in the near future, and can be very fruitful for both students and research-staff.

5.4.4. Finances and Infrastructure / Space Equipment

Question: Does the institution have an adequate budget plan?

Question: Does the institution have adequate buildings and specialized infrastructure for the requirements of the program?

The institution (Faculty of Mechanical Engineering) has an adequate budget plan. During the site-visit, the visited buildings and lecture halls appear adequate for the needs of the Mechatronics study-program. It is well noted that new computer infrastructure has been acquired (20 work places) for computer aided exercises, etc. The labs are well adopted to serve the needs for practical works and projects.

5.4.5. Quality management

Question: Are the institution's programs assessed regularly within the context of internal evaluation processes?

There is an evaluation process of lectures at Faculty of Mechanical Engineering. During the visit it was understood that the analysis of the forms was centrally coordinated and the results finally reported to the dean, who, from case to case, discussed it with the responsible lecturer. They were never directly given to the lecturer, hence he/she never had direct response from student about the lecture. Further, the results of the evaluation was never discussed with the students.

The results of the evaluation process were not available to the E.C. At their visit in 2013, the documents handed in later were only the template of the evaluation, not the results.

In the discussion with the management of FME it was claimed that a new, electronically system was established since winter-semester 2015/16, and the results were handed to the EC later. Unfortunately, they are in Albanian, no translation exists. Furthermore, just a few students use the opportunity to express their opinion on the lecture (e.g. in Mathematics I, there are some 300 students in the lecture, 8 of them filled the evaluation form). Nevertheless, the electronic evaluation seems to work.

Recommendation: it is highly recommended for the management to discuss the results of the evaluation with the responsible lecturer. Further, those results should be presented to the students and improvements should be worked out. Students must be encouraged to take part in the evaluation process. They can be convinced easier, if they see that the lecturer takes the comments serious and improvements are made.

MASTER program

5.4.6. Preamble

Many findings and conclusions from the evaluation of the Bachelor's program also apply for the Master's. The Master's-program has a special status, since it has already been accredited, but it was not in progress for the last years. The program will again start in the winter-semester 2016/17, provided enough students (more than five) apply for the program. Since approximately 15 students will graduate from the Mechatronics Bachelor's program in September 2016, the probability to start is very high.

Where applicable and necessary, comments or recommendations are given.

5.4.7. Academic program and Student Management

The academic program complies with the mission statement of UP. The academic curriculum is properly designed and well-balanced. The didactic concept – which will be a continuation of the Bachelor's program – has proved very appropriate. Academic degree does correspond to international standards. The structure of the program comprises 20 hours of lectures/exercises per week, which roughly corresponds to a work load of 50 to 60 hours per week for students. The work load is high, but it is manageable. The last (fourth) semester of the program is reserved for the diploma-work. Hence, it is guaranteed, that students will have enough time to make independent research and to reflect. The distribution of the ECTS-points appears transparent, all weekly hours exhibit the same factor of 1.5 to the ECTS-system.

From the SER it is not clear, if an internship is scheduled in the program, and how many ECTS-points are accounted for (9.10 in SER).

Further it is not clear, if a subject “Entrepreneurship” is held or not: it is mentioned as a subject in the second year at “Basic Data of Study Program” (Section 9.1), but there are no descriptions of the lecture.

Concerning the admission procedure, it is unclear, if there is any assessment of applicants, or if any applicant will be accepted. At the previous visit in May 2013 it was stated, the applicants from Bachelor studies must have grades at least 8 out of 10 to be accepted. The admission criteria are not included in the SER, but it is assumed, that it did not change.

The ratio of academic staff to students is quite good, since only 20 students will be accepted. This guarantees a very good supervision for each student.

Recommendation: in the 2013 accreditation process is was recommended to have at least some subject taught in English to promote the language. From the SER it is not clear, which subject are intended to be at least partly in English, if any.

5.4.8. Staff

(see Bachelor's program)

5.4.9. Research and International Co-operation

(see Bachelor's program)

5.5. STUDY PROGRAM *SYSTEMS OF RENEWABLE ENERGY* - Bachelor

5.5.1. Preamble

Until the year 2020 20% of the energy of Kosovo shall be generated by renewable energy sources. As a consequence, there is a great demand for engineers educated in the field of renewable energy. It is important, that in the near future many well-educated engineers enter the local market.

5.5.2. Academic Program and Student Management

Question: Does the academic program correspond to the institution's mission statement and principles of operation?

The academic Bachelor's study program "Systems of Renewable Energy" does comply with the institution's mission insofar that by using contemporary teaching methods students are educated on the field of renewable energy systems and are mainly prepared for demands of the open market, and also for research work.
Further, this fact also complies with the Faculty of Mechanical Engineering's vision of a future oriented education of students.

Question: Are the programs quality, range and academic aims appropriate to the academic degree?

Basically, the range of the academic programme is appropriate and well distributed among subjects on mechanical engineering and subjects specific to renewable energy.
A recommendation of the last evaluation has been implemented, namely the internship and diploma-work now is valued with ECTS-points.
The study program is appropriate for the academic degree "Bachelor of Mechanical Engineering".
It is kind of unclear, what is the content of the subject "Practicum on renewable energy sources". In which relation does it stand to the intern-ship? It is accounted with 5 ECTS-points, which is more than the internship (4 ECTS), and almost that many as the diploma-work (6 ECTS).

Question: Is the program based on an overarching didactic concept that has been adequately communicated to and adopted by the teaching staff?

The program shows an overarching concept throughout: beginning with general subject on mechanical engineering, the education in the second year turns to basics of renewable energy, and finally to merely concentrate on renewable energy in the third year. An intern-ship introduces the students to industrial work in the related field, and diploma-work continues the work of intern-ship or is research-oriented.

Apart from on subject in the second semester (Energy economics) there are no economics-related subjects throughout the whole study-program. Since the distribution of 5.5 ECTS-points for the aforementioned subject is regarded too generous, there would be space for a second economics-related subject within the given frame of ECTS-points.

Recommendation: *it is recommended to include a second economics-related subject to the study-programme. Since engineers in the field of renewable energy often start their own business and offer their expertise for many branches, a subject on "Entrepreneurship" would be recommended. It can be a common lecture from the Mechatronics-Bachelor programme, which was recommended there.*

Question: Does the academic degree correspond to international standards?

An overview concerning the comparison of the proposed program with program of the University of Stuttgart and University of Applied Sciences Flensburg demonstrates a high degree of correspondence. Hence, the academic degree corresponds well with international standards.

Question: Does the structure of the program give sufficient opportunity for independent study, reflection and analysis? (e.g. what is the proportion of independent study time compared to online/distance teaching and classroom units?)

In the semesters I to IV the study program comprises subjects with 30 ECTS points per semester, which corresponds to a weekly work load of approximately 50 hours. This compares with other institution's program and has shown to be manageable by students. There is enough time for independent study and reflection, provided the students have no other duties (part-time work, etc.) In the third year, the diploma-work will offer enough time for independent research.

Question: Is the allocation of ECTS appropriate and justified?

The distribution of ECTS-points is generally properly arranged. A few unclear points concern the distribution of ECTS-points for "Mathematics I and II", which is discussed in section 5.5.1.f), since it applies for all study programs in the first year.
Further, the distribution of 5.5 ECTS-points for the subject "Energy Economics" (semester II, 2 hours per week) appears to much. Usually, a factor around 1.5 is appropriate to calculate ECTS-points from weekly lecture hours.

Question: Is the workload required for the academic program manageable for students?

The work-load of 30 ECTS-points per semester is manageable (see e)).

Question: Are the teaching methods and content of teaching units sufficient for the successful achievement of the programs goals and outcomes (competences and qualifications, knowledge and skills)?

The teaching method in the first year relies on the classical lecture-exercise combination, which is appropriate for elementary subjects. In the course of the study program, more practical or project-oriented subject are included, which is a proper way to prepare students for their career. Concluding, the teaching methods and content of teaching units seem to be sufficient to achieve the educational goals.

Question: Is the overlap of academic content between the various parts of the curriculum comprehensible and transparent?

The distribution of subject is designed in a way, where overlaps of the academic context can be given in the curriculum very well, though it depends on the particular lecturer to emphasize them.

Question: How do the admission criteria and admission procedures measure up to international standards?

The admission procedure foresees an admission test, which is basically a test of mathematical skill. As prerequisite the student must have Matura from a secondary school. It is noted positively, that there is an admission procedure to rank students, and a limited number of study places (85 places). Provided, there are many more applicants than study places, the best students can be selected, which contributes to the quality of the education. Not at all universities around Europe, such an admission procedure is usual.

Question: Is the ratio of academic/artistic staff to students appropriate?

The ratio of academic staff to students is appropriate from theoretical view (the pure figure). There are 12 + 5 regular / external professors, 2+1 regular/external assistants and 4 external lecturers. Depending on the demands, the number of assistants can be regarded low. If professors also take care for exercises, this ratio is appropriate. It has to be taken into account, that due to drop outs, the actual number of students (96) is much lower than the possible one.

5.5.3. Staff

Question: Does the institution have an adequate proportion of permanent staff and appropriate proportions of permanent and external staff?

The study program has an adequate proportion of permanent to external staff. As mentioned in previous section k), the number of assistants appears low (2 regular, 1 external), if exercises and intern-ship are taken care for only by assistants.

Question: Does the academic staff demonstrate proven ability at a high academic and didactic level and are their qualifications appropriate to the positions they hold within the institution according to the basic criteria?

The list of publications includes a descent number of publications related to renewable energy (although some titles are in Albanian and are not understood). It is recommended, that the academic staff continues in this way.

5.5.4. Research and International Co-operation

Question: Is the teaching staff involved in research activities inside or outside the institution, and do these research activities feed back into teaching/course contents?

Apparently, the teaching staff is involved in international project, since the SER and the annex “08-UP-FME-Annex-International projects” list international projects in the context of renewable energy-systems. Further, the list of publication comprises several publications on in the field of renewable energy-systems. It is assumed, that diploma-work emerge from these projects and hence feed back to the contents of the courses.

Question: Are the extent and the quality of international cooperation in research and teaching adequate?

As a consequence, the extent and quality of the research and international cooperation appears adequate for the academic staff.

Question: Are students involved in research and cooperation projects?

A natural consequence of research projects are intern-ships and diploma-works as spin-offs. Currently, it can not be evaluated, if there students are actively involved in the project.

5.5.5. Finances and Infrastructure / Space and Equipment

Question: Does the institution have an adequate budget plan?

Question: Does the institution have adequate buildings and specialized infrastructure for the requirements of the program?

FME as an institution has an adequate budget plan, which was handed out the site visit. It is recognized that the budget for investments increases for 15% compared to the previous years.
The Faculty of Mechanical Engineering has adequate rooms to teach and educate students. It is noted positively that new computers have been acquired for computer aided lectures.
The new management of FME seems to be very active in improving infrastructure of FME, which is very appreciated.

5.5.6. Quality Management

Question: Are the institution's programs assessed regularly within the context of internal evaluation processes?

The programs of FME are assessed regularly, resulting in a Self-Evaluation Report, which was distributed to the E.C. It was already mentioned that this SER exhibits some flaws, see section 4.1.2.
For assessing the quality of lectures, evaluation of students is a crucial means. Since this issue concerns all study courses, please refer to section 5.5.5. where it is discussed in detail.

5.6. STUDY PROGRAM *INDUSTRIAL ENGINEERING AND MANAGEMENT*

5.6.1. Academic Program and Student Management

Question: Does the academic program correspond to the institution's mission statement and principles of operation?

In general, the academic program corresponds to the institution's mission statement and principles of operation. Industrial Engineering and Management is internationally well-known definition for higher educational program, mostly at Master's level. It is recommended to proceed to develop similar program also to Master's level, but in this case in English. The readiness to proceed studies in such a master level was discussed in meeting with students and the interest was remarkably high. The program underlines importance of foreign languages, making it mandatory (currently 10 ECTS is mandatory either in English, German or French), however for enabling further internationalization and participation in Erasmus exchange program more emphasize should be put to English. Some courses should be offered in English.

Question: Are the programs quality, range and academic aims appropriate to the academic degree?

The programs quality, range and academic aims are appropriate to the academic degree "Bachelor of Mechanical Engineering". In the curriculum, the Diploma Work is credited by 6 ECTS, corresponding to international academic level. The Bachelor Diploma Work is allowed to be written in foreign language in some cases, as number of international companies is increasing in Kosovo, having interest towards collaboration with university.

Question: Is the program based on an overarching didactic concept that has been adequately communicated to and adopted by the teaching staff?

"Industrial Engineering and Management" is per definition an overarching didactic concept that has been adequately adopted by the teaching staff. In first year lectures are the same as for other Bachelor courses in Faculty of Mechanical Engineering, enabling also considerable economy in curricula. It is combining traditional Engineering (mostly taught in faculties of Mechanical Engineering all over the world) with deeper understanding of Management (mostly taught in cooperation with faculties/schools of Economics/Business Administration). This makes it interdisciplinary, however demanding skilled lecturers with broad experience both from science and industry.

Question: Does the academic degree correspond to international standards?

The current curriculum is well balanced and experiences of other universities (Sarajevo and Zagreb) have used in compilation of the program. The academic degree corresponds to international standards. Internship includes agreements both with local companies and foreign universities (Polytechnic University of Tirana, FH Münster, TU Wien, University of Maribor, and UACS).

Question: Does the structure of the program give sufficient opportunity for independent study, reflection and analysis? (e.g. what is the proportion of independent study time compared to online/distance teaching and classroom units?)

The proposed study program comprises subjects with 30 ECTS points per semester, which is corresponding to accepted full work load of student all over Europe. There is enough time for independent study. Most of studies are regular classroom studies. The possibilities of distance learning depend very much upon ICT development – there was evidence of online library available in open access wireless university network.

Question: Is the allocation of ECTS appropriate and justified?

The allocation of ECTS points is appropriate. The subjects are well sized, having 5-7 ECT. Graduation thesis in amount of 6 ECTS are included into the program Also, the curriculum enables 4 ECTS for Professional Internship, and field studies are integrated into some subjects. However, from the study program student course projects are not evident, when meeting students and teachers it was explained that course works in practice are in several subjects. In such subjects (e.g. Economy of production) project work should be evident also from description/name of the subject.

Question: Is the workload required for the academic program manageable for students?

The workload required for the academic program is manageable for students, but including free choice studies into curriculum would make it more student-friendly and clear.

Question: Are the teaching methods and content of teaching units sufficient for the successful achievement of the programs goals and outcomes (competences and qualifications, knowledge and skills)?

The teaching methods and content of teaching units described in curriculum are sufficient for the successful achievement of the program's goals. The program is well designed to achieve the goal of educating engineers in Industrial Engineering and Management, considering trends in curricula developments it is recommended to add an Entrepreneurship course into the study program Concerning the number of available study places, the filled 97 enrolled students in two years is good result.

Question: Is the overlap of academic content between the various parts of the curriculum comprehensible and transparent?

The overlap of academic content between the various parts of the curriculum is comprehensible and transparent, as the study program corresponds well to international similar study program in Europe.

Question: How do the admission criteria and admission procedures measure up to international standards?

The admission criteria and admission procedures correspond to international standards and all students passing State Matura exam are allowed to start studies at the study program There are studying large number of female students, what adds value to the program. Students also were optimistic about their future, and gender issues were not mentioned to be a problem in career planning in Kosovo. However, students mentioned to be difficult to find a proper workplace in Kosovo; there are few industrial enterprises in the area only. Thus motivation to pass the program might be depending upon development of local economy. Half of the students have been thinking of future career as an entrepreneur. However, the study program does not include clearly defined entrepreneurship course/project.

Question: Is the ratio of academic/artistic staff to students appropriate?

The ratio of 19 permanent academic staff members to 97 students results theoretically 5 students for one academic staff member. The number of students is increasing, as currently are only two first years studying.

5.6.2. Staff

Question: Does the institution have an adequate proportion of permanent staff and appropriate proportions of permanent and external staff?

Basically, the Faculty of Mechanical Engineering does have an adequate number of permanent and external teaching staff (16 Regular professors + 7 external professors, 1 regular + 4 external lecturers, + 1 Regular Assistant + 1 External Assistant) to fulfill the aims of educating students according to international standards.

Question: Does the academic staff demonstrate proven ability at a high academic and didactic level and are their qualifications appropriate to the positions they hold within the institution according to the basic criteria?

The academic staff has proved ability at a high academic and didactic level and is their qualifications appropriate to the positions they hold within the institution according to the basic criteria. There was evidence of elaborated study materials and developed new laboratories. Several staff members have studied abroad, however for publishing activities knowledge of English language should be continuously supported by regularly sending staff members to international conferences.

5.6.3. Research and International Cooperation

Question: Is the teaching staff involved in research activities inside or outside the institution, and do these research activities feed back into teaching/course contents?

The teaching staff is involved in research activities of the institution, mainly publishing at conference proceedings, but also international cooperation program. At bachelor level the research activities feedback into teaching/course contents is noticeable, and several laboratory equipment has been received through international cooperation.

Question: Are the extent and the quality of international cooperation in research and teaching adequate?

The extent and the quality of international cooperation in research and teaching have been improved through recent years and are adequate to university level.

Question: Are students involved in research and cooperation projects?

Students have spent time abroad participating in practice program.

5.6.4. Finances and Infrastructure / Space and Equipment

Question: Does the institution have an adequate budget plan?

The institution has an adequate budget plan.

Question: Does the institution have adequate buildings and specialized infrastructure for the requirements of the program?

There is plenty of room in buildings fulfilling requirements of the program, but further investments into laboratories equipment and ICT should continue. The reading room at library was quite small and it was also suggested by students to increase study area of library. Laboratories can amount few work-groups, but the existing equipment needs careful planning to organize teamwork. The number of rooms dedicated to building prototypes (hands-on learning) should be increased. Yearly Faculty invests from overall budget 183.000 EUR certain amount 100.000 EUR into teaching materials and infrastructure, and for 2016 was prepared a purchase of Festo machine automation didactic set.

5.6.5. Quality Management

Question: Are the institution's programs assessed regularly within the context of internal evaluation processes?

The Bachelor's study course for Industrial Engineering and Management was established two years ago, there was 80 applicants in 2015. The Faculty has shown regular development and proved assessment of their curricula, and the self-evaluation reports have been prepared properly. The student feedback is collected now electronically. Quality is managed by Vice Dean of Quality and Co-operation with Enterprises. The Programme Director is responsible for development of study programme, and this additional workload is also motivated by additional salary (70 EUR per month). Study programme issues are discussed once in a month at departmental meeting.

5.6.6. Recommendations

At least some courses on BSc level should be offered in English. The study program should include clearly defined entrepreneurship course/project. In project-oriented subjects (e.g. Economy of production) project work should be evident also from description/name of the subject. Free choice studies should be included into curriculum to make it more student-friendly and clear. For publishing activities knowledge of English language should be continuously supported by regularly sending staff members to international conferences. It is recommended to proceed to develop similar program also to Master's level, but in this case in English. The reading room at library was quite small and it is recommended to increase study area of library equipped with PC workplaces for reading e-books and electronic study materials.

5.7. STUDY PROGRAM *MANUFACTURING AND AUTOMATION* - Bachelor & Master

5.7.1. Academic programs and student management

Question: Does the academic program correspond to the institution's mission statement and principles of operation?

The study program is aligned with FME's mission statement and principles of operations. The number of graduated in Manufacturing and automation (in 2015 5 BSc and 11 MSc) is really low, taking also into account that this is the only Manufacturing and automation study program in Kosovo which urgently needs new BSc and MSc level specialists to support in the re-industrialization of Kosovo's manufacturing industry.

Question: Are the programs quality, range and academic aims appropriate to the academic degree?

Yes. The earlier accreditation has already seen the program appropriate to the academic degree and recommended development actions have been done to even improve the quality, range and academic aims.

Question: Is the program based on an overarching didactic concept that has been adequately communicated to and adopted by the teaching staff?

The teaching staff clearly makes the best they can in the current situation where the laboratory environments in general are badly out of date with some exceptions. This will also make it difficult to apply 'overarching didactic concept' all over the study program.

Question: Does the academic degree correspond to international standards?

The current curriculum is properly structured with appropriate descriptions of courses and diploma works. Based on the available documents and the site visit the academic degrees can be assessed to correspond to international standards.

Question: Does the structure of the program give sufficient opportunity for independent study, reflection and analysis? (e.g. what is the proportion of independent study time compared to online/distance teaching and classroom units?)

The structure of the program has an understandable storyline based on 30 ECTS per semester, which means an appropriate workload for the students. In general, the division between classroom studies and independent self-study is in balance varies course by course.

Question: Is the allocation of ECTS appropriate and justified?

As already stated in the previous accreditation, the courses have appropriate ECTS allocation. But the BSc thesis has been left out, although the procedures to establish the thesis work have been described quite in detail. The procedure itself looks a little bit over-organized and over-bureaucratic as to all needed stages and amount of participating persons and decision makers, but on the other side the applied procedure gives a solid basis to guarantee a coherent evaluation and approval process of the diploma works.

Question: Is the workload required for the academic program manageable for students?

The workload is manageable for students.

Question: Are the teaching methods and content of teaching units sufficient for the successful achievement of the programs goals and outcomes (competences and qualifications, knowledge and skills)?

The study program for Manufacturing and automation has specific requirements due to the needs of re-industrialization of Kosovo's manufacturing industry. Manufacturing is the backbone of basically all economies (incl. Kosovo), having SMEs in important role. The strongest part in the study program seems to be the theoretical part, but in this study program it is extremely important to learn also state-of-the-art practices and applications. Otherwise the graduated students will lack practical knowledge and skills which would be important to fill the expectations of potential employers (especially SMEs) from the very beginning of the career.

Recommendation: The contents of courses should be connected to the manufacturing context, incl. both the theoretical part and especially the practical and applications part which should be as close as possible to state of the art. Description of some courses is not clear from that point of view e.g. because of local Albanian lecture material. Some examples of courses to be considered and analyzed for possible updates:

1. Hydraulic and pneumatic systems are overrepresented and too much dominating in the program taking into account the current trends in manufacturing and automation. Since 1980's electric systems have replaced hydraulic and pneumatic systems except some specific applications. Renewing of the courses in that direction should be considered to respond better to the current needs and trends.
2. Transportation devices as the title of one course reflects a general image of a traditional and partly out of date study program at least when looking the titles of the courses. In this specific case discussion on Materials handling systems/devices would fit better in today's manufacturing context. During the site visit it was explained that even if the titles have remained the same the contents has been updated and changed. However, it would be strongly recommendable to update and change also the titles of the courses.
3. Kinematics, Dynamics, Electrotechnics, Automatic control: include examples from robotics, materials handling equipment, machine tools etc.
4. Industrial sociology: include direction and implications of trends in technological change, globalization, labour markets, work organization, managerial practices and employment

5. Automation of production processes: update to today's technologies and context, and try to organize demonstration and learning in modern laboratory or industry environment with modern machines
6. Courses related to joining or forming: include technologies and processes used for sheet metal products could be included
7. Assembly technologies, processes and automation should be included in relevant and applicable course
8. Consider updates also in Metal forming, Welding, Cutting tools, CIM, Factory projecting, Entrepreneurship (include also visiting lectures of entrepreneurs), Projection and safety at work (include also ergonomics), Optimal control systems, Adaptive systems, and Digital systems (include also at least introduction to digitalization in manufacturing).

Question: Is the overlap of academic content between the various parts of the curriculum comprehensible and transparent?

The overlap of academic content between the various parts of the curriculum is comprehensible and apparent based on the course descriptions.

Question: How do the admission criteria and admission procedures measure up to international standards?

The admission criteria and admission procedures correspond to international standards. The more attractive the study program is for potential applicants the better students the faculty can get in. From that point of view, it would be important to update the courses and the whole study program continuously to follow the development of state of the art. In the meeting with students they clearly expressed their wish to learn new(est) technologies, processes etc. and have practical hands-in learning which reflects that there is potential for renewal of courses.

Question: Is the ratio of academic/artistic staff to students appropriate?

Number of the teaching staff (BSc:14 regular professors, 1 regular lecture, 2 regular assistants, 9 external professors, 4 external lecturers, 2 external assistants, and MSc: 8 regular professors, 1 regular assistant, 3 external professors, 2 external assistants) looks definitely high enough and sufficient for the number of students (BSc: 167, MSc: 34). The number of graduated (in 2015 5 BSc and 11 MSc) is quite low. The dropout rate at FME is quite high (in 2014/2015 at BSc level in total 38,7% and at MSc level 73,2%) which wastes FME's resources meaning extra costs with no or minor impact compared to situation where the personal and funding resources would be used for more beneficial subjects. The high dropout rate may also reflect that the study program from teaching and contents point of view is not interesting/attracting/motivation for the students, e.g. due too theoretical contents with weak connection to practice. This may be also one reason why the employment of graduates is not higher (MSc 85% and BSc 70%) even if the number of graduates is quite low. The statistics of the Manufacturing and automation degree program is not presented in the documents.

5.7.2. Staff

Question: Does the institution have an adequate proportion of permanent staff and appropriate proportions of permanent and external staff?

The faculty (FME) has sufficient teaching resources and justified balance between permanent and external staff. When comparing the number of study programs and number of graduated there should be possibilities for some kind of rationalization.

Recommendation: *Analysis and discussion between study programs is recommended in order to optimize the use resources and eliminate unnecessary overlaps. Related to the Manufacturing and automation study program this kind of analysis could be done with three other study programs, i.e. Constructions and Mechanization, Mechatronics, and Industrial Engineering and Management.*

Question: Does the academic staff demonstrate proven ability at a high academic and didactic level and are their qualifications appropriate to the positions they hold within the institution according to the basic criteria?

Based on the documentation and meetings and discussions during the site visit the academic staff has proven their qualifications for their positions and ability to work at a high academic and didactic level. During the site visit several examples of good quality study material etc. were presented. Even if mobility of the staff has improved, the mobility periods at FME level have been mainly very short 1-3 days. Only a couple longer mobility periods (one week and one month) have been presented. Active participation and contribution in international conferences is one way to open mobility and also internship opportunities. Efforts should be done to get agreements with foreign universities (AT, DE, SK, CZ, HU, …) –and also with more manufacturing companies for internships.

5.7.3. Research and International Cooperation

Question: Is the teaching staff involved in research activities inside or outside the institution, and do these research activities feed back into teaching/course contents?

The teaching staff is involved in research activities, which can be seen as the scientific publications, most of which are published in conference proceedings. In 2013-2015 in total 104 publications have been published which is not very high in relation to the number of academic staff. The publications are mainly in traditional areas, and e.g. in industrial automation, Mechatronics (electronics/SW) and industrial management there are only a few publications. Additionally, 9 international projects in 2013-2015 have been reported which shows some progress but also potential for improvements in the coming years especially if new funding sources and channels can be found. The qualification of the academic staff is not a bottleneck for that. Earlier discussed rationalization of study programs could also free more resources to research activities.

Question: Are the extent and the quality of international cooperation in research and teaching adequate?

Even if the extent and the quality of international cooperation in research and teaching have been improved, there is still potential for growth and further development if already earlier discussed necessary prerequisites for that are created.

Question: Are students involved in research and cooperation projects?

Some students have participated in international research projects, and studied and worked some time abroad e.g. as part of internships and practice programs.

5.7.4. Finances and Infrastructure/Space and Equipment

Question: Does the institution have an adequate budget plan?

There is an appropriate budget plan.

Question: Does the institution have adequate buildings and specialized infrastructure for the requirements of the program?

Recommendation: The faculty has appropriate buildings and basic infrastructure for the requirements of the program but the backwardness of the teaching and learning facilities and environments strongly hinder learning of modern state-of-the-art technologies, processes, practices, concepts etc. Due to the importance of the Manufacturing and automation study program for the reindustrialization of Kosovo, the Faculty is strongly recommended to work for finding any possible ways to upgrade the out-of-date laboratory and learning facilities, equipment and machines/robots/machine tools to enable learning state-of-the-art manufacturing and automation technologies, processes, methods and concepts in practice.

The promise to use 'contemporary equipment' is challenging to fill because the laboratory environments are widely out of date and would need remarkable investments to get them closer to state-of-the-art level! The presented annual budget (100 kEUR at whole FME level) for investments in new equipment is very low, which means that it will take too long time to get the environments close enough to state of the art. During the site visit the situation of this study program seemed to be possibly the worst. Urgent actions are needed to correct the situation.
One way to boost the needed upgrading of the equipment and environments could be by savings through rationalization of the degree programs e.g. by joining and decreasing degree programs which have a lot of overlaps. Another and additional option would be to discuss with industry and other possible stakeholders and ask either their direct support or by applicable leasing agreements. This would need fostering of discussion and cooperation with industry and stakeholders at continuity basis. The plan to establish Industrial Council is in right direction. One council at FME level is probably not enough. Those study programs which have close connection to industry could have also own or joint smaller Industrial Advisory Boards to guide and monitor the work of the study program which would in longer term build the needed trust between industry and FME/Study program when industry sees that the readiness of graduates is improved for the jobs they offer.

5.7.5. Quality management

Question: Are the institution's programs assessed regularly within the context of internal evaluation processes?

The study program and teaching is assessed regularly. The web-based assessment system is still at early stage and under further development. A set of results of done assessments have been sent to the evaluation group but the assessment process based on these examples written in local language is difficult without additional discussions.

5.7.6. Recommendations

- The number of study programs is recommended to be reduced in order to optimize the use resources and eliminate unnecessary overlaps.
- Serious actions are recommended to enable to modernize the Automation and automation laboratory and automation laboratory and learning environments, as discussed above.
- Titles and contents of several courses could be updated to represent better the European and international standards of today's manufacturing and automation.
- The existing study program supports mainly metals engineering industries even if the target is to serve also other industries such as food and woodwork industries. The ongoing reindustrialization needs strengthening of all potential manufacturing sectors. In order to support

better the different manufacturing sectors, comparable updates and changes are recommended in the study program.

- It would be recommendable to update of the terminology used in English titles and description/contents of the courses to represent today's globally used language (see e.g. the CIRP Encyclopedia of Production Engineering, www.cirp.net).
- The faculty is recommended to consider possibilities to make diploma works (especially MSc theses) in industry. The Manufacturing and automation study program would be a good candidate to pioneer this. The thesis in industry would probably need little longer time and would affect also the guiding and evaluation of the work. Making the thesis works in industry would strengthen collaboration between FME and industry which would benefit FME. When industry has better trust with FME it would be easier to get also support and sponsorships from industry e.g. in investments in learning and research facilities as well as support for research, internships and mobility.

6. MEETING WITH STUDENTS

6.1. General recommendation

6.1.1. Student involvement in quality assurance

The involvement of students in the quality assurance process is highly important in case of further development and improvement. During the meeting we saw that students are proactive and highly concentrated on studies and making the industry of Kosovo better in future. So we and understand that students also have a lot information of labor market needs and could share this experience with the management of each program to improve it and do some changes year by year. We highly recommend to involve students and student representation or student union in the process of preparing of Self-evaluation report and in all main bodies of University governance.

6.1.2. Process of feedback

The process of feedback seems to be only in the start position, as we know the Electronic feedback system is now working for 2 years inside of SEMS (student electronic system), however we didn't get any feedback resuming results. It is good to know that University is progressing in this field, however students would like to see this process more public and more transparent.

Moreover, the most important thing is "feedback on feedback" to let student know what kind of actions were done to improve study quality and satisfaction of studies in university.

6.1.3. Students' internship

Faculty of Mechanical Engineering has new good practice to do internship during the diploma semester. However, it is not enough. We recommend to put some internship in the curriculum during 3-4 semester to let students be more in touch with the industry they are planning to work or create a business. Students now are not so oriented on creation their own business so we recommend to provide the separate course on Internship with all knowledge needed to create their own companies and all details and procedures of

it. The culture of new and innovative start-ups or spin-off is growing year by year and it is very important for Prishtina university to have Business and innovation center in cooperation with private companies and Alumni to prepare more Business oriented students in future.

6.1.4. Cooperation with industry and Alumni association

As we mentioned before cooperation with Alumni and industry people can create new culture of start-ups and be very helpful for those who want to create their own business. More strong cooperation with alumni and industry can also be very helpful for study programs quality assurance purposes. University is preparing students for the labor market and industry people need to be more involved and become equal stakeholders together with University administration, students and alumni in future.

6.1.5. Drop-out rate

One of the main reason of high drop-out rate in BSc is that students are not ready for the study process after the secondary school or gymnasium. To solve this problem, the administration of the faculty of mechanical engineering could think about visiting schools to provide more information about the studies and also make more active advertising campaign to avoid not motivated students in future.

7. MEETING WITH THE TEACHING STAFF

Teaching staff as well as the students are the most important stakeholder (the ones to whom it concerns) of the University. Valuable input can be given to initiate improvement processes, but also weak points can be figured out.

- Teaching staff:
  - assistant professor are independent from full professors,
  - technical assistants are dependent from full professors,
  - research assistants don't exist at the university,
  - for promotion the possibilities available and clear,
  - technical assistants become by a contract for 3 years (can be extended to 4 years) and they can apply for assistant professor if they fulfill all the criteria,
- There is enough academic freedom on all levels, they can also choose their field of research.
- Teaching assistants publish related to their PhD studies in countries abroad
- Financing of research abroad is paid by the host university.
- Four assistants/young assistants of Faculty are also now PhD students at other universities (Hali Demolli and Shkelzen Shabani in Turkey, Ramadan Duraku in Makedonia, Riad Ramadani in Maribor), and this practice is supported by university management.
- The questionnaires for teaching and academic staff were relevant. (results are in the self evaluation report)
- The questionnaires from students were send to the rector and if there are some problems the teacher is involved and improvements must be planned.

8. Closing the Site-visit

8.1. A Short Consultation Meeting of the Expert Team

- The Expert Team discussed possible results of the evaluation process and the demand of additional documents to prepare the report (students evaluation of lectures)
- Time schedule for the generation of the report was discussed to save unnecessary time delay.
- The report should be created as a draft version until Monday 20th of June 2016 and sent to the Agency for review purposes. A final version of the report is scheduled at July 1st 2016.

8.2. Closing Meeting with the Faculty Management

Missing documents necessary to conclude the report of the evaluation procedure were requested from the management.

Remark of the E.C.: Self Evaluation Reports of the Faculty of Mechanical Engineering represent a paper containing a comprehensive and proper overview of mission, development of work and efficiency of the institution. We find this document having a permanent value, and on the occasion of the next evaluation it will serve for comparison. Therefore, it should be completed with information on the composition of the committees list including 4 main topics:

1. list of staff mobilities last three years
2. list of publications in review journals for the last five years
3. number of students graduated last three years for each study program
4. ppt-presentation of the dean
5. strategic milestones from the last three years and for the next three years

9. FINAL ASSESSMENT, RECOMMENDATIONS TO THE NATIONAL COUNCIL

Based on the Self Evaluation Report and attached documents, as well as discussions with all participants of the education process and the insight into the situation on site during the site visit, the Expert Committee for evaluation of the Faculty of Mechanical Engineering established that the Faculty of Mechanical Engineering has been performing successfully its defined mission. It fulfils the expectations of the public in all fields of its activities in general.

Applying the given advises can improve the level to European and International standards.

The Expert Committee proposes improvements in the future self-evaluation reports. A condensed list of the recommendations of the last Evaluation Report including the actions taken since that time shall be part of the main body of the SER. In addition, results from the evaluation procedure of the lectures as well as from the staff shall be included in the SER directly as part of the QA section.

9.1. Suggested Periods of Re-accreditation

The Expert Committee suggests to the council to re-accredit all mentioned bachelor and master study programs in this report. The periods for the re-accreditation are suggested to be

3 Years

- Systems of Renewable Energy BSc
- Manufacturing and Automation BSc and MSc

5 Years

under the prevision of condensing the individual study programme and re-evaluating the ECTS points per subject for:

- Thermoenergetics and Thermotechnology BSc and MSc
- Construction and Mechanisation BSc and MSc
- Mechatronics BSc and MSc
- Industrial Engineering and Management BSc

Finalized in Graz, June 20th, 2016.

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