

# EDUCATIONAL QUALITY ASSESSMENT

## Chemical Engineering

An evaluation of the quality of the bachelor's programme Chemical Engineering at University of Zenica

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## Part I

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## General

## 1. Introduction

In accordance with its mission, the assessment panel (henceforth: the panel) presents its findings and its evaluation **of bachelor's program Chemical Engineering at University of Zenica** in this report.

This report can serve as a basis for the accreditation of the programme. This report is in accordance with the ESABIH guidelines, the panel assessed 7 criteria and 24 indicators. The marks can be adapted at the grading scale of the HEA, hence all criteria for this programme have been graded according to this scale.

## 2. The Assessment Panel

### 2.1 Composition

The assessment panel is composed in conformity with the ESABIH guidelines.

The panel assigned to evaluate the **of bachelor's program Chemical Engineering at University of Zenica** includes the following members.

Chairman: Prof dr Andre Govaert, visiting professor at Ka-Ho St. Lieven, Belgium

Expert 1: Prof dr Patrick Demeyere, head of Bachelor study programme in Chemistry at Ka-Ho St. Lieven Belgium

Expert 2: Prof dr Nusreta Đonlagić, professor at University of Tuzla – B-H expert

Student member: Alma Bulbulušić, student at Mechanical Faculty at Dzemal Bijedic University of Mostar.

The assessment of **of bachelor's program Chemical Engineering at University of Zenica** was accompanied and supported by **Alim Abazović, Quality Assurance Coordinator at Dzemal Bijedic University of Mostar**. He was appointed as secretary of this assessment.

### 2.2 Task Description

Based on the programme's self-evaluation report (SER) and the interviews that were conducted during the assessment visit, the assessment panel will provide the following in its report:

- An evaluation of the criteria and the indicators as defined in the ESABIH framework;
- An all-encompassing evaluation of the programme;
- A formulation of recommendations to bring about quality improvement in the programme.

### 2.3 Working Method

The assessment **of bachelor's program Chemical Engineering at University of Zenica** is conducted in conformity with the guidelines of the ESABIH project.

The panel's procedure is characterised by three identifiable phases:

- Phase 1 Preparation
- Phase 2 Visit to the institution of higher education
- Phase 3 Reporting

### Phase 1 Preparation

Every panel member studies the self-evaluation report and its appendices. The panel members also provide an individual checklist that lists all their questions, their temporary evaluation and their argumentation. The secretary creates a synthesis out of these lists. Following that, the synthesis is thoroughly discussed and provided with arguments.

Based on the discussion and the panel members' questionnaires; the secretary finally makes an inventory of the key points and priorities that should be kept in mind during the interviews and the inspection of materials.

### Phase 2 Visit to the higher education institution

ESABIH consortium group provides a visit schedule template that can be adjusted to the specific situation of a certain programme if necessary. The visit schedule is included as appendix.

During the assessment, the panel interviews a representative group of all the programme's stakeholders, it studies additional information and it visits the institution to be able to assess the students' accommodation and available facilities. The panel uses the checklists' and questionnaires' synthesis for further interviews.

The visit schedule contains a few consultation meetings that allow the panel members to exchange their findings with each other and to come to mutual, more definitive evaluations.

At the end of the assessment visit, the panel's chairperson gives an oral report on the panel's experiences and findings, without uttering any explicit value judgments with regard to its contents.

### Phase 3 Creation of the assessment report

Based on the self-evaluation report, the checklists and the motivations, the secretary draws up a draft of the assessment report, in dialogue with the chairperson and the other panel members. This draft assessment report describes the panel's evaluation and the motivation per criterium and per indicator. In addition to that, points of attention and possible recommendations for improvement are formulated if found necessary or desirable by the panel members.

The draft assessment report is sent to the study programme for the verification of factual errors and for the formulation of possible remarks with regard to the report's content. The programme's reaction on the report is then discussed by the assessment panel.

## 2.4 Forming an Opinion

In the first phase, the panel establishes an evaluation per indicator. Afterwards, the panel establishes an evaluation per criterium, based on the evaluation of the indicators that make up that criterium.

The criterium's evaluation always gives an overview of the indicators' evaluations. In case of a compensation of indicators, the evaluation on criterium level is followed by a motivation and the weighting factor that was used by the panel to come to an evaluation on criterium level. In all other cases, the motivation of the evaluation on criterium level refers to the indicator's argumentation.

All evaluations and weightings follow the decision regulations as formulated in the 'ESABIH guidelines'. At indicator level, the panel grants one of the following scores from this quadruple scale: 'unsatisfactory', 'satisfactory', 'good' or 'excellent'. The score 'unsatisfactory' indicates that the programme does not comply with the generic quality demands for that indicator. The score 'satisfactory' implies that the generic quality demands are met.

The score 'good' indicates that the quality of the programme stands above the generic quality

demands that are related to that indicator. The score 'excellent' implies that the quality of the indicator can be seen both nationally and internationally as an example of best practice. The panel intends to motivate every score given to the evaluated indicators as adequately as possible, taking into account the assessment criteria as formulated in the ESABIH framework.

On the basis of the indicator scores, the panel gives a summarising evaluation at criterium level. A positive evaluation means that the generic quality demands of a specific criterium are met, whereas a negative evaluation indicates that they are not.

Lastly, the panel will make a judgment on the overall quality of the programme at the end of the report.

These marks can be adopted as the future grading scale of HEA.

In the second phase of the panels' procedure, the panel conducted site visit to the higher education institution following the site visit agenda provided by the ESABIH Consortium group. There were no deviations from the agenda in terms of re-scheduling some of the interview groups. The schedule was tight, but there were cases of breaching the time-limit of the interviews.

However, in view of making a thorough assessment of the programme, certain limitations in the site visit have to be given due account, such as the working language. The faculty staff, students and other stakeholders preferred to speak in the local language, so all interviews were handled in the local language with interpretation given by a Self-evaluation team member appointed simultaneous interpreter. This is the reason why the panel members from Bosnia-Herzegovina and the secretary to the panel interpret the interviews with students so as to allow the students to speak more freely in answering the panel's questions. Also, the time-frame of the interviews was in some cases relatively short, which can be seen as a constraint in getting the overall impression of the study programme quality.

## Part II

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# Assessment Report



## General information on the bachelor's programme Chemical Engineering

Study program Chemical Engineering belongs to Faculty of Metallurgy and Materials Science at University of Zenica. Faculty of Metallurgy and Materials Science was established in 1959 as the Technical College of metallurgical profession that in 1961 was grown in Metallurgical Faculty as a part of Sarajevo University. Faculty offered education exclusively within the field of metallurgical engineering since its foundation to academic 1989/90. In academic 1989/90 has introduced the Department of Metallic Materials and in academic 1998/99 Department of Nonmetallic Materials after that Faculty changed its name to the Faculty of Metallurgy and Materials Science (FMM).

The University of Zenica was founded on October 18, 2000 pursuant to the Decision of the Zenica-Doboj Canton Assembly. Faculties and field of studies at University of Zenica are:

- Faculty of Metallurgy and Materials Science
  - Metallurgy
  - Materials: Department of Metal Materials
  - Materials: Department of Non-metal Materials
  - Chemical Engineering
- Faculty of Mechanical Engineering
  - Engineering Product Design
  - Production Technology Management
  - Engineering ecology
  - Maintenance
- Faculty of Education
  - Classroom teaching
  - English Language and Literature
  - German Language and Literature
  - Turkish Language and Literature
  - Mathematics and Computer Science
  - Bosnian, Croatian, Serbian Language and Literature
- Faculty of Economics
  - Enterprise Management
  - Accounting and audit management
- Faculty of Law
  - Law
- Faculty of Polytechnic
  - Civil Engineering
  - Production Business
- Faculty of Health
  - Healthcare
- Faculty of Islamic Pedagogy
  - Social Pedagogy
  - The Islamic religion
  - Preschool Education

At the university of Zenica exists also Metallurgical Institute "Kemal Kapetanović" with departments:

- Department for physical metallurgy
- Department for metallurgical chemistry

- Department for environmental protection and ecology
- Department for thermotechnics and measurements
- Inspection body - ITN
- Department for welding
- Department for metal casting
- Department for plastic metal processing
- Department for mechanical engineering
- Department for electricity and automation
- Department for ore and iron
- Internet-Indoc Center
- Organizational sector

University of Zenica has one campus, with decent infrastructure.

At the bachelor study program Chemical Engineering at university of Zenica following courses are obligatory: Analytical Chemistry I and II, Electrochemistry, Electromechanical Engineering, Physics I and II, Physical Chemistry, Physical Chemistry of Processes in the Metallurgy, Physical Chemistry of Processes in Non-metallic Materials, Physicochemical Fundamentals of Ceramics, Fuel and Combustion, Environmental Chemistry, Chemical Engineering Thermodynamics, Chemical Reactors, Instrumental Methods of Testing, Catalysis and Catalysts, Control of Product Quality, Corrosion and Protection, Corrosion and Protection of Metals, Corrosion and Protection of Non-metals, Crystallography, Material and Energy Balance, Inorganic Chemistry, Inorganic Technology I and II, General Chemistry, Organic Chemistry, Organic Technology, Plant Design I and Thermal Process Engineering.

The first year of study is common to all departments at the Faculty.

In academic 2010/11 year 89 students are enrolled in evaluated study program.

# Criterion 1. Educational Objectives

## Indicator 1.1 Level and Orientation

Assessment criteria:

The educational objectives are focused on getting the student to possess general and specific competences mentioned by the study programme. Graduates should have basic knowledge, skills and attitudes that are defined and planned by educational objectives. Students must have an understanding of the scientific-disciplinary basic knowledge that is specific for a certain domain of science, a systematic knowledge of the core elements of a discipline, including the acquisition of a coherent, detailed knowledge partly inspired by the latest developments of the discipline, and knowledge of the structure of the field of study and the connection with other fields of study.

The educational objectives are focused on getting the student to master general competences such as:

- Obtaining and processing information;
- Ability to reflect critically and to be creative;
- Ability to perform leadership tasks;
- Ability to communicate information, ideas, problems and solutions;
- An attitude of life-long learning.

The educational objectives are also focused on getting the student to master general scientific or (academic) competences such as:

- A research attitude;
- Knowledge of research methods and techniques;
- Ability to collect relevant data that can influence the judgment of social, scientific and ethical questions;
- Ability to appreciate uncertainty and ambiguity;
- The limits of knowledge and the ability to problem guided initiating of research.

The educational objectives are focused on getting the student to master the specific competences of the domain and the scientific field of the study program.

### **The opinion of the assessment panel: Satisfactory**

The assessment panel formed an opinion based on the determination of and on the consideration of the following:

The mentioned learning objectives of the study programme could be seen as satisfactory. The Panel realized that there was certain experience from existing study programs in the region.

Input from the work field is strong point of this study program, and the Panel appreciates the efforts of the study program in this area.

The curriculum of subjects is planned and defined in order that students get the general and specific competence during the study. The aim of the curriculums and the teaching methods is to master the students the knowledge and the understanding of the subject, the ability of critical thinking, analysis, synthesis, evaluation and problem solving, where and how receive information and process information (use of literature, journals, modern information technology).

The key role of teachers is in shaping the students' ability for critical thinking and creativity, to offer the ideas for solving problems.

The practical work with all other aspects of teaching, enable to the students to master specific competencies in the field of chemical engineering.  
The educational objectives are focused on getting the student to possess general and specific competences mentioned by the study programme.

#### **Recommendations for improvement:**

The panel recommends that study program should improve the description of educational objectives taking into account Bologna declaration, Dublin descriptors, Tuning programs and European and National Qualification Framework.

### **Indicator 1.2 Domain Specific Demands**

Assessment criteria:

The educational objectives (mentioned as the end qualifications of the student) join the demands that are set by (foreign) colleagues and the relevant work field for an education within the domain (field of study/discipline and / or professional practice). They are in line with the regulations. The end qualifications for bachelor's degrees and master's degrees are derived from the scientific disciplines, the internationally performed research and the courses that are considered to put research into practice in the relevant professional field.

- General study programme objectives (desired final qualifications of the graduates at study programme level) and their genesis;
- Alignment of the objectives with the bachelor's/ master's competences in the Bologna declaration and European Qualification framework;
- Attention for the international dimension in the study programme's objectives;
- Attention for academic/professional/artistic skills in the objectives;
- Familiarity with the objectives among students and staff involved in the study programme;
- Profiling the study programme with regards to domestic and/or foreign study programmes in order to determine the study programme objectives and (including recent and imminent developments) to make the comparison with the own vision on the vocation/discipline;
- Alignment of the objectives with the professional regulations/legislation;
- Alignment of the objectives with the needs and wants of the intended work field;
- Genesis of the discipline-specific objectives.

#### **The opinion of the assessment panel: Satisfactory**

The assessment panel formed an opinion based on the determination of and on the consideration of the following:

The panel holds the opinion that Chemical Engineering at University of Zenica is a new study program but with lot of experiences from metallurgical programs and with lot of input from work field and academic staff coming from work field.

In the curriculum except to the fundamental disciplines as mathematics and physics, the associated disciplines like the electrical engineering, mechanical engineering, computer science and economics are studied.

The Panel considers that generic competences are implicit in courses, but they are not assessed.

The program of study is comparable with the generally accepted model of study in the field of Chemical engineering and Chemical technology and comparable with the program content of studies in Croatia, Serbia, Slovenian and Macedonia. The aims of the program are defined clearly and

precisely within each subject, as well as competence, knowledge and skills that students obtain after passing the course.

The panel also misses the most important competences expected by the work field contacts cooperation. Genesis of these competences is not described.

The aims of each subject should be more explicitly formulated in terms of competence learning: knowledge, skills and attitude.

The alignment of the objectives with the general bachelor's competences should be more clear as well as with professional regulations.

#### **Recommendations for improvement:**

The Panel strongly recommends that missing generic competences (team work, communication, creative thinking, etc.), and research competences should be embedded in the curricula.

The panel advises the study programme to pay more attention to broader chemical education, instead of metallurgical knowledge. More attention should also be dedicated to practical skills and managerial competences.

### **Opinion on Criterion 1, Educational Objectives: Satisfactory**

Based on the opinions of:

Indicator 1.1, level and orientation: Satisfactory,

Indicator 1.2, domain specific demands: Satisfactory,

the assessment panel holds the opinion that generic quality, concerning criterion 1, is present in the study programme.

If the study programme wishes to be integrated in the European Higher Education Area, there is a need to describe the programme objectives, learning outcomes and real competences in order to make clear how courses will fulfill the needs of B&H society/market and requests of EHEA. This will provide the programme and the stakeholders valuable information for decision making. Doubtlessly, the study programme has the potential to remedy this shortcoming.

## Criterion 2. Curriculum

### Indicator 2.1 Correspondence Between Objectives and the Content of the Programme

Assessment criteria:

The programme is an adequate realization of the end qualifications of the education, as to level, orientation and demands specific for the domain. The end qualifications are adequately translated towards the learning objectives in (parts) of the programme. The content of the programme offers students the possibility to achieve the end qualifications.

- Translation of the objectives in the curriculum;
- Level (bachelor, master) and content of the study programme components;
- Presence of inter-disciplinary elements;
- International dimension in the study programme/internationalisation of the curriculum (policy, participation rate, cooperation forms, international contacts, etc.);
- Degree to which recent advancements in education at home and abroad have found expression in the curriculum;
- Procedures for curriculum revision and innovation;
- Participation of relevant stakeholders in curriculum development, revision and innovation.

#### **The opinion of the assessment panel: Satisfactory**

The assessment panel formed an opinion based on the determination of and on the consideration of the following:

The panel puts forward that these are nice study programs, well structured and explained.

At the study programs there are nice, useful and very detailed and extended description files of course units. The programme is well established following criteria and modules and in line with the current objectives. The programme is using common and good templates for subject specifications. The form for describing the structural elements of a subject is a good way of communicating study program, objectives, content, evaluation method.

Based on site visit and discussion with staff the panel concludes that for teaching process study programs use good and adequate course material.

The programme is well established following criteria and modules and in line with the current objectives; however the absence of a clear profile of competences make it difficult to evaluate the alignment of the programme with the learning outcomes.

As mentioned before the Panel is missing a list with learning outcomes. So it is difficult to prove the correspondence with the objectives. Very nice work is done on ECTS and ECTS description forms. The panel think that it is unusual that examination points for attendance and activity in class exists without description of the reached competences. The continuous revision of the study programme following a procedure is a strong point.

#### **Recommendations for improvement:**

The panel advises the study programmes to create the matrix which can prove that all desired competences and the generic competences also are actually in the curriculum.

## Indicator 2.2 Demands Professional and Academic Alignment

Assessment criteria:

The development of knowledge by students when there is an interaction between the education and the scientific research within relevant disciplines. The programme matches with the developments in the relevant scientific discipline(s) by demonstrable connections with topical scientific theories. The programme guarantees the development of scientific research skills. With certain courses, there are demonstrable connections with the topical practice of the relevant professions.

- Attention in the curriculum for knowledge development;
- Attention in the curriculum for skills that support professional functioning;
- Attention in the curriculum for work field experience: interaction with professional practice, attitude, content, level and guidance of practical training final projects, etc.;
- Alignment with recent (international) developments in the field/discipline and professional practice (among other things, as researcher);
- Research alignment of the study programme; among other things: feedback of (own) research to the study programme, active involvement of students in research within the study programme;
- Attention in the curriculum for development of research skills – conveying the research attitude – research skills. Interaction between study programme and academic services.

### **The opinion of the assessment panel: Good**

The assessment panel formed an opinion based on the determination of and on the consideration of the following:

The panel has a positive attitude towards alignment of the curriculum with work field demands in the region.

The panel's opinion on staff is positive. Staff members are academically of a high level and doing research.

### **Recommendations for improvement:**

The panel strongly recommends that students should be included more in research projects.

The panel advises that curricula should be in alignment with an even broader domain of chemical engineering.

## Indicator 2.3 Coherence Programme

Assessment criteria:

Students take a coherent course programme with regard to content.

- Sequential structure and coherence of the curriculum in terms of the standard process;
- Harmony of the curriculum in the cooperation with other university departments and institutions;
- Relation between the curriculum and flexible learning process.

### **The opinion of the assessment panel: Good**

The assessment panel formed an opinion based on the determination of and on the consideration of the following:

The panel thinks that study program is coherent.

When designing the curriculum and the profile of engineers, the nature of economic regions and economic systems that are located primarily in the area of Zenica-Dobojo Canton and beyond were considered.

### **Recommendations for improvement:**

The Panel thinks that the study program should be more flexible. Panel recommends that more attention should be dedicated to increase flexibility of the study program in areas such as distance learning, part time students, etc.

## **Indicator 2.4 Workload**

Assessment criteria:

The actual amount of study hours per academic year is being checked and reaches the standard of 60 credits.

- The study programme fulfils the formal requirements with regard to the size of the curriculum for bachelor and master:
- It is possible to follow the programme adequately since factors that hinder the learning process are being eliminated as much as possible;
- Study time measurements and follow-up;
- Agreement between estimated and actual study time;
- Spread of the study time in the study programme;
- Presence of factors obstructing or promoting study and any steps.

### **The opinion of the assessment panel: Good**

The assessment panel formed an opinion based on the determination of and on the consideration of the following:

The panel determined that number of ECTS points is in accordance with legislation.

The panel thinks that measurement of workload are present and plans for the improvement of relations between number of ECTS points and student workload

Upon completion of the first cycle of study student achieves 240 ECTS credits. A graduate of the Department of Chemistry after a successful defense of the diploma work is awarded the academic title: Bachelor of Science in Chemical Engineering. The second cycle of study at the Department of Chemistry, the Profile of Chemical Engineering, was established in 2009 by the decision of the Senate of the Zenica University upon approval of the social justification of the master studies (second cycle of study). The second cycle of study lasts two semesters, and upon completion of the second cycle student achieves a minimum of 60 ECTS credits, which together with the first cycle makes in total of 300 ECTS credits.

From the academic 2009/2010 the Chemistry Department was renamed to the Department of Chemical Engineering. The study lasts eight semesters. Upon completion of study student achieves



240 ECTS credits. A graduate of the Department of Chemical Engineering after a successful defence of the diploma work is awarded the academic title: Bachelor of Science in Chemical Engineering, and receives his Diploma and Diploma Supplement.

**Recommendations for improvement:**

The panel strongly recommends that all activities related to study program should be included in ECTS system (summer practice, sport activities, participation in working groups, etc.)

## **Indicator 2.5 Coherence of the Organisation of the Learning Process and Contents**

Assessment criteria:

The structure and the content of the curriculum are coherent and it is in line with modern didactic approaches (new teaching methodologies, innovations in teaching, etc.). The quality of the educational resources is high and there is an alignment of the learning resources with the didactic concept and the objectives (at study programme level).

- The didactic concept is in line with the objectives;
- The work forms are aligned with the didactic concept. Work forms used (lectures, working groups, project work, practical work, self-study, workshops, etc.);
- Alignment of the didactic work forms with the objectives, the didactic concept and the characteristics of the student intake;
- Attention for recent educational developments at home and abroad in the didactic concept and its elaboration;
- Variation of educational forms;
- Educational resources used and quality (syllabi, guides, courses, teaching and learning aids, etc.): Alignment of the learning resources with the didactic concept, the objectives (at study programme level and study programme component level) and the characteristics of the student intake.

**The opinion of the assessment panel: Good**

The assessment panel formed an opinion based on the determination of and on the consideration of the following:

The panel appreciates that different learning strategy and methodology and methods are used within study programs.

The panel asks attention to general and research competences. According to panel general and research competences are used and trained, but not assessed

**Recommendations for improvement:**

By implementing competence based learning some new teaching and evaluation methods should be introduced.

## **Indicator 2.6 Diploma Thesis**

Assessment criteria:

Before obtaining the master's degree students have to make a final project, by which the student has to prove his/her analytic and synthetic capability or independent problem solving capability on academic level or his/her artistic capability. The final project reflects the general critical reflection of the student's intentions to do research.

- Place/relative weight of the master's thesis in the study programme;
- Content and concept of the master's thesis;
- Preparation for the master's thesis;
- Guidance of the master's thesis;
- Cooperation between students and researchers;
- Cooperation between students and the professional field;
- Orientation of the (proposed problem of the) master's thesis to the actual academic/professional context;
- Assessment of the master's thesis.

**The opinion of the assessment panel: Good**

The assessment panel formed an opinion based on the determination of and on the consideration of the following:

Based on the available documents that the panel inspected and looked into, the panel thinks that there is fine quality of the diploma thesis.

Based on site visit and available documents the panel concludes that there are good and clear procedures that are in accordance with legislation.

Upon completion of first cycle study student achieves 240 ECTS credits. A graduate of the Department of Chemical Engineering after successfully defense of the Diploma thesis acquires the academic title: Engineer of chemical technology, and receives Diploma. Diploma works are also the result of active involvement of students in research within the program.

**Recommendations for improvement:**

The Panel thinks that evaluation of the process is needed.

The panel recommends that members of work field must be involved in the assessment of the diploma thesis.

## **Opinion on Criterion 2, Curriculum: Satisfactory**

Based on the opinions of:

Indicator 2.1, correspondence between objectives and the content of the programme: Satisfactory,

Indicator 2.2, demands professional and academic alignment: Good,

Indicator 2.3, coherence programme: Good,

Indicator 2.4, workload: Good,

Indicator 2.5, coherence of the organization of the learning process and contents: Good,

Indicator 2.6, master's thesis: Good,

the assessment panel holds the opinion that generic quality, concerning criterion 2, is present in the study programme.

The Panel thinks that there is a good curriculum at the study program, but with not enough practical work. Still, work placement after 6<sup>th</sup> semester is nice example of good practice.

High quality of final work is evident after examining the documents and procedures.

## Criterion 3. Staff

### Indicator 3.1 Quality of the Staff

Assessment criteria:

The staff is qualified for the educational, organizational realization of the programme. They are also qualified to take care of the content of the programme.

- Human resources policy (including recruitment, determination of tasks, appointments, promotions, evaluation procedure, advice and decision making bodies);
- Impact of substantive, educational and didactic qualities in the recruitment and promotion, evaluation and monitoring of the staff;
- Policy with regard to the staff for educational activities;
- Factors obstructing the pursuit of a good human resources policy;
- Professionalization (life-long learning approach) of the staff;
- Expertise of the teaching/academic staff (substantive, educational and didactic);
- Involvement of the teaching/academic staff;
- Technical, administrative and organisational expertise of the staff;
- Introduction and guidance of staff and equal opportunities policy.

#### **The opinion of the assessment panel: Good**

The assessment panel formed an opinion based on the determination of and on the consideration of the following:

The panel thinks that at this study programs very motivated and enthusiastic staff are engaged .

The panel appreciates positive attitude for improvement.

Based on the available documents that the panel inspected and looked into, the panel concludes that the qualifications of the staff are on academic level.

The panel determined that some of the staff members are engaged in research.

For the B-H conditions, the academic staff is well prepared to teach the core of the proposed programme. They are motivated and they have a good knowledge of the local needs for the profession.

The review panel observes that the promotion system for the teachers is clear and accepted by the components of the faculty.

There are some financial limitations to hire permanent teachers, which is a limitation for research developments.

#### **Recommendations for improvement:**

Academic staff members must be responsible for teaching, doing research, improvement of course units and contact with work field.

The panel recommends that workload of the staff members should be followed.

Some activities are needed for professionalization (educational reform, learning outputs and indicators, etc.), and team building. The panel recommends for the study programs to create and adopt professionalization plan for staff.

The panel also recommends that management structure should be more efficient.

### **Indicator 3.2 Demands Professional/Academic Alignment**

Assessment criteria:

For some courses it is necessary that a sufficient amount of staff members have knowledge and insight with regard to the profession. The course matches with the following criteria with regards to the effort of staff made within a professional, academic education:

- Professional experience and knowledge of the professional practice among the staff with educational or education-supporting tasks;
- Research expertise and research activity in the practice and the development of the arts;
- Range of specialisations among the staff with research tasks;
- Educational contribution from the professional field and the staff's international contacts, including feedback with regards to the study programme, the participation in international networks and the partnerships with domestic and foreign partner institutions.

#### **The opinion of the assessment panel: Good**

The assessment panel formed an opinion based on the determination of and on the consideration of the following:

The academic qualification of staff members is high. The teaching process at the study program is conducted by a qualified teaching staff employed at the Faculty, and other faculties of the University of Zenica and associates.

The Panel positively assessed the research projects that study program participated in and elements of those projects implemented in study program. This practice should continue and bring different benefits to study program, staff and students.

The panel appreciates staff coming from work field engaged in teaching process at study program.

#### **Recommendations for improvement:**

The panel recommends that the national and international cooperation to start up student mobility should be improved.

### **Indicator 3.3 Quantity of Staff**

Assessment criteria:

A sufficient amount of staff is being appointed to organize the course with the desired quality. Human resource policy is organized in a good and proper way. Recruitment policy is based on good selection of staff.

- Size of the workforce;
- Size of the workforce in proportion to the number of students;
- Ratios between the various categories of staff;
- Number and percentage of visiting professors;

- Age structure;
- Share of the various staff categories in education and research.

### **The opinion of the assessment panel: Satisfactory**

The assessment panel formed an opinion based on the determination of and on the consideration of the following:

The panel determined that quantity of staff is in accordance to norms and standards: 18 teachers and staff are permanently employed at the Faculty. Of these, four (4) regular professors, five (5) part-time professors, six (6) assistant professors, one (1) senior assistant, and two (2) assistants. As the first two semesters are common to all three departments in the teaching team of the Department of Chemical Engineering are involved the 26 teachers of other departments, such as teachers of Department of Chemical Engineering involved in teaching process of two other departments.

### **Recommendations for improvement:**

The panel strongly recommends to study program management that they should pay attention to age structure of teaching staff. Regarding academic staff, there are 7 persons age 50-60, and 6 person age 60-70, as stated in table 3.7. of the SER. The Panel thinks that age structure of academic staff should be improved.

### **Opinion on Criterion 3, Staff: Satisfactory**

Based on the opinions of:

Indicator 3.1, quality of staff: Good,

Indicator 3.2, demands professional/academic alignment: Good,

Indicator 3.3, quantity of staff: Satisfactory,

The assessment panel holds the opinion that generic quality, concerning criterion 3, is present in the study programme.

The Panel thinks that the staff members are very motivated and enthusiastic, supported by Management.

Good relation between students and staff is evident from discussions and site visit.

It is obvious that positive regulation regarding staff members is followed.

## Criterion 4. Students

### Indicator 4.1 Assessment and Testing (Learning Assessment)

Assessment criteria:

By means of assessments, tests and exams, students have been adequately tested. The learning assessment is in accordance with the proclaimed learning objectives (parts) of the programme.

- Student guidance during assessment;
- Organisation of tests and examinations;
- Various assessment standards with regards to the objectives of the study programme components and the study programme as a whole: concept, orientation of the evaluation to the (integrated) tests of knowledge, insight, skills and attitudes, degree of difficulty;
- Criteria and method of the assessment by the evaluators;
- Criteria and method of the assessment by the examination committee;
- Transparency of the assessment: Familiarity of students with the requirements connected to the evaluation;
- Familiarity of students and staff with the assessment procedures;
- Quality assurance of examination matters.

#### **The opinion of the assessment panel: Good**

The assessment panel formed an opinion based on the determination of and on the consideration of the following:

The panel thinks that assessment and testing is in accordance with study program syllabi. The planned student activities for each subject are given in the framework of its program. Each of the planned activities are shown in SER (Table 4.1.) carried a certain number of points, which is the sum total of 100. Each student is informed in advance with the ways and methods of assessment of each proposed activity and with the number of points that can be obtained in each activity being assessed. So, The Panel thinks that there are good and clear procedures about assessment and testing.

Students are familiar with the schedule of the final exam and mid-term exams. Schedule of the final exam is published for each examination period at the beginning of the academic year, with the date, time and place of the examination. Mid-term exams are held during the teaching process, the half and at the end of the semester. About the date, time and place of mid-term exams the students each time are informed in time. Grade is public, grading system is known. The students have an unconditional opportunity to examine their written work in terms that together with the results of the examination are issued on the notice board and website of the Faculty. If a student is unable to inspect his written work within the stipulated period, then he can arrange with the teacher another date that suits both teacher and student.

The Panel is convinced that entire process is transparent and in accordance with positive procedure.

#### **Recommendations for improvement:**

The panel strongly advises that the new assessment methods should be considered.

## Indicator 4.2 Practical Training

Assessment criteria:

The practical training enables students to acquire practical experience. Students develop professional skills and attitudes required for the independent practice under guidance and under conditions of increasing independence. The training is the result of an independent study on a problem that is relevant to the study programme and the field of action. The results of the training reflect the student's reasoning capacity, the information processing and critical reflection capacity and the competence in applying solution strategies in problem situations from professional practice.

- Place/relative weight of the practical training/thesis in the study programme;
- Contents and concept of the practical training;
- Preparation for the practical training;
- Guidance in the practical training;
- Assessment of the practical training.

### **The opinion of the assessment panel: Satisfactory**

The assessment panel formed an opinion based on the determination of and on the consideration of the following:

The Panel thinks that this part of the study can be used as an example of good practice for B-H study programs.

Within the curriculum students have the ability to conduct practical classes making that curricula is relevant when it comes to employability skills. Depending on the subject within the Department, the practical classes are held in the laboratories of the Faculty, Metallurgical Institute "Kemal Kapetanović, Faculty of Mechanical Engineering, on the ground and in industrial sector with developed content and concept.

A special form of practical training is a professional practice for a period of 4 (four) weeks, which is mandatory for students after completion of the 6th semester and it is usually performed in the laboratories and plants of industrial entities with a detailed plan and program to acquire expertise knowledge. The mentors - a teacher, who is appointed by Head of Chair and a professional person from a company together make a program of practice. Both mentor upon completion of professional practice provide assessment of professional practice. This type of practical training is very important because it gives students an insight into the real world of teamwork, research skills, making decisions, solving problems and overcoming misunderstandings.

The panel appreciates the independent way of practical training.

### **Recommendations for improvement:**

The Panel recommends that there should be more practical work present in study program structure.

The panel also recommends that the practical work should be improved in way that becomes more structured and guided.



### **Indicator 4.3 Conditions of Admission**

Assessment criteria:

Content of the program fits in with the qualifications of the incoming students. Admission procedures are clear and transparent.

- Internal procedures for admission of students;
- Characteristics of the student intake and related policy;
- The curriculum is in line with the preliminary training;
- Specific activities with regard to the alignment between the preliminary training and the study programme.

#### **The opinion of the assessment panel: Satisfactory**

The assessment panel formed an opinion based on the determination of and on the consideration of the following:

Admission procedures, including conditions of enrollment, are defined by the Statute of the University. Admissions policy and the number of students to enroll in degree programs is defined in accordance with the University capacity (human and spatial).

Based on the available information, the panel was able to determine that good and motivated students are selected. Enrollment of students in the Department of Chemical Engineering is performed without qualification exam, based on the general success achieved in the four-year high school and on the basis of success in subjects that are relevant for this type of study such as: mathematics, chemistry and physics.

Enrollment of students is conducted in accordance with the Decision on the criteria and standards for determining the order of candidates for admission in the first year of the first cycle of studies at faculties of the University of Zenica. The panel thinks that procedures are clear, transparent and known.

#### **Recommendations for improvement:**

The panel advises that more statistical indicators regarding students and admission of the students should be monitored.

### **Indicator 4.4 Student Involvement in the Improvement of the Teaching/Learning Processes**

Assessment criteria:

The institution evaluates the curriculum and the teaching processes itself by introducing student enquiries and satisfaction questionnaires. Student representatives are involved in the decision making process and in the managerial structures.

- Handling the results of enquiries;
- Influence of students on curriculum;
- Participation of students in different decision making bodies and influence on managerial structures.

### **The opinion of the assessment panel: Good**

The assessment panel formed an opinion based on the determination of and on the consideration of the following:

During the interview with the students and management, it appeared that motivated students are involved in improvements of the teaching/learning process.

There are enough opportunities for students to be involved: as a student representative (Participating students in various bodies dealing with adoption decisions and their impact on the management structure), or different ways of student impact to curricula (TECHNOEDUCA, Quality Board, etc.)

### **Recommendations for improvement:**

There should be trainings, motivation and awarding of the involved students, in order to make students more active in different aspects of students life.

## **Indicator 4.5 Measures for Promoting Mobility, Including the Mutual Recognition of Credits**

Assessment criteria:

The existence of bilateral and multilateral agreements with domestic and foreign institutions for the exchange of students. Participation of institution and students in different exchange programs.  
Existence of ECTS and/or internal credit system

- Existence of bilateral and multilateral agreements in the country and abroad;
- Existence of student exchange programs;
- Acceptance of credits gain during exchange programs;
- Existence of ECTS or other credit systems.

### **The opinion of the assessment panel: Satisfactory**

The assessment panel formed an opinion based on the determination of and on the consideration of the following:

The panel shows understanding that unfortunately, neither at the federal nor the state level, are there any pre-requisites for mobility, although there is no language barrier, and there are no networks of related faculties that would enable student and academic staff mobility, however, this is an issue related to the political decision making.

The panel determined that ECTS system is introduced at the University level, and that students are informed about different mobility possibilities.

### **Recommendations for improvement:**

Students should be more motivated for mobility, especially because at the moment of writing SER and conducting site visit, there were no students in exchange with other institutions in country or abroad.

The Panel recommends that it would be helpful for mobility promotion to create network for student exchange and mobility.

The Panel strongly advises that the study program should be more flexible, in order to attract foreign and domestic students from this scientific area.

## **Indicator 4.6 Coaching of Students**

Assessment criteria:

Coaching system is introduced. The coaching and the providing of information meet the students' needs.

- Existence of coaching system and regular consultations;
- Way of coaching students.

### **The opinion of the assessment panel: Satisfactory**

The assessment panel formed an opinion based on the determination of and on the consideration of the following:

The panel noticed that traditional system of coaching students through consultations exists at the study program.

### **Recommendations for improvement:**

The panel thinks that different options in counseling of the students should be explored and students should be stimulated to use it.

## **Indicator 4.7 Information, Consultation and Complaint System**

Assessment criteria:

- Way of handling students' complaints;
- Measures for student support;
- Information and advice during the study programme by the study programme/central services;
- Communication of educational objectives as well as education and examination regulations;
- Organisation and guidance of international student exchange (including guidance for and integration of foreign students).

### **The opinion of the assessment panel: Satisfactory**

The assessment panel formed an opinion based on the determination of and on the consideration of the following:

The panel finds out that the web-page is up-to-date with all relevant information.

After examining the documents the panel determined that procedures for complaining are clear and transparent.

### **Recommendations for improvement:**

The panel advises that it would be helpful to research the opportunities for introducing institution of Ombudsman (for students, but also for staff).

### **Opinion on Criterion 4, Students: Satisfactory**

Based on the opinions of:

Indicator 4.1, assessment and testing: Good,

Indicator 4.2, practical training: Satisfactory,

Indicator 4.3, condition of admission: Satisfactory,

Indicator 4.4, student involvement in the improvement of the teaching/learning process: Good,

Indicator 4.5, measures for promoting mobility, including mutual recognition of credits: Satisfactory,

Indicator 4.6, coaching of students: Satisfactory,

Indicator 4.7 information, consultation and complaining system: Satisfactory,

the assessment panel holds the opinion that generic quality, concerning criterion 4, is present in the study program. There is only a limitation concerning the international mobility and the measures for promoting it.

Students are motivated and enthusiastic, but their involvement is not high. The panel also noticed that student services could be improved.

## Criterion 5. Means and Facilities

### Indicator 5.1 Material Aspects

Assessment criteria:

Housing and facilities are adequate to realize the programme. Teaching tools are adequate for introducing new teaching methodologies and for introducing innovations in teaching process.

- Policy on premises and facilities;
- Size and quality (= degree to which they are geared to the objectives of the study programme) of lecture halls;
- Practical rooms and laboratories;
- Library facilities; books and periodicals;
- Self-study centres;
- Computer facilities;
- Study programme-related research infrastructure;
- Student and teacher facilities;
- Accessibility of the facilities;
- Size of the available financial resources.

#### **The opinion of the assessment panel: Good**

The assessment panel formed an opinion based on the determination of and on the consideration of the following:

After a faculty tour the panel holds the opinion that facilities are adequate and satisfactory. A lot of new equipment is in operation.

The panel puts forward advantages of the integrated university regarding usage of facilities and equipment.

#### **Recommendations for improvement:**

The panel advises better transparency in financial issues.

The panel also recommends that Library can be optimized.

### **Opinion on Criterion 5, Means and Facilities: Satisfactory**

Based on the opinions of:

Indicator 5.1, material aspects: Good,

the assessment panel holds the opinion that generic quality, concerning criterion 5, is present in the study programme.

Facilities are in relatively good condition, well equipped and clean.

Panel don't have a clear view about financial means

## Criterion 6. Internal Quality Control

### Indicator 6.1 Evaluation Results

Assessment criteria:

The course is being evaluated periodically through usage of different testable targets. Systematic measures to follow up on the teaching process are introduced. Quality structures are established and the quality of teaching within the study programme is permanently monitored.

- Description of the quality policy and of the approach of the internal quality assurance;
- Existence of quality structures;
- Depersonalized summary of the measured results of the study programme;
- Dynamics of evaluation procedures;
- Usage of results obtained during evaluation process.

#### **The opinion of the assessment panel: Good**

The assessment panel formed an opinion based on the determination of and on the consideration of the following:

Based on the available information, the panel was able to determine that the QA policy is defined on institution (central) level, and motivated QA coordinator (manager) exists at the central and the faculty level. QA system is well structured and very good implemented. The panel puts forward good cooperation between several levels in quality system, and a lot of measurements and results regarding improvements of the QA system.

#### **Recommendations for improvement:**

The Panel advises that the result of surveys should be more anonymous.

### Indicator 6.2 Measures for Improvement

Assessment criteria:

The results of evaluation are the starting point for a strategic and operational approach in the introduction, the improvement and the development of demonstrable measures necessary for the realization of the educational objectives. Improvement measures are based on threats and weaknesses noticed during the evaluation process.

- Degree to which past targets were achieved;
- Degree to which the targets for the future are well founded;
- Improvement actions in the study programme (allocation of resources, designation of responsibilities and powers, planning and monitoring project management);
- Special attention for the response to findings and recommendations of the former assessment visit and results of student evaluations.

#### **The opinion of the assessment panel: Good**

The assessment panel formed an opinion based on the determination of and on the consideration of the following:

Based on the available documents that the panel inspected and looked into, the panel conclude that SWOT analysis is created and adopted at the study program level, and it is a part of SER.

Measures for improvements are systematically planned and monitored

#### **Recommendations for improvement:**

Even though SWOT analysis exists, operational and action plans the panel is missing. The panel strongly recommends that study program management create operational and/or action plans for improvements with agreed time-frame and person in charge, etc. for plans implementation.

### **Indicator 6.3 Involving Co-workers, Students, Alumni and the Professional Field**

Assessment criteria:

Co-workers, students, alumni and the professional field are being involved in the internal quality control.

- Performance of the boards and assessment panels involved in the internal quality assurance (including the student participation);
- Involvement of the staff in decision-making and evaluations as part of the internal quality assurance;
- Involvement of students in decision-making and evaluations as part of the internal quality assurance;
- Involvement of graduates and the professional fields in educational evaluations and curriculum innovations;
- Contacts between the study programme and the graduates/professional field.

#### **The opinion of the assessment panel: Good**

The assessment panel formed an opinion based on the determination of and on the consideration of the following:

After discussions with all discussion groups and examining of the documentation, the panel thinks that all stakeholders are involved.

#### **Recommendations for improvement:**

The panel advises that training in quality management is needed for built-up of quality culture.

### **Opinion on Criterion 6, Internal Quality Control: Satisfactory**

Based on the opinions of:

Indicator 6.1, evaluation results: Good,

Indicator 6.2, measures for improvement: Good,

Indicator 6.3, involving co-workers, students, alumni and professional field: Good,

the assessment panel holds the opinion that generic quality, concerning criterion 6, is present in the study programme.

According to the panel the quality structure is example of good practice. A lot of motivated people are involved in the QA board. QA board is composed of all relevant stakeholders involved.

The panel thinks that there are a lot of measures for improvement, but concrete action plans are still missing.



## Criterion 7. Results Achieved

### Indicator 7.1 Realized Level

Assessment criteria:

The realized end qualifications are in accordance with the pursued competences as for level, orientation and domain specific demands.

- Degree to which objectives are achieved;
- Quality of the master's thesis;
- Quality of the practical training;
- Realisations in terms of internationalisation of the education: participation of students (number and percentage of students, ratio of incoming vs. outgoing students) and staff in international exchange programmes;
- Preparation of the graduates for entry into the job market;
- Content of the programme and level of employment;
- Satisfaction of the graduates about their employment;
- Appreciation for the graduates by the professional field;
- Satisfaction of the graduates about the study programme

#### **The opinion of the assessment panel: Satisfactory**

The assessment panel formed an opinion based on the determination of and on the consideration of the following:

During the interview with alumni and the work field representatives the panel deduced that they are satisfied with realized level

Based on the available documents and diploma thesis that the panel inspected and looked into, the panel established that there is fine quality of the diploma thesis.

#### **Recommendations for improvement:**

The panel recommends that practical training of students should be considered.

Even though the panel understands that mobility of students and academic staff at the University of Tuzla has not yet been organized at a satisfactory level, it is not possible to implement mobility within B&H due to the lack of political will, the panel strongly recommend that internationalization must be stimulated.

Panel also advises that study program/Faculty should improve the process of preparation for the entrance in the work field (for example career centre, etc.).

### Indicator 7.2 Educational Output

Assessment criteria:

Target figures are being set for the educational output in comparison with other relevant courses. The educational output meets these target figures.

- Policy of the study programme with respect to the study progress;

- Target figures used and their comparison to other relevant study programmes;
- Pass rates and discussion;
- Analysis of student advancement;
- Diploma supplement;
- Average study duration and assessment;
- Results of study into the study programme's failures and dropouts.

**The opinion of the assessment panel: Satisfactory**

The assessment panel formed an opinion based on the determination of and on the consideration of the following:

The panel interprets passing rate, and conclude that passing rate is increasing.

**Recommendations for improvement:**

The panel advises that it is necessary to continue follow-up of passing rate using appropriate indicators.

**Opinion on Criterion 7, Results Achieved: Satisfactory**

Based on the opinions of:

Indicator 7.1, realized level: Satisfactory,

Indicator 7.2, educational output: Satisfactory,

the assessment panel holds the opinion that generic quality, concerning criterion 7, is present in the study programme.

The Panel has the impression that the learning objectives are realized, but because we do not have description of learning outcomes it is not easy to prove that.

Passing rates are improved last year, but it is still an important issue to follow-up.

## Global Opinion

The assessment panel based its opinion and its motivation on the following sources:

- The study programme's self-evaluation report (SER) and its appendices, the conducted interviews with all parties concerned,
- The available documents during the assessment visit,
- The requested documents,
- The study programme's reaction on the assessment report.

SER was created professionally. In writing down SER participated a lot of persons from different field of faculty (study program) life. The participating students play respectable role in meetings and they gave huge contribution in work of the SER working group and finally writing down SER.

Team for writing down SER was working in accordance to adopted criteria and indicators.

SER was discussed and adopted at study program level and also faculty level bodies.

The global opinion of the assessment panel for the quality of the Bachelor is positive, especially taking into consideration the Bosnian National standards. Thus, at this level all the criteria could be considered as satisfactory.

The Panel strongly recommend that study program also has certain areas to improve, as mention in this report. The Panel suggests that study program and faculty management should create plans operative (action) plans for improvement aspects we suggested.

Because of all what it is mention in this report, the **Panel gives positive opinion for accreditation of this study program.**

Based on the opinions of:

Criterion 1, educational objectives and learning outcomes: Satisfactory

Criterion 2, curriculum: Satisfactory

Criterion 3, staff: Satisfactory

Criterion 4, students: Satisfactory

Criterion 5, means and facilities: Satisfactory

Criterion 6, internal quality control: Satisfactory

Criterion 7, results achieved: Satisfactory

the assessment panel holds the opinion that there is a satisfactory generic quality present in the study programme.

## Overview of the Opinions

	Indicator Score	Criterion Score
Criterion 1: Educational Objectives and Learning Outcomes		Satisfactory
Indicator 1.1 Level and Orientation	Satisfactory	
Indicator 1.2 Domain Specific demands	Satisfactory	
Criterion 2: Curriculum		Satisfactory
Indicator 2.1 Correspondence between Objectives and the Content of the Programme	Satisfactory	
Indicator 2.2 Demands Professional and Academic Alignment	Good	
Indicator 2.3 Coherence Programme	Good	
Indicator 2.4 Workload	Good	
Indicator 2.5 Coherence of the Organization of the Learning Process and Contents	Good	
Indicator 2.6 Diploma Thesis	Good	
Criterion 3: Staff		
Indicator 3.1 Quality of Staff	Good	
Indicator 3.2 Demands Professional/Academic Alignment	Good	
Indicator 3.3 Quantity of Staff	Satisfactory	
Criterion 4: Students		Satisfactory
Indicator 4.1 Assessment and Testing	Good	
Indicator 4.2 Practical training	Satisfactory	
Indicator 4.3 Condition of Admission	Satisfactory	
Indicator 4.4 Student Involvement in the Improvement of the Teaching/Learning Processes	Good	
Indicator 4.5 Measures for promoting Mobility, Including the Mutual recognition of Credits	Satisfactory	
Indicator 4.6 Coaching of Students	Satisfactory	

Indicator 4.7 Information, Consultation and Complaining System	Satisfactory	
Criterion 5: Means and Facilities		Satisfactory
Indicator 5.1 Material Aspects	Good	
Criterion 6: Internal Quality Control		Satisfactory
Indicator 6.1 Evaluation Results	Good	
Indicator 6.2 Measures for Improvement	Good	
Indicator 6.3 Involving Co-workers, Students, Alumni and the Professional Field	Good	
Criterion 7: Results Achieved		Satisfactory
Indicator 7.1 Realized Level	Satisfactory	
Indicator 7.2 Educational Output	Satisfactory	

## Appendices

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## Agenda

<b>Date 08.01.2012</b>	Arrival to Sarajevo	
Afternoon	Meeting of external assessment team	
Evening	Dinner	

<b>Date 09.01.2012</b>		
07.00	Trip to Zenica	
08:30-9:00	Study program	Meeting with self assessment team
09:00-09:30	Study program	Meeting management
09:30-10:00	Study program	Meeting academic staff
10:00-10:15	Study program	Coffee break
10:15-10:45	Study program	Meeting academic staff
10:45-11:30	Study program	Meeting students representatives of first and second year
11:30-12:15	Study program	Meeting students representatives of third and fourth years
12:15-13:00	Study program	Meeting administration
13:00-14:00	Study program	Lunch break
14:00-14:30	Study program	Meeting student service
14:30-15:00	Study program	Meeting representatives of international and/or QA office
15:00-16:30	Study program	Faculty tour
16:30-17:30	Study program	Meeting alumni and representatives of workfield

17:30	Study program	Meeting of external assessment team
20:00	Study program	Dinner

**Date: 10.1.2012.**

07:30		Breakfast
9:30 to 12:00	Study program	Informal program-discussion with students, staff, additional meetings and documents and etc.
8:30 to 9:30	Study program	Meeting with Self assessment team
12:00-13:00	Lunch	
13:00-14:30	Study program	Meeting of external assessment team
14:30-15:30	Study program	Report to dean, vice deans, staff and others
17:00	Departure to Sarajevo	