

The Procedure on the Evaluation of HEI/ Engineering programmes for the FEANI INDEX

2015-04-15 Doc.HIS/03/0581	Approved by:	Approved by HIS President
Revision 1	HIS Monitoring Committee	

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1. INTRODUCTION

This document is the Procedure for the Evaluation of High education institutions, HEI and HEI's Engineering institutions/programmes in order to comparing educational qualification in meeting the criteria to attain approvement for FEANI INDEX list¹.

Its purpose is to carry out transparent, objective and competent review which also takes account of any special features which degree programme may have and to make recommendation to FEANI EMC so that Engineering programmes can be included to FEANI INDEX if the HIS Evaluation decision for the program evaluated is positive.

The evaluation criteria is based on the key document at European level: EUR-ACE: Standards and Guidelines for Quality Assurance in the European Higher Education Area, EHEA, (ESG, European Standards and Guidelines).

The Procedure is also related to legal national requirements such as Croatian Qualification Framework Act which is related and comparable with EQF (European Qualification Framework) and QA-EHEA (The Qualifications Framework for the European Higher Education Area).

The Programme outcomes from First Cycle and Second Cycle degrees reflect the demands of different branches, cycles and profiles are consistent with the FEANI education standards and the criteria set out in the ENQA.

The Croatian Monitoring Committee (HIS MC) is responsible to keep the INDEX up date for the engineering programmes from Croatia applying for the inclusion to the FEANI INDEX list.

The European Monitoring Committee (EMC) is responsible for the monitoring of the system and the quality assurance.

¹ FEANI has set up and maintains the FEANI INDEX: the List of HEI and Programmes from FEANI Member Countries which meet the FEANI education standard; the engineering programmes fulfilling the mandatory education requirements for the EUR ING title.

In this list the official duration of the education in FEANI terms, the academic title and the characteristics of each programme are specified.

The European professional card, the instrument of faster recognition of qualifications based on direct interaction between professional authorities across the national borders can be issued for the HEI programmes listed on FEANI INDEX.

2. THE PROCEDURE UPDATING

The Procedure is subject to revision at least in regular intervals every five years to keep it up-to date with the revisions of the documents based on.

The Working Group nominated by EMC and consisting of 2-3 EMC members will evaluate the changes in High educational system in Croatia, changes and up dates in FEANI EMC procedure and recommendation and prepare this Procedure for update when needed.

The evaluation includes an audit in Croatia and a written report. This report includes:

- a brief description of the educational system and changes in Croatia
- a description of the QA system and the accreditation procedure
- the work flow used in HIS MC to update the INDEX
- a recommendation to EMC

After acceptance of the report by the EMC, HIS MC can update the INDEX automatically (via internet submission tool) for five years.

3. REFERENT DOCUMENTS

1. Guide to the FEANI EUR ING Register (approved FEANI GA, 4.10.2013.
2. EUR-ACE - Standards and Guidelines for Quality Assurance in the European Higher Education Area,
3. Directive 2013/55/EU on the recognition of professional qualifications and Regulation
4. FEANI Handbook for the NMC's (update October 2014).
5. HIS Cooperation Agreement with FEANI for issuing of the Engineering Card in Croatia
6. Zakon o osiguravanju kvalitete i znanosti u visokom obrazovanju (NN 45/09) (Law on QA in Science and Education)
7. The Croatian Qualifications Frameworks Act
8. Handbook on Managing administration of the Engineering Card
9. Process of an additional way of INDEX updating (approved by the FEANI Executive Board on 12 January 2015)

4. ABBRIVATIONS AND DEFINITIONS

FEANI

FEANI	Federation Européenne d'Associations Nationales d'Ingénieurs European Federation of National Engineering Associations
EMC	FEANI European Monitoring Committee
NMC	FEANI National Monitoring Committee
NAA	National Accreditation Agency (AZVO in Croatia)
FEANI INDEX	List of HEI and Programmes recognized by FEANI
EUR ING	The EUR ING title delivered by FEANI is designed as a guarantee of competence for professional engineers.
EngineerLING card	An instrument for promoting the International Mobility of Engineers

HEI High Educational Institution

FCD	First Cycle Degree
SCD	Second Cycle Degree
ECTS	European Credit Transfer System (Bologna system)
B	Represents a secondary school education validated by certificate
U	University programme given by HEI,
E	Represent a year of experience
CPD	Continuing professional Development

Standards and Guidelines

ENQA	European Standards and Guidelines for Quality Assurance in the EHEA
EHEA	European High educational Area
EQF	European Qualification Framework acts to make national qualifications more readable across Europe, promoting mobility between countries and facilitating their lifelong learning. Since 2012, all new qualifications issued in Europe carry a reference to an appropriate EQF level.
IEA	International Association for Evaluation of Educational Achievement (Washington accord)
ENAAE	European Network for Accreditation of Engineering Education

5. TARGET GROUP

Target group are Higher Education Institutions (HEI) seeks accreditation or reaccreditation and applying for the inclusion to the FEANI INDEX list.

The Procedure gives opportunity HEIs to be on the FEANI INDEX List of Schools and Programmes through the registration in accordance with the Guide to the FEANI EUR ING Register.

Registration of the HEI on the FEANI INDEX gives to the Engineers of this HEI the right to get the professional ID card- European Engineering card.

Engineering cards are tools that show a comparable educational profile whose recognition is based on International standards and that is easy to use for professionals and employers.

The European Engineering card could be issued by National Engineering association –HIS, which is National partner of FEANI.

6. CRITERIA

In the Evaluation procedure for HEI/FCD and HEI/SCD programmes the following criteria have to be fulfilled:

6.1 Recognition of HEI

The HEI is accepted by the government

The HEI is offering engineering programs according to the FEANI education standard

A QA system is in place on an institutional or program level according to the European standards and Guidelines (ESG).

6.2 Recognition of programmes

Content and subject related requirements for a degree program in engineering listed in the FEANI INDEX

Basic sciences (Mathematics, Physics, Chemistry, Biology, Geology, ...) must represent a minimum of 20% of the overall ECTS. Higher Mathematics (linear algebra, analytical geometry, differential and integral calculus, numerical analysis, operational research, discrete mathematics, statistics, ...) must represent a minimum of 24 ECTS.

Engineering subjects must correspond to a minimum of 60% or 50% of the overall ECTS, if its duration is 3U or longer, respectively.

Non-technical subjects (communication skills, economics, management, team working, law, safety, environment, languages, ...) must correspond to a minimum of 10% of the overall ECTS.

One subject may be integrated in more than one of the above classifications, contributing with its ECTS to them.

Basic Sciences (Mathematics)	>36 ECTS (>24 ECTS)
Engineering subjects	> 108 ECTS
Non-technical subjects	>18 ECTS

7. THE MAIN ACTIVITY DESCRIPTION

7.1. HEI's application

HEI which apply to be including in FEANI INDEX list should send to HIS secretariat following information (Appendix 2):

1. Name of the HEI
2. Country
3. Address
4. Date of the first accreditation and the name of Accreditation Institution.
5. Date of reaccreditation and name of Accreditation Institution
6. Date of validity
7. Name of the Programme
8. Date of starting of the Program
9. Standard period of study and credit points gained (according to ECTS)
10. Final degree
11. Programme start date within the academic year
12. Number of students per academic year (started/graduated)
13. Needs and Objectives
14. Most relevant national / international partners of the HEI
15. Most relevant research projects
16. Policy and procedure for Quality assurance
17. The name and the function of the representative of the HEI
18. The name of the person in charge for the HIS/FEANI evaluation
19. The date of submission

7.2 Starting the Procedure

HIS Secretariat forwards to the HIS MC receiving applicant's information. After one week HIS shall inform the applicant about the terms and conditions of Procedure Instruction of preparing proposal for FEANI INDEX list inclusion. The Procedure starts when HEI accepts HIS conditions of the suggested Procedure Instruction.

7.3. Nomination of a HIS MC Working Group

HIS MC will nominate Working Group which will analysing the programmes focus on the items in 7.4, expected achievement and the factors related to it as an important data in competence recognition at the international, national, and local levels.

Working Group consists of 3-6 members depending on the Procedure Instruction included in the proposal.

The Working Group is composed of:

- 1 Convenor of the group
- 1 Professional assistant
- 1-2 HEI-professional representative
- 1 Industry representative
- 1 FEANI consultant

The members of WG should be able to understand:

- the subject matter of the programme;
- the needs of stakeholders in the particular programme.

Before participating in the procedure of approval, every Working Group member must sign a confidentiality and impartiality declaration.

7.4. Preparation and Procedure definition

The HIS MC WG offers regular seminars/workshops for the Representatives of the HEI to prepare them for the task and to reflect on their understanding of their role.

HIS MC WG will provide the relevant documents/forms to HEI and support HEI in its efforts and offer needed instructions. Possible additional requirements shall be agreed in advance between HEI and HIS/institution/or consultant needed.

HIS MC WG Convenor shall define the Procedure Instruction line for the assessment of HEI upon the prerequisite for application of the HEI.

There are 4 (four) lines depending of following prerequisite in application:

7.4.1 HEI is on the FEANI INDEX list, but not this program;

If the HEI is already include in the FEANI Index and the new course structure is similar to the structure of courses from the same school already in Index, the new course will be analysed in accordance with **Instruction A 1**.

7.4.2 HEI is not on the FEANI INDEX list;

HEI is accredited or reaccredited by National Accreditation Agency, AZVO, but not on the FEANI INDEX list. The Programs shall be analysed in accordance with **Instruction A 2**.

7.4.3 HEI is accredited or reaccredited by accreditation agency but not Croatian.

The HEI is accepted by the respective country and the relevant Accreditation Agency proved a QA-System in place on an institutional level according to the European standards and Guidelines, ESG. The HEI shall be analysed in accordance with **Instruction B 1**

7.4.4. HEI is not accredited by any Accreditation agencies.

The HEI shall be analysed by HIS MC WG in cooperation with relevant accreditation agency to analyse the human resources and adequate facilities to deliver the program and all other relevant information in order to prove and achieve recognition of a level of overall competence for education. HIS MC WG shall follow the **Instruction B 2**.

8. LEARNING OUTCOMES

8.1 Learning outcomes of engineering programs listed in the FEANI INDEX

Knowledge and Understanding

The basic knowledge and understanding of science, mathematics and engineering fundamentals are essential to satisfying the other programme outcomes. Graduates should demonstrate their knowledge and understanding of their engineering specialisation, and also of the wider context of engineering.

First Cycle graduates should have:

- knowledge and understanding of the scientific and mathematical principles underlying their branch of engineering;
- a systematic understanding of the key aspects and concepts of their branch of engineering;
- coherent knowledge of their branch of engineering including some at the forefront of the branch;
- awareness of the wider multidisciplinary context of engineering.

Second Cycle graduates should have:

- an in-depth knowledge and understanding of the principles of their branch of engineering;
- a critical awareness of the forefront of their branch.

Engineering Analysis

Graduates should be able to solve engineering problems consistent with their level of knowledge and understanding, and which may involve considerations from outside their field of specialisation. Analysis can include the identification of the problem, clarification of the specification, consideration of possible methods of solution, selection of the most appropriate method, and correct implementation. Graduates should be able to use a variety of methods, including mathematical analysis, computational modelling, or practical experiments, and should be able to recognise the importance of societal, health and safety, environmental and commercial constraints.

First Cycle graduates should have:

- the ability to apply their knowledge and understanding to identify, formulate and solve engineering problems using established methods;
- the ability to apply their knowledge and understanding to analyse engineering products, processes and methods;
- the ability to select and apply relevant analytic and modelling methods.

Second Cycle graduates should have:

- the ability to solve problems that are unfamiliar, incompletely defined, and have competing specifications;
- the ability to formulate and solve problems in new and emerging areas of their specialisation;
- the ability to use their knowledge and understanding to conceptualise engineering models, systems and processes;
- the ability to apply innovative methods in problem solving.

Engineering Design

Graduates should be able to realize engineering designs consistent with their level of knowledge and understanding, working in cooperation with engineers and non-engineers. The designs may be of devices, processes, methods or artefacts, and the specifications could be wider than technical, including an awareness of societal, health and safety, environmental and commercial considerations.

First Cycle graduates should have:

- the ability to apply their knowledge and understanding to develop and realise designs to meet defined and specified requirements;
- an understanding of design methodologies, and an ability to use them.

Second Cycle graduates should have:

- an ability to use their knowledge and understanding to design solutions to unfamiliar problems, possibly involving other disciplines;
- an ability to use creativity to develop new and original ideas and methods;
- an ability to use their engineering judgement to work with complexity, technical uncertainty and incomplete information.

Research and development

Graduates should be able to use appropriate methods to pursue research or other detailed analysis of technical issues consistent with their level of knowledge and understanding. Research may involve literature searches, the design and experiments performing, the interpretation of data, and computer simulation. They may require that data bases, codes of practice and safety regulations are familiar.

First Cycle graduates should have:

- the ability to conduct searches of literature, and to use data bases and other sources of information;
- the ability to design and conduct appropriate experiments, interpret the data and draw conclusions;
- workshop and laboratory skills.

Second Cycle graduates should have:

- the ability to identify, locate and obtain required data;
- the ability to design and conduct analytic, modelling and experimental investigations;
- the ability to critically evaluate data and draw conclusions;
- the ability to investigate the application of new and emerging technologies in their branch of engineering.

Engineering Practice

Graduates should be able to apply their knowledge and understanding to developing practical skills for solving problems, conducting inspections, and designing engineering devices and processes. These skills may include the knowledge, use and limitations of materials, computer modelling, engineering processes, equipment, workshop practice, and technical literature and information sources. They should also recognize the wider, non-technical implications of engineering practice, ethical, environmental, commercial and industrial.

First Cycle graduates should have:

- the ability to select and use appropriate equipment, tools and methods;
- the ability to combine theory and practice to solve engineering problems;
- an understanding of applicable techniques and methods, and of their limitations;
- an awareness of the non-technical implications of engineering practice.

Second Cycle graduates should have:

- the ability to integrate knowledge from different branches, and handle complexity;
- a comprehensive understanding of applicable techniques and methods, and of their limitations;
- a knowledge of the non-technical implications of engineering practice.

Transferable Skills

The skills necessary for the practice of engineering, and which are applicable more widely, should be developed within the programme.

First Cycle graduates should be able to:

- function effectively as an individual and as a member of a team;
- use diverse methods to communicate effectively with the engineering community and with society at large;
- demonstrate awareness of the health, safety and legal issues and responsibilities of engineering practice, the impact of engineering solutions in a societal and

environmental context, and commit to professional ethics, responsibilities and norms of engineering practice;

- demonstrate an awareness of project management and business practices, such as risk and change management, and understand their limitations;
- recognise the need for, and have the ability to engage in independent, life-long learning.

Second Cycle graduates should be able to:

- fulfil all the Transferable Skill requirements of a First Cycle graduate at the more demanding level of Second Cycle;
- function effectively as leader of a team that may be composed of different disciplines and levels;
- work and communicate effectively in national and international contexts.

9. PROCEDURE INSTRUCTIONS; A 1, A 2, B 1 and B 2.

9.1 Instructions

Procedure Instruction A 1

(relevant documents: Appendix 3 -Table 3 and Appendix 4 - Table 4.1.)

If the HEI is already include in the FEANI Index and the new engineering programmes course structure is similar to the structure of courses from the same school already in Index, Working Group will check the new programmes in accordance with described in 6.2 Recognition of programmes; Content and subject related requirements for a degree program in engineering listed in the FEANI INDEX

Also engineering programs outcome for science, engineering etc. should be analyzed in accordance with described in point 8. Learning outcomes.

WG need to meet the minimum requirement which can give evidence that the applicant at this HEI's program may achieve the professional engineering competence.

Level of competence is based on the recommendation for a professional level described in EQF level 6 or above that is coherent to several frameworks like IEA The Table 3. Course structure with relevant data should be included in the documents of Evaluation.

Procedure Instruction A 2

(relevant documents: Appendix 4-Table 4.2.)

If the HEI is not on the FEANI INDEX list and the initial and mandatory accreditation of the programs is performed by AZVO or other relevant Accreditation agency and HEI is accepted by the government of Croatia the procedure A2 shall start with looking at the HEI in accordance with needs in 6.1.

If the QA system is in place on an institutional or program level according to the European standards and Guidelines (ESG), NMC WG can continue with Procedure A1.

After finishing Evaluation procedure of HEI the HIS NMC working group will continue with Evaluation of HEI's Engineering programmes in accordance with the Procedure Instruction **1A**.

Procedure Instruction B 1

If HEI is accredited or reaccredited by National Accreditation Agency or other accreditation agency accepted by the government of other country (not Croatia) the Accreditation Certificate and the results shall be compared (procedure and using standards) with the other recognized accreditation procedure relevant for FEANI.

If the accreditation system is recognized WG will continued the Procedure described in Procedure Instruction **A 2**.

If the Certification of accreditation is not recognized the HEI will be forwarded to **B 2** procedure.

Procedure Instruction B 2.

If HEI is not accredited by any accreditation agencies the HEI will be forwarded and supported in accreditation process.

After the accreditation the HIS WG will continue the porcedure according **A 2**.

9.2. HIS MC WG site visit to HEI

Working Group will examine all HEI's documents and made some notices which will be discussed with the management of HEI to checking all evidence during the site visit to the HEI. The consultancy and site visit evaluation to the HEI should be announced in advance and last not more than 3 days

9.3. HIS MC WG report

After finishing the Evaluation and assessment of HEI, and site visit, Working Group will prepare a report to the HIS Monitoring Committee(Appendix 5, Table 5.1) in accordance with the relevant documents for each procedure.

9.4. HIS MC/EB report

The HIS Monitoring Committee after checking the Report of the MC WG and examination of documents send the recommendation to HIS Executive Board if the engineering programmes can be recommended for inclusion on the FEANI Index.

If the Report is negative the HEI will be informed and consulted for the next possible steps in order to achieve the level of acceptance to be recommended for inclusion in FEANI INDEX list.

HIS Executive Board provide the programme information for the final report to FEANI MC.

9.5. Decision

The FEANI EMC will make the final decision for the approval and the submission for the new HEI/Programme is to be include on the FEANI INDEX list.

10. APPENDIX

Appendix 1 Flowchart for HIS Accreditation of the Engineering Higher Education Institution (HEI) Programme for FEANI INDEX

Appendix 2 Templates for HEI/Programme application

Appendix 3 Template for Course structure

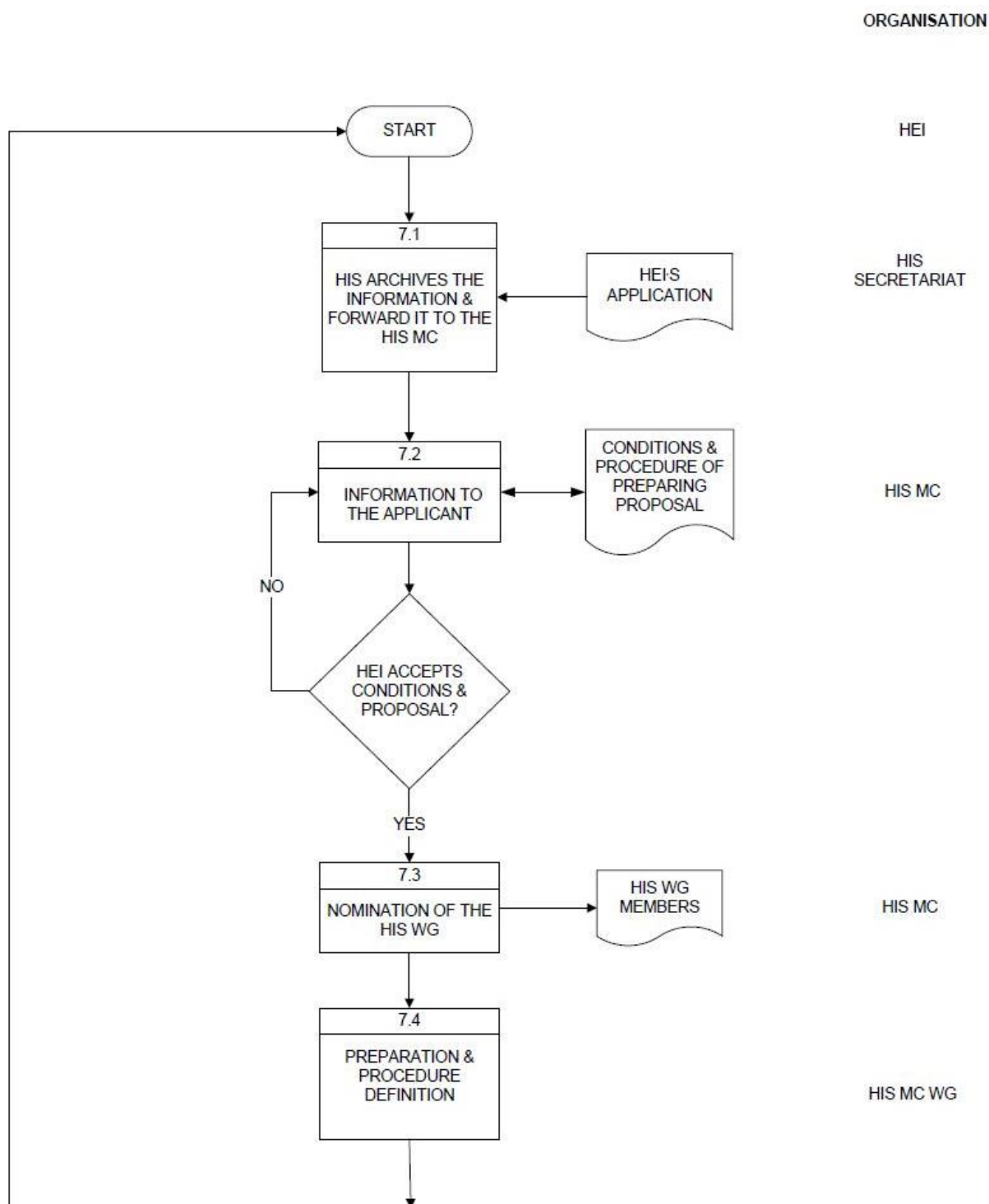
Appendix 4 Criteria and Requirements for the HEI/Programme Assessment's

(* table from EUR-ACE Framework Standards for the Accreditation of Engineering Programmes – Final Version)

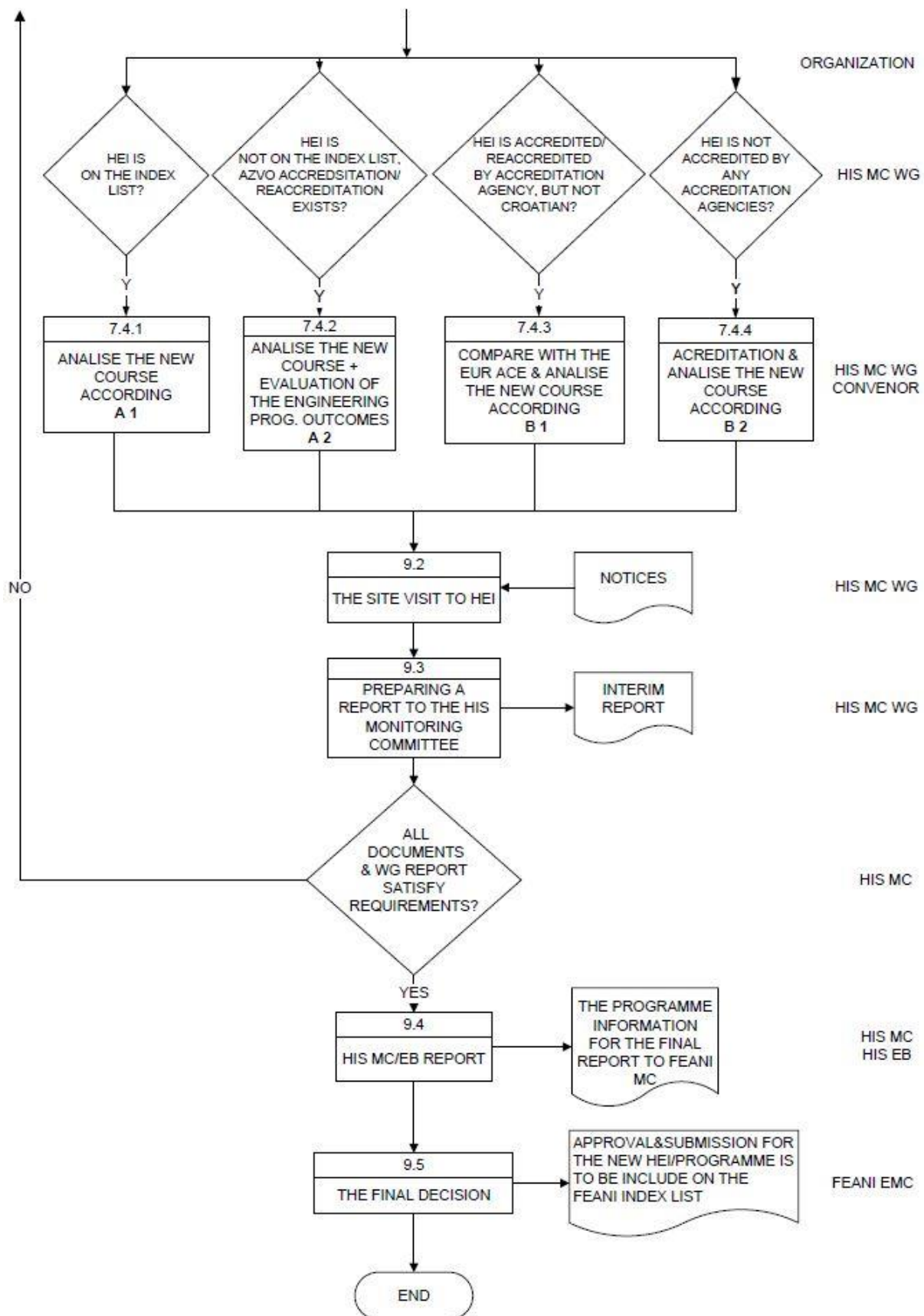
Appendix 5 HIS Final Evaluation Report

Appendix 1

FLOWCHART FOR EVALUATION OF THE HEI PROGRAMS FOR FEANI INDEX



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Appendix 2



HRVATSKI INŽENJERSKI SAVEZ
CROATIAN ENGINEERING ASSOCIATION



APPLICATION FOR THE NEW HEI PROGRAMME ON FEANI INDEX LIST ZAHTEJ ZA UVOĐENJE NOVOG STUDIJSKOG PROGRAMA NA FEANI INDEX LISTU	
Name of the HEI <u>V.U. (Visokoučilište)</u>	
Country <u>Zemlja</u>	
Adress <u>Adresa</u>	
Date of the first accreditation and the name of Accreditation Institution. <u>Naziv akreditacijske institucije i datum prve akreditacije</u>	
Date of reaccreditation and name of Accreditation Institution <u>Datum reakreditacije</u>	
Date of validity <u>Vrijeme valjanosti</u>	
Name of the Programme <u>Naziv studijskog programa</u>	
Date of starting of the Program <u>Datum uvođenja studijskog Programa</u>	
Standard period of study and credit points gained (according to ECTS) <u>Trajanje studija i broj ECTS-a</u>	
Final degree <u>Akademski ili stručni naziv</u>	
Programme start date within the academic year <u>Datum početka provođenja studijskog programa (unutar akademske godine?)</u>	

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ZAHTEJEV ZA UVODENJE NOVOG STUDJSKOG PROGRAMA NA FEANI INDEX LISTU

Number of students per academic year (started/graduated) <u>Broj studenata za akademsku godinu (upisanih/diplomiranih)</u>	
Needs and Objectives <u>Potrebe i ciljevi</u>	
Most relevant national / international partners of the HEI <u>Značajniji domaći i međunarodni suradnici</u>	
Most relevant research projects <u>Značajniji istraživački projekti</u>	
Policy and procedure for Quality assurance <u>Politika kvalitete i postupci ostvarenja</u>	
The name and the function of the representative of the HEI <u>Ime i funkcija predstavnika visokog učilišta</u>	
The name of the person in charge for the HIS/FEANI evaluation <u>Ime i funkcija odgovorne osobe u postupku evaluacije</u>	
The date of submission <u>Datum podnošenja zahtjeva</u>	

Take over/date	HIS Secretariat
Preuzimanje /datum	HIS Tajništvo

Appendix 3

Table 3 – Course structure

FEANI EMC and HIS MC - Evaluation of a programme for the FEANI INDEX												
Country: _____				<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Education (Years)</td> <td style="width: 20%;">Cycle (post-Bologna only) (1st, 2nd or 2nd cycle integrated)</td> </tr> <tr> <td>* U</td> <td></td> </tr> <tr> <td>** T</td> <td></td> </tr> </table>			Education (Years)	Cycle (post-Bologna only) (1 st , 2 nd or 2nd cycle integrated)	* U		** T	
Education (Years)	Cycle (post-Bologna only) (1 st , 2 nd or 2nd cycle integrated)											
* U												
** T												
School: _____												
Programme: _____												
School representative: _____												
Date: _____												
Classification of Courses				Units: ECTS								
N°	Course	Basic Sciences		Eng. Subjects	Non Tech. Subjects	Total						
		Maths	Others									
1						0						
2						0						
3						0						
4						0						
5						0						
6						0						
7						0						
8						0						
9						0						
10						0						
11						0						
12						0						
13						0						
14						0						
15						0						
Total		0	0	0	0	0						
Percentages		#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!							
<i>*Napomena: u slučaju većeg broja smjerova povećati broj unosa redaka u tablici po potrebi</i>												
Programme duration		0	Years	No								
Mathematics content		0	ECTS	No								
Basic Sciences content			ECTS									
Engineering Sciences content			ECTS									
Non Technical Subjects content			ECTS									
Result												
Notes												
NMC Expert (Name, Signature)				Date:								
EMC Decision				Date:								

* U represents a year (full-time or equivalent) of approved University Programme either given by a university or other recognized body at the university level, approved by FEANI and included in the FEANI INDEX - the "List of Schools and Programmes"

** T represents a year (full-time or equivalent) of Training through a programme - the aim of which is to increase engineering knowledge through practical work, for instance in a construction site, in a factory, laboratory, office or other working environment, defined, supervised and approved by a university - as part of engineering programme

Appendix 4

Criteria and Requirements for the FEANI index/HIS Programme Evaluation (*based on EUR-ACE Framework Standards for the Accreditation of Engineering Programmes)

Table 4.1.

Study programmes: _____

Guide lines	Criteria	Requirements	<i>What the HEI's documents should give evidence to HIS</i>
1. Needs, Objectives and Outcomes	1.1 Needs of the Interested Parties	Have the needs of the interested parties, (such as students, industry, engineering associations, etc.) been identified	Modes and periods of relationships with the interested parties. Needs identified for each of the identified interested parties.
	1.2 Educational Objectives	Are the programme educational objectives consistent with the mission of the (HEI) and with the needs of the interested parties (such as students, industry, engineering associations, etc.)?	Programme educational objectives vs. mission of the HEI and needs of the interested parties. Transparency and publicity of the programme educational objectives.
	1.3 Programme Outcomes	Do the programme outcomes cover the programme outcomes for accreditation (cf. Section 1)?	Programme outcomes vs. programme outcomes for accreditation
		Are the programme outcomes consistent with the programme educational objectives?	Programme outcomes vs. programme educational objectives

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2. Educational Process	2.1 Planning	Does the curriculum ensure the achievement of the programme outcomes?	Curriculum (syllabus, ECTS credits, credits for course work and personal study), its transparency and publicity. Definition/description of modules' characteristics (credits, contents, specific learning outcomes, assessment methods of individual modules), their transparency and publicity. Integration of professional practice (external practical experience, laboratories, projects, etc.). Final examination, thesis, project, etc.. Correspondence of curriculum and modules' characteristics to the programme outcomes. Planning of the delivery. Teaching methods and techniques (fulltime, part time, parallel to or integrated in professional work, use of multimedia or telematics devices, etc.). Measures to promote students' mobility
	2.2. Delivery	Is teaching delivered according to planning?	Correspondence of the delivery with the planning. Results of the students' evaluation of taught modules. Results of the students' and tutors' evaluation of external practical experiences. Results of students' mobility.
		Are counselling and support-workload offered to the students adequate to promote the achievement of the modules' specific learning outcomes?	Number of staff and their workload for counselling and support to the students.

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	2.3. Learning Assessment	Have examinations, projects and other assessment methods been designed to evaluate the extent to which students can demonstrate achievement of the learning outcomes of single modules and programme outcomes respectively throughout the programme and at its conclusion?	Examination papers and coursework (samples of assessed coursework, continuous assessments, project reports). Transparency and publicity of the standards and rules concerning the assessment of student performance
3. Resources and Partnerships	3.1 Academic and Support Staff	Is the academic staff adequate to accomplish the programme outcomes?	Number, composition, competency and qualification of the teaching staff. Research (publications, participation in research projects, participation in conferences, etc.) and/or professional activities and consulting work of the teaching staff.
		Is the tech..and admin. staff adequate to accomplish the programme outcomes?	Number, composition, competency and qualification of the technical- administrative support staff.
	3.2 Facilities	Are the classrooms adequate to accomplish the programme outcomes?	Classrooms and associated equipment available to students
		Are the computing facilities adequate to accomplish the programme outcomes?	Computing facilities available to student

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		Are the laboratories, workshops and associated equipment adequate to accomplish the programme outcomes?	Laboratories, workshops and associated equipment available to students.
		Are the libraries and associated equipment and services adequate to accomplish programme outcomes?	Libraries and associated equipment and services available to student
	3.3 Financial Resources	Are the financial resources adequate to accomplish the programme outcomes?	Budget for teaching and support staff. Budget for running and upgrading facilities. Budget for training.
	3.4 Partnerships	Do the partnerships the HEI and the programme are participating in contribute to accomplish the programme outcomes and facilitate the mobility of the students?	Local / regional / national / international industrial partnerships and cooperation agreements. Local / regional / national / international partnerships and cooperation agreements with research institutions. Local / regional / national / international cooperation agreements, programmes or measures with other Higher Education Institutions.

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4. Assessment of Educational Process	4.1. Students	Do the students enrolled in the programme have the right knowledge and attitudes to achieve the programme outcomes in the expected time?	Entrance requirements. Admission requirements (only for "numerus clausus" programmes).
		Do the results related to the students' career attest the achievement of the programme outcomes in the expected time?	Students' career progress. Learning levels achieved. Success rates and time taken to complete the programme
	4.2 Graduates	Do graduates enter an occupation corresponding to their qualification?	Time taken to enter the workforce. Match between employment and education received.
		Do stakeholders (graduates, employers, etc.) confirm the achievement of the programme's educational objectives?	Graduates' opinions on the education received. Opinion of employers on the graduates' education.

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5. Management System	5.1 Organisation and decision-making processes	Are HEI's and programme's organisation and decision-making processes adequate to accomplish the programme outcomes	Documentation on HEI's and programme's organisational structures and decision-making processes (statutes, organisational charts, management of organisational processes, etc.) Positions of responsibility for the various actions to direct and control the educational process, their relationships of link and dependence. Existence and use of effective co-ordination mechanisms of decision- making processes, both horizontal and vertical. Existence and use of reliable information sources for decision-making
	5.2 Quality Assurance System	Are HEI's and programme's Quality Assurance Systems effective to ensure the achievement of the programme outcomes?	HEI's and programme's policy and procedures for quality assurance
		Are the delivery process', students' and graduates' results analysed and used to promote continual improvement of the programme?	Existence of a regulated and systematic process for continual programme review, development and improvement based on the analysis of the delivery processes, students' and graduates' results. Results of improvement actions.
		Are needs, objectives and outcomes, educational process, resources and partnerships, management system periodically re-examined?	Existence of a regulated, systematic and periodic process for re- examining needs objectives and outcomes, educational process, resources and partnerships, management system. Results of re-examination activity.

Criteria and Requirements for the FEANI INDEX/HIS Programme Evaluation
 (* based on EUR-ACE Standards/ESG for the HEI Assessment)

Table 4.2.

Study programmes:_____

ESG	What the HEI's should give evidence to HIS	HEI answers
1.1 Policy and procedures for quality assurance: Institutions should have a policy and associated procedures for the assurance of the quality and standards of their programmes and awards. They should also commit themselves explicitly to the development of a culture which recognises the importance of quality, and quality assurance, in their work. To achieve this, institutions should develop and implement a strategy for the continuous enhancement of quality. The strategy, policy and procedures should have a formal status and be publicly available. They should also include a role for students and other stakeholders.	1. Strategy for all activities, mission, vision, values, positioning and comparing with similarly HEI, Consists of Faculties and in how many fields of sciences covers Higher Education up to doctoral levels. 2. Formal policies and procedures provide a framework within which HEI can develop and monitor the effectiveness of their quality assurance systems and raise the HEI requirements for appointment and promotion which can help to enhance HEI's reputation and raise awareness of the need for excellence. 3. Something about providing public confidence in institutional autonomy. 4. Evaluation of quality of management & governance 5. How HEI improves the general coordination for QA across the university, including the use of key performance indicators and measures to develop quality	

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1.2 Approval, monitoring and periodic review of programmes and awards: Institutions should have formal mechanisms for the approval, periodic review and monitoring of their programmes and awards.	1. Gives HEI strong support the full and correct application of Bologna principles across the university, including employability, student centre teaching, the use of a learning outcomes approach, mobility and competence-oriented learning. 2. Does HEI analyse reasons for the continued high rates of drop-out and late completion including at doctoral level, and develop responses to ensure that these decrease in a targeted way. 3. Using the QA process for systematic programme evaluation and renewal, including the application of the Bologna principles. 4. Ensure and provide that ECTS credits reflect the reality of student workload across all programmes and are easy recognised, particular for mobility within and between university and faculties.	
1.3 Assessment of students: Students should be assessed using published criteria, regulations and procedures which are applied consistently. Student assessment procedures are expected to: be designed to measure the achievement of the intended learning outcomes and other programme objectives; be appropriate for their purpose, whether diagnostic, formative or summative; have clear and published criteria for	1. Ensure and provide fair and better information to students and prospective students about study programmes and outcomes. 2. Ensure that the faculties prepare appropriate assessment procedures for designed and measuring the achievement of learning outcomes; 3. Ensure that the faculties published clear criteria for examine and consequences of examination regulations	

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marking; be undertaken by people who understand the role of assessment in the progression of students towards the achievement of the knowledge and competences associated with their intended qualification; where possible, not rely on the judgements of individual examiners; take account of all the possible consequences of examination regulations; have clear regulations covering student absence, illness and other mitigating circumstances; ensure that assessments are conducted securely in accordance with the institution's stated procedures; be subject to administrative verification checks to ensure the accuracy of procedures. In addition, students should be clearly informed about the assessment strategy being used for their programme, what examinations or other assessment methods they will be subject to, what will be expected of them, and the criteria that will be applied to the assessment of their performance.	4. Does HEI ensure methods of monitoring students' progress 5. How does HEI monitoring students' right of appeal all over the faculties 6. How does HEI monitoring students' progress after graduation	
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1.4 Quality assurance of teaching staff: Institutions should have ways of satisfying themselves that staff involved with the teaching of students are qualified and competent to do so. They should be available to those undertaking external reviews, and commented upon in reports.	1. Is the academic staff adequate to accomplish the programme outcomes? 2. Which activities ensure HEI that staff involved in teaching process are qualified and competent? 3. Does HEI organize regular workshops and discrete training events of limited duration (day or two) on generic skills and specific topics led by experts. 4. Does HEI organize conferences with external contributors and open to national and international participation? 5. Does HEI monitoring part-time teachers staff numbers, proportion of full-time work, connection with organization and management of study on the faculties 6. How HEI control at the faculties teachers responsibilities in teaching, management, research 7. Does HEI prepare application of the findings of teaching evaluation to personnel management 8. Does HEI regulated teachers activities in research	
1.5 Learning resources and student support: Institutions should ensure that the resources available for the support of student learning are adequate and appropriate for each programme offered.	1. How does HEI ensure that the resources are available and strictly use for the support of student learning? 2. Are the resources adequate and appropriate for each programme which offered faculties and how does HEI ensure the monitoring	

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	about that? 3. Which resources were used and how they were allocated? 4. How does HEI ensure the organization, responsibility and monitoring of student practice and training and evaluation results at the faculties?	
	1. Does HEI ensure effective information system which provide accurate and timely data for both faculties and university level planning and decisions making processes? 2. Does HEI use international link and collaboration agreements between the faculties and other parties 5.	
1.6 Information systems: Institutions should ensure that they collect, analyse and use relevant information for the effective management of their programmes of study and other activities.	1. Does HEI regularly publish all information in according to its transparency? 2. How HEI ensure some contacts with other institutions, nationally and abroad? 3. Gives HEI Information about the participation of faculties in international projects, student-exchange programmes, interdisciplinary programmes, mobility of students and teachers?	
1.7. Public information: Institutions should regularly publish up to date, impartial and objective information, both quantitative and qualitative, about the programmes and awards they are offering.		

Criteria and Requirements for the FEANI INDEX/HIS Programme Evaluation
 (* based on EUR-ACE Framework Standards for the Accreditation of Engineering Programmes)

Table 4.3.
Study programmes: _____

Guide lines	Criteria	Requirements	<i>What the HEI's documents should give evidence to HIS</i>	<i>Report</i>
1. Needs, Objectives and Outcomes	1.1 Needs of the Interested Parties	Have the needs of the interested parties, (such as students, industry, engineering associations, etc.) been identified	Modes and periods of relationships with the interested parties. Needs identified for each of the identified interested parties.	
	1.2 Educational Objectives	Are the programme educational objectives consistent with the mission of the (HEI) and with the needs of the interested parties (such as students, industry, engineering associations, etc.)?	Programme educational objectives vs. mission of the HEI and needs of the interested parties. Transparency and publicity of the programme educational objectives.	
	1.3 Programme Outcomes	Do the programme outcomes cover the programme outcomes for accreditation (cf. Section 1)?	Programme outcomes vs. programme outcomes for accreditation	

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		Are the programme outcomes consistent with the programme educational objectives?	Programme outcomes vs. programme educational objectives	
2. Educational Process	2.1 Planning	Does the curriculum ensure the achievement of the programme outcomes?	Curriculum (syllabus, ECTS credits, credits for course work and personal study), its transparency and publicity. Definition/description of modules' characteristics (credits, contents, specific learning outcomes, assessment methods of individual modules), their transparency and publicity. Integration of professional practice (external practical experience, laboratories, projects, etc.). Final examination, thesis, project, etc.. Correspondence of curriculum and modules' characteristics to the programme outcomes. Planning of the delivery. Teaching methods and techniques (fulltime, part time, parallel to or integrated in professional work, use of multimedia or telematics devices, etc.). Measures to promote students' mobility	
	2.2. Delivery	Is teaching delivered according to planning?	Correspondence of the delivery with the planning. Results of the students' evaluation of taught modules. Results of the students' and tutors' evaluation of external practical experiences. Results of students' mobility.	

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		Are counselling and support-workload offered to the students adequate to promote the achievement of the modules' specific learning outcomes?	Number of staff and their workload for counselling and support to the students.	
	2.3. Learning Assessment	Have examinations, projects and other assessment methods been designed to evaluate the extent to which students can demonstrate achievement of the learning outcomes of single modules and programme outcomes respectively throughout the programme and at its conclusion?	Examination papers and coursework (samples of assessed coursework, continuous assessments, project reports). Transparency and publicity of the standards and rules concerning the assessment of student performance	
3. Resources and Partnerships	3.1 Academic and Support Staff	Is the academic staff adequate to accomplish the programme outcomes?	Number, composition, competency and qualification of the teaching staff. Research (publications, participation in research projects, participation in conferences, etc.) and/or professional activities and consulting work of the teaching staff.	
		Is the techn.and admin. staff adequate to accomplish the programme outcomes?	Number, composition, competency and qualification of the technical-administrative support staff.	

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	3.2 Facilities	Are the classrooms adequate to accomplish the programme outcomes?	Classrooms and associated equipment available to students	
		Are the computing facilities adequate to accomplish the programme outcomes?	Computing facilities available to student	
		Are the laboratories, workshops and associated equipment adequate to accomplish the programme outcomes?	Laboratories, workshops and associated equipment available to students.	
		Are the libraries and associated equipment and services adequate to accomplish programme outcomes?	Libraries and associated equipment and services available to student	
	3.3 Financial Resources	Are the financial resources adequate to accomplish the programme outcomes?	Budget for teaching and support staff. Budget for running and upgrading facilities. Budget for training.	

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	3.4 Partnerships	Do the partnerships the HEI and the programme are participating in contribute to accomplish the programme outcomes and facilitate the mobility of the students?	Local / regional / national / international industrial partnerships and cooperation agreements. Local / regional / national / international partnerships and cooperation agreements with research institutions. Local / regional / national / international cooperation agreements, programmes or measures with other Higher Education Institutions.	
4. Assessment of Educational Process	4.1. Students	Do the students enrolled in the programme have the right knowledge and attitudes to achieve the programme outcomes in the expected time?	Entrance requirements. Admission requirements (only for "numerus clausus" programmes).	
		Do the results related to the students' career attest the achievement of the programme outcomes in the expected time?	Students' career progress. Learning levels achieved. Success rates and time taken to complete the programme	
	4.2 Graduates	Do graduates enter an occupation corresponding to their qualification?	Time taken to enter the workforce. Match between employment and education received.	

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		Do stakeholders (graduates, employers, etc.) confirm the achievement of the programme's educational objectives?	Graduates' opinions on the education received. Opinion of employers on the graduates' education.	
5. Management System	5.1 Organisation and decision-making processes	Are HEI's and programme's organisation and decision-making processes adequate to accomplish the programme outcomes	Documentation on HEI's and programme's organisational structures and decision-making processes (statutes, organisational charts, management of organisational processes, etc.) Positions of responsibility for the various actions to direct and control the educational process, their relationships of link and dependence. Existence and use of effective co-ordination mechanisms of decision-making processes, both horizontal and vertical. Existence and use of reliable information sources for decision-making	
		Are HEI's and programme's Quality Assurance Systems effective to ensure the achievement of the programme outcomes?	HEI's and programme's policy and procedures for quality assurance	
	5.2 Quality Assurance System	Are the delivery process', students' and graduates' results analysed and used to promote continual improvement of the programme?	Existence of a regulated and systematic process for continual programme review, development and improvement based on the analysis of the delivery processes, students' and graduates' results. Results of improvement actions.	

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		Are needs, objectives and outcomes, educational process, resources and partnerships, management system periodically re-examined?	Existence of a regulated, systematic and periodic process for re- examining needs objectives and outcomes, educational process, resources and partnerships, management system. Results of re-examination activity.	
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Appendix 5**HIS Final Evaluation Report**

HIS REPORT TO FEANI ON EVALUATION OF HEI / PROGRAMME	
Name of the HEI	
Country	
Adress	
Is HEI on the FEANI INDEX list	☐ YES ☐ NO
Name of the Programme	
Date of starting of the Program	
Standard period of study and credit points gained (according to ECTS)	
Final degree	
Needs and Objectives	
Learning outcomes	
Most relevant research projects	
Most relevant research projects	
Most relevant national / international partners of the HEI	
Policy and procedure for Quality assurance	
Is evaluation provided according to EUR-ACE?	☐ YES ☐ NO
NMC Report and recommendation	
FEANI National partner decision (HIS)	
Date & Signature	