Romanian Agency for Quality Assurance in Higher Education   **European Network for Accreditation of Engineering Education**

Commissions of permanent experts in the field of Engineering Sciences 1 and 2

Register of Employers

GUIDELINES FOR SELF-EVALUATION OF STUDY PROGRAMMES AND EXTERNAL EVALUATION FOR OBTAINING THE EUR-ACE® CERTIFICATION

This document is drawn up by ENAEE - European Network for Accreditation of Engineering Education, for the purpose of supporting the higher education institutions which apply for obtaining the EUR-ACE® certification.

	Evaluation Criteria	Requirements	What should the Self-Evaluation Report highlight and the evaluation team should check
1.	**Mission and objectives of evaluated study programme**		
1.1	Requirements of labour market regarding the qualification obtained by the evaluated study programme	The institution which coordinates the study programme has regular consultations with the representatives of business environment and labour market.	*Documented information on:* - consultation of representatives of business environment and labour market (employers: companies, professional organizations relevant in the field, other relevant categories of employers); presentation of methods by which the consultation process and its calendar were carried out;
		The methodology and calendar of consultations are adequate for identification of educational requirements formulated by employers (with their predictable transformations, as a result of foresight studies and development strategies at regional, national and European level).	- educational requirements identified after the consultations with the representatives of business environment and labour market (employers – with their predictable transformations, as a result of foresight studies and development strategies at regional, national and European level).
		Educational requirements formulated by employers contributed to definition of mission, objectives and expected results of the study programme.	*Answers to the following questions will be considered:* a) Where, when and how were the consultations made with the representatives of business environment and labour market?

			b) Were the methodology and calendar of consultations suitable for identification of educational requirements? c) Did the educational requirements formulated by employers contribute to the definition of mission, objectives and expected results of the study programme? For example, regarding the professional profile and/or functions/role/expected activities from graduates, respectively associated necessary competences.
1.2	Mission and objectives of the study programme evaluated	There is correspondence between: (i) mission and objectives of study programme, (ii) the professional profile of graduates, respectively the activities carried out by students during the study programme, (iii) expected results (knowledge and skills) obtained by students during the learning process.	*Documented information on* the mission and objectives of the study programme. *Answers to the following questions will be considered: a)* Is there agreement between: (i) mission and objectives of study programme, (ii) the professional profile of graduates, respectively the activities carried out by students during the study programme, (iii) expected results (knowledge and skills) obtained by students during the learning process?
		The mission and objectives of study programme are in line with the mission of the institution which provides it and with the educational requirements identified on labour market.	b) Are the mission and objectives of study programme in line with the mission of the institution which provides it and with the educational requirements identified on the labour market?
1.3	Expected results of the study programme evaluated:	The expected results of the study programme were established depending on what the students should know, understand and/or be capable to demonstrate after the finalization of learning process.	*Documented information on* the expected results of the study programme: competences and skills. *Answers to the following questions will be considered:* a) Were the expected results of the study programme

	competences (knowledge and skills)	Competences (knowledge and skills) established as results of the study programme are in line with the National Framework of Qualifications in the Higher Education, with the EURACE® standards and with the mission and declared objectives of the study programme evaluated.	established depending on what the students should know, understand and/or be capable to demonstrate after the finalization of learning process? b) Are the competences (knowledge and skills) set as results of the study programme in line with the National Framework of Qualifications in Higher Education, with the EURACE® standards and with the mission and declared objectives of the evaluated study programme?
2.	**Teaching process**		
2.1	Teaching-learning process	The declared results of learning for all the subjects attended by the student, corroborated, assure the obtaining of expected results of the study programme evaluated. The curriculum of the evaluated study programme is approved at institutional level. The curriculum reflects the focus on student of the teaching and learning process, allowing flexible learning routes by optional and elective subjects and encouraging the students to have a proactive role in the learning process. The curriculum is conceived so as to meet the educational requirements formulated by employers, including regarding the acquisition of practical skills.	*Documented information on:* - curriculum (training objectives, competences, structure, etc.); - subject sheets (number of credits, learning outcomes – knowledge and skills obtained, content of subject, types of activities – course/ seminar/ laboratory/ project, evaluation methods, including those imposed by preliminary conditions – if applicable, the teaching material); - documentation of sustainability of curriculum in view of obtaining the expected results of the study programme. *Answers to the following questions will be considered:* a) Do the learning outcomes declared for all the subjects attended by the student, corroborated, obtain the expected results of the evaluated study programme? b) Is the curriculum of the evaluated study programme approved at institutional level? c) Does the curriculum reflect the focus on student of the

		The subject sheets reflect the focus on student of the teaching-learning process, including by provision of activities specific to individual study (homework, individual projects or team projects etc.) and their inclusion in the evaluation process.	teaching and learning process, allowing flexible learning routes by optional and elective subjects and encouraging the students to have a proactive role in the learning process?
		The practice subject sheets are drawn up accordingly, by acquisition by the students of practical skills which allow them at graduation to get employed on the labour market.	d) Is the curriculum conceived so as to meet the educational requirements formulated by the employers, including regarding the acquisition of practical skills? e) Do the subject sheets reflect the focus on student of the teaching-learning process, including by provision of activities specific to individual study (homework, individual projects or team projects etc.) and their inclusion in the evaluation process? f) Are the practice subject sheets drawn up accordingly by acquisition by the students of the practical skills which allow them at graduation to get employed on the labour market.
		The themes for elaboration of study finalization works (diploma projects/dissertations) contain subjects proposed/formulated in collaboration with the business environment?	g) Do the themes for elaboration of study finalization works (diploma projects/dissertations) contain subjects proposed/formulated in collaboration with the business environment?
2.2	Evaluation of students regarding the developed	The evaluation methods and evaluation criteria of students regarding the developed competences (knowledge and skills acquired) are included in the subject sheets.	*Documented information on* evaluation methods and evaluation criteria of students regarding the developed competences (knowledge and skills acquired).

	competences	For the subjects provided with laboratory activities and/or project, the evaluation methods and criteria included in the subject sheets contain detailed information on the evaluation of students in different types of activities: course/ laboratory/ project (for example, percentage of final mark, minimum performance standard).	*Answers to the following questions will be considered:* a) Are the evaluation methods and evaluation criteria of students regarding the developed competences (knowledge and skills acquired) included in the subject sheets?
		The evaluation methods and evaluation criteria of students regarding the developed competences are adequate and allow the checking of acquisition by them of knowledge and skills set out in the subject sheets.	b) For the subjects provided with laboratory activities and/or project, do the evaluation methods and criteria included in the subject sheets contain detailed information on the evaluation of students in different types of activities: course/ laboratory/ project (for example, percentage of final mark, minimum performance standard)?
		In the evaluation process of the internship activity we take into account the appreciations of the internship tutor from the company in which that activity was carried out.	c) Are the evaluation methods and evaluation criteria of students regarding the developed competences adequate and do they allow the checking of acquisition by them of knowledge and skills set out in the subject sheets? d) In the evaluation process of the internship activity do we take into account the appreciations of the internship tutor from the company in which that activity was carried out?
		In the evaluation process of the study finalization works with themes proposed/formulated in collaboration with the business environment we take into account the appreciations of the representatives of the company in collaboration with whom the activity was carried out. The representatives of business environment are invited to assist to the defence of study finalization works.	e) In the evaluation process of the study finalization works with themes proposed/formulated in collaboration with the business environment do we take into account the feedback of the representative of the company in collaboration with whom the activity was carried out? f) To the defence of study finalization works are the representatives of business environment invited to assist?
2.3	Planning of teaching process	The teaching process is planned properly so as to allow the students to develop the competences formulated as expected results of the study	*Documented information on:* - structure of academic year; - timetable of teaching activities;

		programme, in the normal period set out for the completion of studies (for example, the number of weeks per semester, number of hours per week, number of necessary hours for individual study, number of internship weeks, report of course hours and applicative activities etc.).	- planning of internship in the field and specialty - planning of examination sessions. *We will have in view the answer to the following question:* Is the teaching process planned adequately so as to allow the students to develop their competences formulated as expected results of the study programme in the normal period set out for completion of studies?
2.4	Organization and coordination of teaching process	The teaching process is organized and coordinated so as to assure the realization of mission, objectives and obtainment of expected results of the study programme.	*Documented information on:* - description of the manner in which the teaching process is organized and coordinated, including the evaluation process of students regarding the developed competences; - method of collection of feedback regarding the quality of processes mentioned above, statistical analysis and documentation used. *Answers to the following questions will be considered:* a) Is the teaching process organized and coordinated as to assure the realization of mission, objectives and expected results of the study programme? b) Are there conditions which assure the development of competences by the natural and correlated accumulation of knowledge and skills declared in the subject sheets (for example, groups of conditioned subjects)? c) Do the results of analyses regarding the quality of evaluation of students regarding the developed competences confirm the adequacy of evaluation methods used and proper realization of the process? d) Is the development of competences by the students (by acquisition of knowledge and skills set out in the subject
		There are conditions which assure the development of competences by natural and correlated accumulation of knowledge and skills declared in the subject sheets (for example, groups of conditioned subjects).	
		The results of analyses regarding the quality of evaluation of students regarding the developed competences confirm the adequacy of evaluation methods used and the proper realization of the process.	
		The development of competences by students (by acquisition of knowledge and skills set out in subject sheets) is properly evaluated.	
		The teaching process is organized so as to assure the graduates the skill of understanding the necessity of involvement in the life-long learning process for updating of knowledge, with the	

		evolution of the field they attended.	sheets) properly evaluated? e) Is the teaching process organized so as to assure the graduates the skills of understanding the necessity of involvement in the life-long learning process for updating knowledge, with the evolution of the field they attended?
3.	**Resources**		
3.1	Teaching staff	The teaching staff is hired according to the recruitment criteria established at institutional level, according to the legal provisions. The auxiliary teaching staff corresponds from the point of view of professional qualification to contribute to the organization and realization of quality teaching activities and to attainment of objectives regarding expected results (acquisition of knowledge and skills). The institution offers the teaching staff opportunities for improvement of teaching competences and use of new technologies for the purpose of teaching.	*Documented information on:* - list of teaching staff and their CVs; - list of auxiliary teaching staff who support the teaching process with mention of their professional qualification; - recruitment policy of the teaching staff; - the opportunities offered by the institution to the teaching staff for improvement of teaching skills and skills of using the new technologies. *Answers to the following questions will be considered:* a) Is the teaching staff hired according to the recruitment criteria established at institutional level, according to the legal provisions? b) Does the auxiliary teaching staff correspond from the point of view of professional qualification to contribute to the organization and realization of quality teaching activities and to attainment of objectives regarding expected results (acquisition of knowledge and skills)? c) Does the institution offer the teaching staff opportunities for the improvement of teaching competences and skills of using the new technologies for the purpose of teaching?

3.2	Facilities and auxiliary staff	The study programme has the necessary facilities, the corresponding equipment from quantity and quality point of view.	*Documented information on:* - list of course/seminar rooms and teaching facilities (multimedia equipment) in their equipment; - list of available rooms for individual study of students and their equipment; - list of laboratories used in the evaluated study programme, with description of equipment and auxiliary staff available; - the library, with description of equipment, services offered and available staff; - other resources and special initiatives.
		There is technical auxiliary staff and staff for library in sufficient number and training.	*Answers to the following questions will be considered:* a) Does the study programme have the necessary facilities, proper equipment from quantity and quality point of view? (with clear references about: course/seminar/laboratory rooms, rooms for individual study, library) b) Are there technical auxiliary staff and staff for library in sufficient number and training?
3.3	Support services for students	The study programme offers the students relevant support for the learning process (counselling in career, tutorship and assistance), thus facilitating the acquisition of knowledge and skills, respectively the graduation to a superior study year.	*Documented information on:* - career counselling; - tutorship and assistance; - administrative staff available for student services.

		There is sufficient staff with proper training for assurance of support services for students.	*Answers to the following questions will be considered:* a) Does the study programme offer the students relevant support for the learning process (counselling in career, tutorship and assistance), thus facilitating the acquisition of knowledge and skills, respectively the graduation to a superior study year? b) Is there sufficient staff with proper training for assurance of support services for students?
3.4	Partnerships	The partnerships signed with public and private organizations for the internship of students are in sufficient number and corresponding in content (regarding the duration of internship, number of internship places, tutorship assured in the company, etc.) to obtain the expected results of the study programme.	*Documented information on*: - list of partnership agreements which allow the students to carry out internship periods outside of university; - method of realization of internship of students – stipulated in the partnership agreements: duration of internship, number of internship places, tutorship assured in the company, etc.; - mechanism of access of students to the internship places offered by companies; - list of companies in which the students carried out internship activities in the period of evaluation and number of internship places allotted by those companies; - list of partnerships which allow the students to carry out mobility periods abroad. *Answers to the following questions will be considered:* a) Are the partnerships signed with public and private organizations for the internship of students in sufficient number to obtain the expected results of the study programme? b) Are the partnerships signed with public and private
		There are partnerships signed with the organizations with which consultations were previously made for identification of educational requirements (criterion 1.1)	
		The partnerships signed with other higher education institutions from abroad correspond for the realization of international mobilities and for obtaining the expected results of study programme.	

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			organizations for internship of students adequate in content (regarding the duration of internship, number of internship places, tutorship assured in the company, etc.) to obtain the expected results of the study programme? c) Are there partnerships signed with the organizations with which consultations were previously made for identification of educational requirements? d) Are there mechanisms of access of students to internship places? e) Do the partnerships signed with higher educational institutions from abroad correspond for the realization of international mobilities and obtaining the expected results of the study programme?
4.	**Admission, transfer, route and graduation of students**		
4.1	Regulations regarding the professional activity of students	There are regulations regarding: - conditions of admission to the study programme and evaluation methods of the fulfilment of criteria by candidates (potential students); - recognition of qualifications from higher education and study periods within mobilities; - criteria regarding the promotion of students during the schooling period; - method of finalization of a university cycle.	*Documented information on:* - previous qualifications; - conditions of admission to the study programme and evaluation methods of fulfilment of criteria by candidates (potential students); - regulations regarding the recognition of qualifications from higher education and study periods within mobilities; - criteria regarding the promotion of students during the schooling period; - method of finalization of a university cycle.
4.2	Admission and evolution of students during the first year of	Outcomes of evaluation of students after the first year of study confirm the adequacy of admission conditions.	*Documented information on:* - outcomes of evaluations regarding the fulfilment degree of admission criteria by students admitted to the study programme;

	study	The curriculum for the 1st year is designed so that it helps and motivates students for the study of engineering sciences.	- results of students after the first year of study. *Answers to the following questions will be considered:* a) Do the outcomes of evaluation of students after the first year of study confirm the adequacy of admission conditions? b) Is the curriculum for the 1st year conceived to help and motivate students for the study of engineering sciences?
4.3	Examination of students	The forms of examination and methods used assure the efficiency of the learning process for all the subjects of curriculum.	*Documented information on* examination of students in all the subjects of curriculum (from the current year and previous years); *We will have in view the answer to the following question:* Do the forms of examination and the methods used assure the efficiency of the learning process for all the subjects of curriculum?
4.4	Promotion and route of students	Monitoring the route of students regarding: - the professional results during the study years, - dropout rate, - credits accumulated by students who promote from one year to another (as credited students); - duration of study until graduation, confirms the efficiency of the learning process.	*Documented information on:* - results of monitoring process of students during the study years; - results of the monitoring process of dropout rate; - results of monitoring process of credits accumulated by students who promote from one year to another (as credited students); - results of the monitoring process of duration of study until graduation. *We will have in view the answer to the following question:* Does the monitoring of the route of students confirm the efficiency of the learning process?

5.	**Internal quality assurance**		
5.1	Policies and processes for internal quality assurance of study programmes	The higher education institution complies with the public policies regarding the quality assurance of study programmes. The higher education institution has an efficient management system and efficient decision-making processes (applies the undertaken quality assurance policy and proves the functioning of quality assurance structures/mechanisms).	*Documented information on:* - policy regarding the quality assurance of study programmes of the institution; - the organizational structure for assurance of quality of study programmes and decision-making process in the institution; - method of application of quality assurance policy and functioning of quality assurance structures/mechanisms *Answers to the following questions will be considered:* a) Does the higher education institution comply with the public policies regarding the quality assurance of study programmes? b) Does the higher education institution have an efficient management system and efficient decision-making processes (applies the undertaken quality assurance policy and proves the functioning of quality assurance structures/mechanisms)?
5.2	Management of study programme	The study programme contributes to the global quality assurance process in institution and implements the relevant outcomes of this process.	*Documented information on:* - quality assurance policies and procedures relevant for the study programme evaluated. *We will have in view the answer to the following question:* Does the study programme contribute to the global quality assurance process in institution and implement the relevant outcomes of this process?

5.3	Regular evaluation and development of study programmes	The study programme is regularly evaluated from the point of view of: needs and objectives identified on the labour market, teaching-learning process, resources, results, management system, for the purpose of assuring the continuity and relevance of all these elements. The regular evaluation process takes into account: (i) the interest for the study programme and satisfaction regarding the training of students/graduates from the representatives of labour market; (ii) the interest for the study programme and satisfaction regarding the training of students from the internship partners; (iii) results of monitoring the opinion of students regarding the teaching process.	*Documented information on:* - policies and procedures regarding the regular evaluation and development of study programmes (including regular consultations with the representatives of labour market, survey of opinion poll of internship partners, survey of opinion of students); - the results of the latest evaluations (internal and external). *Answers to the following questions will be considered:* a) Is the study programme regularly evaluated from the point of view of: needs and objectives identified on the labour market, teaching-learning process, resources, results, management system, for the purpose of assuring the continuity and relevance of all these elements? b) Does the regular evaluation process take into account: (i) the interest for the study programme and satisfaction regarding the training of students/graduates from the representatives of labour market; (ii) the interest for the study programme and satisfaction regarding the training of students from the internship partners; (iii) results of monitoring the opinion of students regarding the teaching process?
5.4	Opinion of students on the teaching process	The monitoring process of opinion of students is adequate from the point of view of relevance of the collected information, response rate and improvement measures (identified and implemented).	*Documented information on:* - opinion of students regarding the teaching process; - opinion of students regarding the internship periods carried out outside of university; - opinion of students regarding the study or internship periods

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		The monitoring of students' opinion regarding the teaching process confirms the efficiency of that process and support services offered.	carried out in international mobilities; - opinion of students in terminal year on the teaching process and support services; - the way in which the institution reacts to the feedback received from students (improvement measures identified and implemented). *Answers to the following questions will be considered:* a) Is the monitoring process of students' opinion adequate from the point of view of relevance of collected information and response rate? b) Does the monitoring of students' opinion regarding the teaching process confirm the efficiency of that process and support services offered?
5.5	Professional insertion of graduates	The results of monitoring process of insertion of graduates on the labour market, the opinion of hired graduates and employers regarding the training during the university studies confirm the value of qualification obtained, adequacy of objectives and expected results of study programme compared to the needs of labour market.	*Documented information on:* - results of monitoring the professional insertion of graduates; - results of monitoring the route of graduates to master's degree programmes (only for bachelor's degree programmes); - results of monitoring the route of graduates to Ph.D. programmes (only for the master's degree programmes); - results of monitoring the opinion of graduates over the

		The involvement of partner companies of study programme evaluated, in professional insertion of graduates, confirms the value of qualification obtained, adequacy of objectives and expected results of study programme compared to the needs of labour market.	education process from the period of university studies; - results of monitoring the opinion of employers regarding the training of graduates; - results regarding the active involvement of partner companies in the professional insertion process of graduates. *Answers to the following questions will be considered:* a) Do the results of monitoring process of insertion of graduates on the labour market, the opinion of hired graduates and employers regarding the training during the university studies confirm the value of qualification obtained, adequacy of objectives and expected results of study programme compared to the needs of labour market? b) Does the involvement of partner companies of study programme evaluated, in professional insertion of graduates, confirm the value of qualification obtained, adequacy of objectives and expected results of study programme compared to the needs of labour market.
5.6	Public availability of information	The study programme offers public complete, updated and easily accessible both quantitative and qualitative information of objectives of teaching-learning process, resources, results and management system.	*Documented information on* publication of relevant data regarding the quality assurance of study programme. *Answers to the following questions will be considered:* Does the study programme offer public complete, updated and easily accessible both quantitative and qualitative information, of the objectives, teaching-learning process, resources, results and management system?

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ARACIS Council