

### STANDARDS AND PROCEDURES FOR ENGINEERING PROGRAMME ACCREDITATION



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Accreditation framework and objectives



#### 1.1 Background and objectives

The Finnish Education Evaluation Centre FINEEC's Engineering Programme Accreditation aims to support the enhancement of quality in engineering degree programmes. The accreditation is voluntary for Finnish higher education institutions and degree programmes, and the operating status or degree awarding power of a degree programme does not depend on an accreditation by FINEEC. The Engineering Programme Accreditation method responds to a demand for evaluations which support the assurance and enhancement of quality of teaching and learning at the programme level.

The accreditation provides higher education institutions with the means to get an independent evaluation of how a degree programme provides its graduates with the academic qualifications necessary for a career in the engineering profession. Additionally, the accreditation aims to facilitate professional recognition of engineering degrees internationally. Higher education institutions can also use the accreditation standards as a tool in the evaluation and development of their programmes.

The standards and procedures of the accreditation are based on the European Accredited Engineer (EUR-ACE) framework standards<sup>1</sup> of the European Network for Accreditation of Engineering Education (ENAEE).

An accreditation evaluates a degree programme — organisation, planning, implementation and development — to decide if the programme's operation ensures that its students achieve the programme's learning outcomes; and to decide if the programme's learning outcomes correspond to the FINEEC reference programme learning outcomes (see Section 2).

<sup>1</sup> http://www.enaee.eu/publications/european-framework-standards

The FINEEC reference programme learning outcomes describe the knowledge, skills and competences that the learning process should enable Bachelor's or Master's degree graduates to demonstrate. The reference programme learning outcomes are common for all branches of engineering to enable accreditations to reflect on the specific demands of different branches and to embrace the growing diversity of engineering programmes.

An accreditation process can result in one of three different outcomes:

- The programme is accredited without reservation and the accreditation is valid for six years;
- The programme is conditionally accredited, and the accreditation is valid for six years only if the conditions are met within a specified amount of time;
- The programme is not accredited.

Chapters 2–7 describe the standards and procedures for accreditation in full detail.

FINEEC follows ENAEE's guidelines concerning the possibility of online implementation of the accreditations. When accepted by ENAEE, FINEEC's engineering programme accreditations, which may lead to the award of a EUR-ACE quality label, can be implemented either fully or partly online. The principles and criteria described in this manual will be applied to engineering programme accreditations regardless of the method of implementation.

The implementation method of the accreditation will not affect the accreditation team's assessment, the price of the accreditation or the award of the EUR-ACE quality label.

#### 1.2 On the EUR-ACE system

The EUR-ACE Label is a certificate that authorised quality assurance agencies can award to engineering degree programmes. The European Network for Accreditation of Engineering Education (ENAEE) is responsible for the EUR-ACE Framework Standards and Guidelines. ENAEE authorises quality assurance agencies that fulfil the standards to award the EUR-ACE Label.

The goal of the ENAEE is to promote the mobility of graduates from degree programmes in engineering through mutual recognition of the accreditation decisions issued by a European accreditation association.

According to the ENAEE, the principal aim of the EUR-ACE is to develop a framework for the accreditation of engineering degree programmes within the European Higher Education Area. ENAEE has developed the framework standards and the procedures for their implementation to be widely applicable and inclusive to reflect the diversity of the engineering degree programmes. The framework affords a means for comparing educational qualifications within the EHEA and promotes the mobility of engineering graduates. The EUR-ACE Label may be awarded to Bachelor's (First Cycle) and Master's (Second Cycle) degrees in engineering.

The engineering degree programmes that have been awarded the EUR-ACE Label and the agencies authorised to award the EUR-ACE Label, are listed on the ENAEE website<sup>2</sup>.

#### 1.3 Eligible programmes

FINEEC is currently authorised to award the EUR-ACE Bachelor Label to four-year (240 ECTS) Bachelor's programmes. Pilot accreditations are possible for 180 ECTS Bachelor's degree and 60–120 ECTS Master's degree programmes in Engineering or Technology and can also lead to the EUR-ACE Label.

The ECTS requirement can also be delivered in part-time mode but with limitations on the overall time taken to achieve the required programme outcomes.

The degree programmes seeking the accreditation must have alumni and evidence available on the achievement of the programme outcomes of all the years of study.

Programmes that seek to be accredited should be informed of the accreditation standards (see Section 2) and reasonably confident that the programme's learning outcomes correspond to the FINEEC reference programme learning outcomes (see Section 3).

The HEI's and degree programmes seeking the accreditation should have a national legal recognition.

<sup>2</sup> http://www.enaee.eu/



Reference programme learning outcomes



FINEEC reference programme learning outcomes describe the knowledge, skills and competencies that the learning process should enable Bachelor's or Master's degree engineering graduates to demonstrate.

Assessment of the achievement of the programme outcomes is included in standard 8.

#### 2.1 Bachelor's degree

#### Knowledge and understanding

The learning process should enable Bachelor Degree graduates to demonstrate:

- knowledge and understanding of mathematics, computing and other basic sciences underlying their engineering specialisation, at a level necessary to achieve the other programme learning outcomes;
- knowledge and understanding of engineering fundamentals underlying their specialisation, at a level necessary to achieve the other programme learning outcomes, including some awareness at the forefront;
- knowledge and understanding of applicable materials, equipment and tools, engineering technologies and processes, and of their limitations, in their specialisation
- knowledge and understanding of applicable techniques and methods of analysis, design and investigation, and of their limitations, in their specialisation;

#### Engineering practice

The learning process should enable Bachelor Degree graduates to demonstrate:

- ability to analyse complex engineering products, processes and systems, and to correctly interpret the outcomes of such analyses, by being able to select and having the practical skills to apply relevant established analytical, computational and experimental techniques and methods
- ability to identify, formulate and solve complex engineering problems, by being able to select and having the practical skills to apply relevant established analytical, computational and experimental techniques and methods
- ability to develop and design complex products (devices, artefacts, etc.), processes and systems to meet established requirements that can include societal, health and safety, environmental, economic and industrial constraints, by being able to select and having the practical skills to apply relevant design methodologies
- practical skills for realising complex engineering designs
- ability to use an awareness of the forefront of their engineering specialisation in design and development
- ability to apply norms of engineering practice in their engineering specialisation;
- ability to consult and apply codes of practice and safety regulations in their engineering specialisation

#### Investigations and information retrieval

The learning process should enable Bachelor Degree graduates to demonstrate:

- ability to conduct searches of literature, to consult and to critically use scientific databases and other appropriate sources of information, and to carry out simulation and analysis, in order to pursue detailed investigations and research of technical issues
- ability and practical skills to design and conduct experimental investigations, interpret data and draw conclusions
- ability to work in a laboratory/workshop setting

#### Multidisciplinary competences

The learning process should enable Bachelor Degree graduates to demonstrate:

- awareness of the wider multidisciplinary context of engineering
- awareness of societal, health and safety, environmental, economic and industrial implications of engineering practice and recognition of the constraints that they pose
- awareness of economic, organisational and managerial issues (such as project management, risk and change management) in the industrial and business context

- ability to gather and interpret relevant data and handle complexity to inform judgements that include reflection on relevant social and ethical issues;
- ability to manage complex technical or professional activities or projects, taking responsibility for decision making
- ability to recognise the need for and to engage in independent life-long learning
- ability to follow developments in science and technology

#### Communication and team-working

The learning process should enable Bachelor Degree graduates to demonstrate:

- ability to communicate effectively information, ideas, problems and solutions with the engineering community
- ability to communicate effectively information, ideas, problems and solutions with the society at large;
- ability to function effectively in a national and an international context;
- ability to function effectively as an individual and as a member of a team;
- ability to cooperate effectively with engineers and non-engineers.

#### 2.2 Master's degree

#### Knowledge and understanding

The learning process should enable Master's Degree graduates to demonstrate:

- in-depth knowledge and understanding of mathematics, computing and sciences underlying their engineering specialisation, at a level necessary to achieve the other programme learning outcomes
- in-depth knowledge and understanding of engineering disciplines underlying their specialisation, at a level necessary to achieve the other programme learning outcomes;
- critical awareness of the forefront of their specialisation
- comprehensive knowledge and understanding of applicable materials, equipment and tools, engineering technologies and processes, and of their limitations;
- comprehensive knowledge and understanding of applicable techniques and methods of analysis, design and investigation and of their limitations;

#### Engineering practice

The learning process should enable Master's Degree graduates to demonstrate:

- ability to analyse new and complex engineering products, processes and systems within broader or multidisciplinary contexts, and to critically interpret the outcomes of such analyses, by being able to select and apply the most appropriate and relevant, established or new and innovative, analytical, computational and experimental methods and tools,
- ability to conceptualise engineering products, processes and systems;
- ability to select and practical skills to apply the most appropriate and relevant, established or new and innovative, analytical, computational and experimental methods and computer tools in problem solving.
- ability to identify, formulate and solve unfamiliar complex engineering problems in new and emerging areas of their specialisation. The problems can be incompletely defined, have competing specifications and may involve considerations from outside their field of study and have non-technical – societal, health and safety, environmental, economic and industrial – constraints.
- ability to select and practical skills to apply the most appropriate and relevant design methodologies or to use creativity to develop new and original design methodologies.
- ability to design and develop new and complex products (devices, artefacts, etc.), processes and systems, with incompletely defined and/or competing specifications that require integration of knowledge from different fields and non-technical – societal, health and safety, environmental, economic and industrial commercial – constraints;
- practical skills, including the use of computer tools, to realise complex engineering designs
- ability to design using knowledge and understanding at the forefront of their engineering specialisation.

#### Investigations and information retrieval

The learning process should enable Master's Degree graduates to demonstrate:

- ability to identify, locate and obtain required data;
- ability to conduct searches of literature, to consult and critically use databases and other sources of information, to carry out simulation in order to pursue detailed investigations and research of complex technical issues;
- practical skills, including the use of computer tools, for designing and conducting complex investigations;
- advanced laboratory/workshop skills and ability to design and conduct experimental investigations, critically evaluate data and draw conclusions;
- ability to investigate in a creative way the application of new and emerging technologies at the forefront of their engineering specialisation

#### Multidisciplinary competences

The learning process should enable Master's Degree graduates to demonstrate:

- critical awareness of the wider multidisciplinary context of engineering and of knowledge issues at the interface between different fields.
- knowledge and understanding of the non-technical societal, health and safety, environmental, economic and industrial – implications of engineering practice;
- critical awareness of economic, organisational and managerial issues (such as project management, risk and change management)
- ability to apply norms of engineering practice
- ability to consult and apply codes of practice and safety regulations;
- ability to integrate knowledge and handle complexity, to formulate judgements with incomplete or limited information, that include reflecting on social and ethical responsibilities linked to the application of their knowledge and judgement to deliver sustainable solutions for society, the economy and environment;
- ability to manage complex technical or professional activities or projects that can require new strategic approaches, taking responsibility for decision making.
- ability to engage in independent life-long learning;
- ability to undertake further study autonomously.

#### Communication and team-working

The learning process should enable Master's Degree graduates to demonstrate:

- ability to use diverse methods to communicate clearly and unambiguously their conclusions, and the knowledge and rationale underpinning these, to specialist and non-specialist audiences in national and international contexts;
- ability to function effectively in national and international contexts, as a member or leader of a team, that may be composed of different disciplines and levels, and that may use virtual communication tools



# Accreditation standards



An accredited programme fulfils the following standards for planning of education, implementation of teaching and learning, resources and quality management. The compliance with the FINEEC reference programme outcomes is primarily assessed under the standard 8.

#### Planning of the programme

- 1. The programme aims, which describe the educational task and purpose of the programme, are consistent with the mission of the higher education institution and reflect the identified needs of employers and other stakeholders.
- 2. The programme learning outcomes, which describe the knowledge, understanding, skills and abilities that the programme enables graduates to demonstrate, are consistent with the programme aims, with relevant national qualifications frameworks (if applicable) and with the FINEEC reference programme learning outcomes (see Section 3).
- 3. The course level learning outcomes, including thesis work and possible practical training, aggregate to the programme's learning outcomes.
- 4. The curriculum gives comprehensive information on all the individual courses of the programme, including thesis work and possible practical training, and is accessible to students.
- 5. The curriculum and the course timetable enable students to graduate in the expected time.
- 6. The criteria and process for student admission and transfer are clearly specified and published. Students should be informed of the qualifications necessary to enter the programme.
- 7. Students are informed of regulations and guidelines that concern recognition of prior learning, progress of studies and graduation.

#### Implementation of teaching and learning

8. The teaching and learning process, including the assessment of students, enables students to demonstrate that they have achieved the intended course and programme level learning outcomes. Students have an active role in co-creating the learning process and the assessment of students reflects this approach.

#### Resources

- 9. The academic staff are sufficient in number and qualification to enable students to achieve the programme learning outcomes. There are arrangements in place to keep the pedagogical and professional competence of the academic staff up to date.
- 10. An effective team of technical and administrative staff supports the programme. There are arrangements in place to keep the competence of the support staff up to date.
- 11. The students are provided adequate and accessible support services to enable the achievement of the programme learning outcomes.
- 12. The classrooms, computing facilities, software, laboratories, workshops, libraries and associated equipment and services are sufficient and accessible to enable students to achieve the programme learning outcomes.
- 13. The HEI and the programme have external partnerships that are adequate to the achievement of the programme learning outcomes.
- 14. The financial resources are sufficient to implement the learning process as planned and to further develop it.

#### Quality management

- 15. The quality management procedures of the programme are consistent with the quality policy of the higher education institution.
- 16. The organisation and decision-making processes of the programme are fit for effective management.
- 17. The programme reviews and develops the programme aims, curriculum, teaching and learning process, resources and partnerships and quality management in a systematic and regular manner, taking into account analysis of results of student admissions, students' study progress, achieved learning levels, student, graduate and employer feedback and graduate's employment data.
- 18. The programme provides public, up to date information about its objectives, teaching and learning process, resources, quality management procedures and results.



Evaluation of accreditation standards



#### 4.1 Evaluation of individual standards

The accreditation team evaluates the extent to which the programme fulfils the individual standards (see section 2: Accreditation standards) using a three-point scale:

- Acceptable: the programme meets the standard fully, even if improvements are still possible;
- *Conditionally acceptable*: the standard is not fully met but the programme can implement the necessary enhancement actions within one year;
- *Unacceptable*: the programme does not meet the standard and cannot implement the necessary enhancement actions within one year.

#### 4.2 Recommendation on the accreditation decision

Based on the evaluation of the individual standards, the accreditation team recommends to the FINEEC Committee for Engineering Education that the programme should be either

- Accredited without reservation, if all individual standards are acceptable;
- Accredited with conditions, if any of the standards is conditionally acceptable and none are unacceptable;
- Not accredited, if any of the standards is unacceptable.



# Accreditation procedures



The accreditation process consists of the following stages:

- 1. The HEI makes a request for an accreditation of a particular engineering degree programme
- 2. Agreement between FINEEC and the HEI
- 3. FINEEC appoints and trains the accreditation team
- 4. The HEI compiles the self-evaluation report
- 5. The accreditation team visits the HEI
- 6. The accreditation team prepares the report and the HEI checks the report for factual correctness
- 7. The accreditation team gives its recommendation on the result of the accreditation
- 8. The FINEEC Committee for Engineering Education's decides on the result
- 9. FINEEC publishes the accreditation result and the report
- 10. The accreditation team and the HEI give feedback to FINEEC

### 5.1 Request by the higher education institution and the agreement negotiation

A higher education institution (HEI) contacts FINEEC to express its interest in an accreditation and to suggest an expected timeframe for the review.

After informal discussions on the details of the accreditation have taken place FINEEC and the HEI sign an agreement regarding the accreditation. The agreement records the following issues:

- The engineering degree programme to be accredited
- The nationality/internationality of the accreditation team and the language used in the accreditation

- Publicity of the accreditation report and result
- Timeframe of the accreditation
- Price of the accreditation and distribution of other costs

#### 5.2 Self-assessment report

The accreditation is based on a detailed self-assessment report provided by the higher education institution, electronic evidence room and the visit by the accreditation team.

The HEI submits the self-assessment report to FINEEC within sufficient amount of time before the accreditation team's visit to the HEI. The exact deadline for the report is included in the agreement between the HEI and FINEEC. Typically, the deadline would be at least four weeks prior to the visit. The length of the report should not be more than 40 pages, excluding appendices. The recommended number of appendices is maximum 15 pieces. Both self-assessment report and the appendices should primarily be in the language of the accreditation.

The consideration of actions arising from observations of possible previous accreditation reports should be included in the self-assessment report.

The structure of the report is described in a template for self-assessment that is available on the FINEEC website.

If HEI has been subject of other external quality assurance reviews the results of these reviews and any conditions addressed should be made available to FINEEC and the accreditation team. If the HEI have been audited by FINEEC, the audit reports are publicly available on FINEEC web site.

#### 5.3 Accreditation team

#### 5.3.1 Composition and selection criteria

The FINEEC Committee for Engineering Education appoints the accreditation team. The team comprises at least three members who represent a balance of relevant experience and expertise.

At least one member of the accreditation team is an academic, at least one a practising engineering professional and at least one a student. FINEEC arranges training for the team members and expects each team member to participate in the training.

The FINEEC Committee for Engineering Education appoints the chair of the review team. Members of the team are on an equal footing as evaluators. A project manager from FINEEC in charge of the accreditation process takes part in the team's activities as an expert of accreditations.

FINEEC uses the following criteria to select the accreditation team members:

- Good knowledge of the higher education system and engineering education
- Good knowledge of the field of the target programme
- Experience with evaluations, accreditations or audits.

A person is disqualified from acting as a member of the accreditation team if he or she is an interested party or if confidence in his or her impartiality in relation to the HEI subject to the accreditation comes under question. Disqualification is determined in compliance with the provisions of the Finnish Administrative Procedure Act (434/2003, chapter 5, sections 27–29).

Such situations may arise, for example, if the person is employed by the HEI subject to the review or has acted in a position of trust within the institution's decision-making body. Team members must take it upon themselves to inform FINEEC about any issues that may bear on their disqualification.

A disqualified person may not in any way take part in the accreditation process.

The HEI is given the opportunity to comment on the team's composition before FINEEC appoints the team, especially from the perspective of disqualification.

FINEEC does not distribute any confidential documentation to the accreditation team before possible disqualifications have been determined and the FINEEC Committee for Engineering Education has appointed the accreditation team.

FINEEC and the accreditation team members sign an agreement that specifies the accreditationrelated tasks, fees and any other conditions related to the assignment.

#### 5.3.2 Tasks of the team

Members of the accreditation team:

- Familiarise with the FINEEC operations and FINEEC accreditation concept
- Examine the self-evaluation report and background material provided by the programme
- Decide on the details of the site visit, prepare for the visit and conduct the visit as planned
- Compile the report, including a proposition regarding the result of the accreditation.

In addition to these tasks, the chair of the accreditation team has a special role. The chair:

- Chairs the accreditation team's meetings and the site visit
- Takes responsibility for the accreditation task as a whole and for editing the report jointly with the FINEEC project manager
- Presents the results of the accreditation at the FINEEC Committee for Engineering Education meeting

The project manager's tasks include:

- Organising the training for team members
- Supporting the accreditation team's activities by taking part in the team's discussions as an expert in accreditations, and instructing the team as concerns the accreditation criteria
- Being the point of contact between the HEI and the accreditation team
- Editing the accreditation report and taking charge of communication of the outcome of the accreditation.

#### 5.3.3 Training of the team

FINEEC arranges training for accreditation team members and requires that each team member completes the training.

During the training, the team members learn about the operations of FINEEC, the objectives of the accreditations and the accreditation procedure, as well as about the tasks and operating principles of the team. In addition, if the programme to be accredited is from a Finnish institution, the training familiarises international team members with the Finnish higher education system and with engineering education in Finland.

#### 5.3.4 Operating principles and ethical guidelines

FINEEC accreditation teams comply with the following operating principles and ethical guidelines in their work:

- *Impartiality and objectivity*: accreditation team takes an impartial and objective approach towards the subject of the accreditation, as well as recognises their position of power and the responsibility relating to it;
- *Transparent and evidence-based evaluation*: the accreditation is based on transparent and systematically applied criteria, as well as only on material collected in connection with the accreditation;
- *Confidentiality*: all information acquired during the process, except for that published in the final report, is confidential;

• *Interaction*: the accreditation is carried out through good cooperation and interaction with the HEI and the programme.

#### 5.3.5 Remuneration

FINEEC determines the fees of accreditation team members following its adopted principles.

#### 5.4 Visit to the HEI

The accreditation team visits the HEI and the degree programme in question to verify the information given in the self-assessment report and to gain more information to support the compilation of the report and the eventual decision on the result of the accreditation.

In the accreditation agreement between FINEEC and the HEI, both parties undertake to implement the accreditation visit partly or fully online, should the situation so require. A similar undertaking is also included in the agreements made with the accreditation team members. If organising the accreditation visit on the HEI's premises is not possible, FINEEC will agree with the HEI on an online visit. The initiative for implementing the accreditation visit online may be made by FINEEC or the HEI.

The length of the visit is at least two days. During the visit, the team discusses with representatives of at least:

- Programme management (head of programme / department / faculty / institution)
- Academic staff members
- Support staff members
- Current and former students
- External stakeholders (employers / industry / representatives of professional engineering organisations)

The language of the interviews and other sessions with the above-mentioned groups is language of the accreditation. HEI can arrange the interpretation for its own parties. HEI is responsible for arrangements and costs of the interpretation.

The team also reviews assessed work with regards to the standard and modes of assessment as well as to the learning achievements of the students. The HEI is expected to have samples of the following available for this accreditation in the electronic evidence room:

- Thesis works, representing the whole scale of grade evaluation
- Project works
- Assessed project reports
- Examination papers
- Continuous assessment
- Other assessed coursework
- Entrance examinations
- Recent research publications relevant to the programme.

The materials listed above should cover all five categories of FINEEC reference programme outcomes.

The material shall be placed to the electronic evidence room arranged by the HEI. The accreditation team should have access to the evidence room at least a week prior the visit.

In addition to the interviews and the reviews, the team visits the most relevant facilities, such as laboratories or libraries. In case of the online visit, the HEI and the degree programme should produce the facilities tour included in the accreditation visit programme as a video implementation. The video should be recorded for the accreditation team's use at least a week prior the visit. The accreditation team should have the opportunity to ask the HEI representatives questions about the facilities tour during the visit.

In case of online visit, FINEEC reserves for the accreditation team the possibility to request additional material or organise additional hearings after the visit if the evidence obtained during an online visit was insufficient due to such reasons as technical problems.

At the end of the visit, the accreditation team gives initial feedback to the programme management.

#### 5.5 Report

The accreditation team prepares a review report. The report is based on the self-evaluation report and background material provided by the programme and on the observations the team makes during the visit to the HEI. It represents the common opinion of the accreditation team.

The report follows a given structure:

- 1. Description of the review process and of the programme
- 2. Evaluation of the fulfilment of the accreditation standards
- 3. Recommendation to the FINEEC Committee for Engineering Education

The report template is available on the FINEEC website.

The accreditation report, without the recommendation for the accreditation result, is submitted to the HEI so it can check the report for factual errors. The accreditation team then finalises the report and formulates its recommendation based on the results of the accreditation for the FINEEC Committee for Engineering Education.

#### 5.6 Decision and publication

The FINEEC Committee for Engineering Education decides on the accreditation result based on the report and the recommendation of the accreditation team. The accreditation decision defines the exact period of validity of the accreditation and in the case of a conditional accreditation, the timeframe to fulfil the conditions.

FINEEC publishes the results and the report on FINEEC's website after the decision and communicates the result to the HEI and to ENAEE.

FINEEC maintains an online register of accredited programmes.

The HEI's are responsible for their use of the EUR-ACE label in their communication, marketing and other operations. Only the valid EUR-ACE labels can be used along with the information in line with the EUR-ACE standards and guidelines.

#### 5.7 Appeals procedure

An HEI unsatisfied with the conduct of the accreditation process by FINEEC, or with the accreditation result, can make use of FINEEC's appeals procedure for Engineering Programme Accreditations that is available on FINEEC's website.

#### 5.8 Feedback

FINEEC asks the HEI and the accreditation team members to give feedback on the accreditation process. The feedback is used in the continuous development of FINEEC's operations as a part of its quality management system.



# Validity of the accreditation



The accreditation is valid for six years, with the below-mentioned exceptions. The exact period of validity is stated in the accreditation decision and refers to the date of graduation.

If the programme is accredited with conditions, the programme must fulfil the set conditions within the timeframe that is specified in the decision. Typically, the length of the timeframe is maximum one year.

Within the specified amount of time, the HEI must submit an interim report to the FINHEEC Committee for Engineering Education on how the programme has fulfilled the requirements. The committee may decide that a site visit is needed to confirm the extent to which the requirements have been fulfilled. The committee may also consult the accreditation team on the matter. The committee decides on the continuation of the accreditation based on the HEI's report and possible site visit and possible consultation with the review team.

If the programme fails to meet the conditions on time, the validity of the accreditation will lapse.

The validity of the accreditation may be reconsidered if significant changes are made to the programme learning outcomes or to the programme's organisation, implementation and development. Therefore, the HEI is expected to inform FINEEC if it has made such changes. Significant changes include, but are not limited to, a major redefinition of the programme learning outcomes, the removal of current, or the introduction of new, focus areas and major subjects, or changes to the degrees awarded for graduates.

Normal curriculum development, where the curriculum is gradually updated to reflect new knowledge in the field, the gradual development of the programme's implementation based on the information given by the quality management system, or the addition of elective parts to the curriculum are examples of non-significant changes that need not to be reported to FINEEC.

FINEEC asks the accredited degree programmes to report on annual basis, whether the above listed significant changes have been adopted or not. The FINEEC Committee for Engineering Education handles the reports and decides on the continuation of the accreditations.



## Re-accreditation



If the HEI desires to renew the accreditation, the programme must be re-accredited prior to the end of the valid accreditation. FINEEC advices to begin the re-accreditation process at least one year prior to the expiration.

The re-accreditation process follows the accreditation procedure described in this document with special attention paid to how the programme has developed since the previous accreditation.

#### HIGHER EDUCATION

INEEC's Engineering Programme Accreditation is a degree programme specific evaluation that can lead to the European EUR-ACE® Label. The accreditation aims to support the enhancement of quality in engineering degree programmes and increase comparability and recognition of engineering degrees within Europe. The accreditation is voluntary for Finnish higher education institutions and degree programmes.

This manual introduces FINEEC's accreditation concept for engineering degree programmes.

The Finnish Education Evaluation Centre (FINEEC) is an independent, state evaluation agency responsible for the external evaluations of education from early childhood education to higher education in Finland. It implements system and thematic evaluations, learning outcome evaluations and fieldspecific evaluations. Moreover, FINEEC supports providers of education and training and higher education institutions in matters related to evaluation and quality assurance, as well as advances the evaluation of education.

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