



Education Quality Assurance Plan

TU Delft

Delft University of Technology

TU Delft

*Education Quality
Assurance Plan*

Foreword

A university that wishes to provide high quality teaching obviously must have a clear vision of teaching, and in particular of education quality. TU Delft aspires to be such a university. A clear vision of education quality presupposes an institution-wide system of quality assurance, in which the vision is described and with which quality can continuously be monitored and improved. The system for institution-wide quality assurance described in this report aims to meet these requirements.

The aforementioned raises the question of TU Delft's vision of education quality prior to the present system. It goes without saying that this vision has long been entrenched in TU Delft. Testimony of this can be found in the Teaching Calendars, the Plans of Action triggered by the inspections, the TU Delft instrument database for Faculty Education Quality Assurance Cycles and the Logistics Quality Monitor. However, the various lines of approach were more or less disconnected prior to this Quality Assurance System. In other words, TU Delft already had various programmes of quality assurance; what was required was integration of these programmes into a single system.

In addition to the integration of the existing programmes in a new TU Delft framework, the Quality Assurance System also needed to be expanded. To gain a clear picture of the quality of the degree programmes at the central level, the new system incorporates programme-based annual reports. An important role in this system will be played by the impending accreditation system, made up of Institutional Audits and programme accreditations. To acquire the classification 'trusted institution' in an Institutional Audit, so that lighter programme accreditations can be applied, TU Delft has to demonstrate it is 'in control' with regard to process related aspects such as quality assurance and personnel management. The annual reports will be used as an instrument to achieve this.

Other new instruments are the Internal Programme Audits and the Internal Central Audit at TU Delft-wide level. These fulfil a similar role to the midterm research review. A number of degree programmes already apply the programme audit instrument. Using these audits, the university and the degree programmes can assess the quality of the teaching and teaching-related aspects halfway through the Institutional Audit cycle of six years, so that there will be enough time to cope with any weak points before the next Institutional Audit or programme accreditation.



The most important function of the TU Delft-wide quality system is to improve the quality of education. This can be achieved if all involved parties are prepared to participate in an open discussion on the basis of the annual reports and are willing to learn from each other's best practices.

To recapitulate, both existing instruments and existing best practices have been used to the best possible effect in the design of the new programme. The innovation is that these best practices have been combined with a number of new instruments in an institution-wide framework. This new programme will demonstrate that TU Delft takes education quality very seriously indeed!

TU Delft Quality Assurance Plan Project Team
Delft, Autumn 2009

Summary

This is a summary in two parts. The first part is a general description of the TU Delft Education Quality Assurance Plan. This plan contains a number of elements that are new for TU Delft. These elements are described briefly in part two of this summary.

1. The TU Delft Education Quality Assurance Plan in brief

A system of Education Quality Assurance is operational within each of TU Delft's faculties. In 2006, TU Delft's Executive Board (EB) decided that a system of Education Quality Assurance was to be developed at the institutional level as well. There were two reasons for this:

1. To promote the university's culture of quality and therefore education quality.
2. The introduction of a new accreditation system based on Institutional Audits.
If the university acquires the classification 'trusted institution', then the programme accreditations can be smaller in scale and more oriented on programme content. For an Institutional Audit, a system of quality assurance at the institutional level is required.

During the development of the TU Delft Quality Assurance Plan, existing systems at the faculties, best practices and the requirements of the new accreditation system (insofar as these were available) were all taken into account. The administrative burden on the university and on the individual faculties was limited as much as possible to the essentials required to run an operational Quality Assurance System at the central level.

The basis for the TU Delft Education Quality Assurance Plan is a description of the criteria that must be met for an effective system of quality assurance. This system is made up of a cyclical process in which the following successive aspects are involved:

1. The definition of quality (standards and indicators).
2. The assessment of quality.
3. The analysis of whether the quality assessed meets the standards and, if not, the possible causes.
4. The improvement of quality.
5. The organisation of quality assurance (who is responsible for what and when).



The essential areas of focus for the TU Delft system of Education Quality Assurance were defined at both the institutional level and the faculty/programme level on the basis of this initial draft.

Institutional Level

A. Education policy processes

This concerns safeguarding the interaction between education policy at the central and the faculty level. Areas of attention are the degree to which university policy is implemented within the degree programmes, as well as the degree in which the daily practice of the faculties (including best practices) is taken into account in the new TU Delft policy.

Education policy will be safeguarded with the help of various existing reports and processes (e.g. Long Term Plans, bilateral talks held between the EB and the faculties, plans of action following inspections), as well as new instruments (Education Quality Assurance annual reports and the ad hoc and thematic audits).

B. Secondary Processes

Education quality is not only influenced by the content of the programmes, but also by the quality of logistical processes. These are partially carried out by the faculties and partially carried out at the central level. The faculty-organised processes are described in the faculty system of quality assurance. The TU Delft Education Quality Assurance Plan team has made an inventory of the central, secondary processes that have an influence on education quality. This system distinguishes between the student perspective and the faculty perspective. Furthermore, the proposed TU Delft Education Quality Assurance Plan includes a system of quality assurance for these central secondary processes. The development of this system is the task of the University Corporate Office.

Faculty Level

At the faculty and programme level, the essential criteria for Education Quality Assurance are defined. For example, the TU Delft Education Quality Assurance Plan describes that a Quality Handbook (in which the quality assurance cycle is described) and an annual Quality Assurance Activities Plan are

required, that various actors must be involved in quality assurance and that education quality must be included in the R&D cycle.

It also defines for which aspects a quality definition is in any case required and which aspects must be included in the assessments. The assessments are carried out using the Education Quality Assurance annual reports and the Internal Programme Audits.

2. Brief description of the new elements

Education Quality Assurance Annual Report

TU Delft's degree programmes provide a report each year which describe a number of core elements of education quality.

This includes information on intake, throughflow (yields, drop-out and delay rates) and more qualitative information on the basis of subject evaluations, for example.

The annual reports will furnish similar information using a simple format. The annual reports will ensure that only limited new information need be gathered for an accreditation, instead making the information from the past years more easily accessible. The annual report is also intended to help the various parties to learn from each other and to give the EB the confidence that the programme organisation is 'in control'.

Quality Handbook

In the report 'TU Delft Education Quality Assurance Plan', the format of a Faculty Quality Handbook is described. The faculties are to describe how they will implement the quality cycle, they are to elaborate on how the quality of a number of aspects will be monitored (essential requirements have been formulated) and they are to describe which assessment instruments are used.

Internal Programme Audit

This audit is oriented in the first place on the degree programmes' Education Quality Assurance System. The individual degree programmes themselves decide whether other aspects will also be included in the audit. The audit is carried out by a commission, made up of TU Delft staff and external experts. The Internal Programme Audit takes place once every six years between two accreditations.

Internal Thematic Audit

This audit is to determine to what level a certain theme of central education policy (e.g. ICTO policy, Focus on Education) is implemented by the faculties. These audits do not have a set frequency. The Executive Board takes the initiative for these audits.

Internal Central Audit

An Internal Central Audit is proposed at the institutional level. This audit will involve education policy processes and secondary processes that have an influence on education quality. The output of the Internal Central Audit is important input for an Institutional Audit and for the classification 'trusted institution'. The Internal Central Audit is carried out once every six years.

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Introduction

TU Delft's ambition for 2010 is to position itself internationally as a leading institution of higher education, which is an attractive place of study for students and which contributes to the needs of graduates in the technical sciences¹. The international competitiveness of universities will increasingly be determined by the quality of the programmes, international reputation and social relevance. This requires professional educational organisation and continual awareness of the importance of quality.

As a member of the 3TU federation, within the context of the Science and Technology Sector Plan (Sectorplan Wetenschap en Techniek)² of the 3TU Graduate School, TU Delft has committed itself to "promoting the initiatives of the three TUs to improve the international quality of education and research." Within this framework, it is important that TU Delft can provide transparency to the other members of the federation regarding the international quality of all its initial education.

At the national and European level, institutional accreditation of education is likely to gain sway. In the present proposals for an accreditation system after 2010, it will be possible to request an Institutional Audit on the basis of which a 'trusted institution' classification can be acquired. Institutions with this classification will be able to obtain education accreditation solely on the basis of the contents of their degree programmes, as institutional matters such as personnel policy, quality assurance, etc. are included in the Institutional Audit. Process (institutional level) and content (programme level) thus become separate elements. The new system is to give an impulse to the internal quality culture of the institutions, places the emphasis of inspections on the quality of the degree programmes and aims to create a better balance between accountability and improvement³.

1_ TU Delft Strategic Plan 2007-2010

2_ Powerful Innovation! (Slagkracht in innovatie!): Science and Technology Sector Plan, February 2004.

3_ Memo to the House of Representatives from the Minister of Education, Culture and Science dated 11/02/08 (HO&S/prog/07/4788).



Moreover, the Minister of Education, Culture and Science has established the Higher Education Quality and Funding Commission (Commissie Kwaliteit en Bekostiging Hoger Onderwijs). This commission was required to come with recommendations on the best way to structure and implement the process of coupling quality indicators and funding, before 1 September 2008⁴.

The ambitions and developments described above require more than just a properly functioning Quality Assurance System at the faculty level; they require such a system at the institutional level too. A TU Delft-wide basic concept for a Quality Assurance System already exists. This basic concept is used by the faculties as a stepping stone towards a Faculty Quality Assurance System. This means that each of the individual TU Delft faculties already has an operational Quality Assurance System, however the degree of implementation and the intensity of the system differs per faculty. At the institutional level there is as yet no operational system of quality assurance. The importance of harmonisation, transparency and comparability is evident. Therefore, the administrative calendar of the Executive Board (EB)⁵ stipulates that a plan for a TU Delft-wide Quality Assurance System, with adaptations per faculty, will be prepared, approved and implemented TU Delft-wide.

This document describes the requirements for a system of Education Quality Assurance at both the institutional and faculty level in three parts. Part I is of a general nature and describes TU Delft's vision of quality assurance, in other words, which definitions, conditions and phases are distinguished in the system. Part II describes which quality assurance activities there are throughout the university to guarantee that the provision of education-related services to the faculties is sufficient to ensure that the degree programme can function at an optimal level. It also describes which procedures and instruments have been agreed on at the institutional level, on the one hand to monitor the faculties, and on the other to assist with the realisation of an efficient Quality Assurance System. Part III discusses the faculties. Here it is described what a faculty must do to meet the requirements of a properly functioning Education Quality Assurance System.

4_ See <http://www.minocw.nl/bekostigingho/972/Commissie-Kwaliteit-en-bekostiging-Hoger-onderwijs.html>

5_ Administrative Calendar 2006/Administrative Calendar 2007.

Part I

General

1. TU Delft Quality Assurance Plan Project Team

The Executive Board appointed a TU Delft Quality Assurance Plan project team as of 1 May 2006, with the assignment of preparing an Education Quality Assurance Plan including:

- the development of a TU Delft-wide Education Quality Assurance System;
- a plan for the implementation of this Quality Assurance System⁶.

The project team includes experts in the fields of education and quality assurance at the institutional and faculty level. The project team went through some membership changes during the course of the project. The members of the project team and the changes to the team are described in Appendix 8.

In mid 2007 the project team formulated the following ambitions for the TU Delft Quality Assurance Plan:

- contribute to and improve TU Delft's quality of education;
- achieve harmonisation in the quality assessment cycles;
- integrate the new education policy in the quality assessment cycle (from an ad hoc and individual to an integrated approach);
- produce a quality system that effectively demonstrates quality at the institutional level and does justice to the degree programmes' and faculties' individual culture.

In September 2008, a draft of the TU Delft Education Quality Assurance Plan was presented to the Executive Board. The Executive Board approved the Education Quality Assurance Plan as pilot for the NVAO's (Accreditation Organisation of the Netherlands and Flanders) pilot accreditation system phase 2 in which TU Delft participated. Following the pilot accreditation system phase 2, the Education Quality Assurance Plan was evaluated and revised.

⁶ An implementation initiative was sent to the EB in an earlier letter (25/09/2008). This Education Quality Assurance System also contains a large number of methods for making the proposed instruments operational.



2. Institutional Quality Assurance

The project team was assigned to develop a transparent system for institutional Quality Assurance with the following aims:

- a. continuous improvement of education quality;
- b. continuous promotion of quality awareness within the university as a whole and within the faculties;
- c. compliance with the externally defined accreditation requirements⁷;
- d. demonstrate education quality in the international arena;
- e. ensure rapid anticipation of and participation in institutional accreditation if this becomes an option.

The implementation and execution of a system of quality assurance is not a goal in itself, but a means to achieve the above aims. In the ideal situation, the Quality Assurance System, together with the development of effective education policy, will lead to qualitatively outstanding education.

A short description is given below of what the terms quality and Quality Assurance System are understood to mean, both at the institutional and faculty levels.

Quality and the university

- TU Delft has a national and international reputation in education.
- TU Delft offers outstanding education: the structure and content of its degree programmes are comparable to the programmes of leading universities abroad.
- TU Delft has an institution-wide Quality Assurance System which credibly guarantees the quality of the degree programmes it offers.

Quality Assurance System for the university

A system made up of procedures and instruments with which the university monitors the quality of

⁷ See the NVAO website for the applicable requirements (www.nvaio.net).

the education offered by the faculties and with which it can make any necessary adjustments. An extension of this is that the Quality Assurance System at the institutional level will itself periodically be evaluated.

Quality and the degree programme

- The structure and content of the degree programme is comparable to similar programmes of leading universities abroad.
- The programme has a Quality Assurance System that at least meets the criteria of the Quality Assurance System at the institutional level.

Quality Assurance System for the degree programme

A system with which the degree programme is periodically evaluated, partly on the basis of verifiable objectives, such that the results of this evaluation can form the basis for demonstrable measures for improvement that contribute to achieving the targets.

3. Starting points

The following starting points have been applied in the creation of a system of institutional quality assurance for TU Delft:

- The TU Delft-wide Quality Assurance System is primarily a means for improving TU Delft's education.
- The TU Delft-wide Quality Assurance System must be able to be applied to the individual faculties.
- The TU Delft-wide Quality Assurance System must provide the EB with a guarantee of, or confidence in, the quality of TU Delft's education.
- The aim is not to design a completely new Quality Assurance System; instead the system must be based on existing procedures and instruments for internal quality assurance, i.e.:
 - TU Delft-wide basic concept for Integrated Quality Assurance by the Education Quality Assurance (EQA) project group (Spring 2005).
 - Quality assurance instrument database of the EQA project group (2005-2006).
 - TU Delft procedures for assessing self-studies and plan of action following an inspection report (2005).
 - Basic Teaching Qualification⁸.
 - Recommendations of the Quality & Accreditation Advisory Council (Adviesraad Kwaliteit & Accreditatie) on the conditions for an internal Quality Assurance System⁹.
 - EQA project group's recommendations with regard to possible quality standards and indicators.

8_ The Basic Teaching Qualification (BTQ) programme aims to provide new university teaching staff with the opportunity to develop competencies necessary to carrying out their teaching duties effectively. On completing the programme, participants should meet the requirements of the basic qualification.

9_ The Quality & Accreditation Advisory Council (AKA) of the EB sets the following simple and lucid requirements in its recommendations on the conditions for a Quality Assurance System (entitled 'Keep it Simple'):

- a. The responsibilities of all parties to the system are clear and they are recorded and safeguarded at all levels.
- b. All parties within the university have their own role to play.
- c. The Quality Assurance System must be transparent and the results must be made public.
- d. The system is based on visible monitoring and verifiable improvement.

- The TU Delft-wide Quality Assurance System is in line with the Quality Assurance Systems of the two other universities of technology and Leiden University at the institutional level.
- The TU Delft-wide Quality Assurance System is based on the PDCA, or Deming circle¹⁰.
- The TU Delft-wide Quality Assurance System will itself be regularly evaluated and will be adjusted if required.

4. Basic elements of the TU Delft Education Quality Assurance System

In May 2005, the Quality Assurance staff consultation prepared a basic concept for a system of quality assurance on the basis of information provided by the faculties. This basic concept, that was endorsed by the EB, the Operational Committee and the Directors of Studies, describes the requirements that an effective system for quality assurance must meet.

Because the basic concept was widely accepted, and because it harmonised with the starting points as described above, the TU Delft Quality Assurance System project team used this concept as the basis for the elaboration of the university-wide system for Education Quality Assurance. In the following paragraph, the main points of the basic concept are described as formulated by the Quality Assurance staff consultation. For more information on the five steps in the cycle, the basic concept for a system of quality assurance can be consulted¹¹.

An effective Quality Assurance System is a cycle in which the following steps are completed:

1. *Quality definition:* A definition of quality by means of defining concrete goals and quality standards per quality aspect. This entails the specification of the vision of education quality. Because various stakeholders and actors can be distinguished within the education system, who all perceive education quality differently dependent on their frame of reference, various points of view and perspectives of quality can be distinguished.

Example

Degree programme X opts for a quality vision in which the students' and labour market perspective have priority. The following quality standards could be considered in the development of the 'curriculum' quality aspect:

- the curriculum is transparent;
- the study load is evenly spread over the semesters;
- recent practical examples and issues are presented in the curriculum.

Curriculum quality standards from the labour market perspective could be:

- the subjects are relevant for the anticipated profession;
- the subjects are up to date;
- the professional field approves the curriculum.

A standard aimed at academic development is not a matter of course for these two perspectives because this standard is part of the programme content and formal and legal perspective.

10_ A PDCA circle or Deming circle is a set of four successive, mutually connected activities (Plan, Do, Check, Act), with which the quality of an object can be systematically improved.

11_ TU Delft Integrated Quality Assurance System Basic Concept – degree programmes (2004).

2. *Quality assessment:* Acquiring the requisite information to determine which level of quality is actually provided.

Examples of information resources are: prospective and current students, drop-outs, alumni, staff, labour market.
Examples of instruments and research methods are: surveys, interviews, observations, document analysis.

3. *Analysis:* Analysing the data on the basis of the quality standards.

Example

A degree programme establishes that first-year yield has not achieved the desired percentage. The cause of the low yield could be insufficient supervision or insufficient pre-university qualifications, the didactic methods used in the first year, lack of student motivation, etc. Each possible cause requires a different action to improve first-year yield. In this phase, it is very important that the real cause of the poor yield is found, so that an appropriate solution can be sought.

4. *Quality Improvement:* Determining or initiating the actions required to improve the education and compensating for the gap between ambition and reality.

To ensure the cyclical character of quality assurance, it must be ascertained whether the Quality Improvement projects have actually lead to improvement of quality. The more often the quality cycle is completed, the better will be the control of the factors that play a role in the success of a degree programme

The above four steps are part of the quality circle. The fifth step describes the organisation of the quality circle.

5. *Quality Organisation:* How are the various steps in the Quality Assurance System organised? How are the results communicated to the actors involved?

The fifth step is required to ensure that the cycle is completed successfully. The activities that are carried out within the aforementioned four steps require an organisational structure. The fifth step in an effective Quality Assurance System is therefore the organisation and embedding of the system. A record is kept of who is responsible for which activity at which time. The activities are described in a 'Quality Assurance Protocol' which includes an overview of the step-by-step plan and the associated actions. An official must be appointed who ensures that the planning and organisation agreements are kept, and another must be appointed who has final responsibility. It is important that clear procedures are formulated. For example, what is to be done with the results of a student course evaluation? Should teaching staff act on the results as they best see fit? Or is this the responsibility of the programme management? Are the students provided with information about the survey results and the planned actions? How is this information provided? What is done with the results of the evaluation with regard to

personnel policy and the R&D interviews? The procedures for using a certain instrument can be fixed in so-called 'User Guides'.

The schematic depiction of the cycle looks like this:

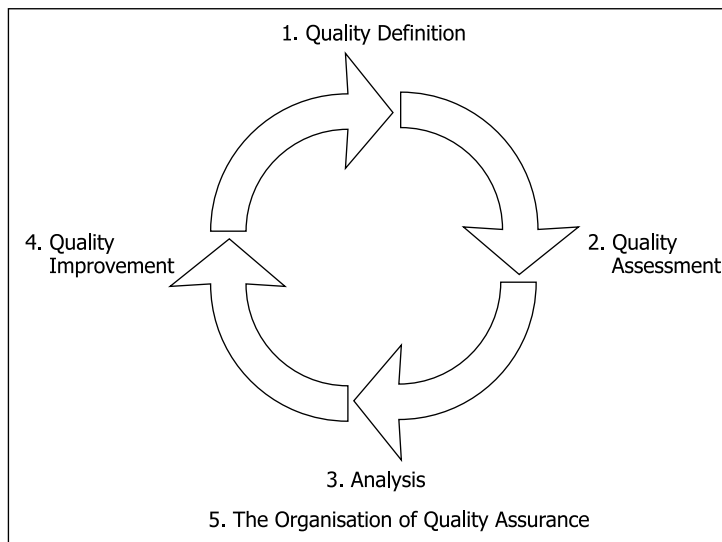


Figure 1: Schematic overview of Quality Assurance System

5. Relationship between Education Quality Assurance and education policy

Education policy describes objectives in relation to various education related aspects and subjects and then describes what the university and the individual faculties do to achieve these objectives. These are descriptions of choices, working methods, procedures, etc.

Education Quality Assurance evaluates whether the objectives of the education policy are being achieved. To this end, various instruments and assessments are used to consult various information resources. Thus education policy and quality assurance have in common both their objectives and the process of Quality Improvement. However, the formulation of an improvement measure is part of quality assurance, whereas the implementation of this improvement measure falls under the realm of education policy.

The quality assurance staff consultation has included an overview of the quality aspects of TU Delft degree programmes in its basic concept for a system of quality assurance. These quality aspects now form the quality assurance areas of attention. This overview can be found in Appendix 1.

Part II

Institutional level

At the university level, two processes can be distinguished in relation to education: the processes of education policy, and the secondary, education-facilitating processes of the Shared Service Centres (SSCs).

Quality assurance for the education policy processes is aimed at safeguarding the interaction between the education policy of the programmes or faculties and the central institutional policy. This interaction is top-down, instead of bottom-up. The top-down process entails institutional policy reorientation as a result of new requirements set down by the government, or social developments that demand a new education policy or adjustments to the existing policy, such as changes to the pre-university education curriculum. The bottom-up process entails selection and combination of the best practices, points for improvement at the programme level, and dissemination of these improvements throughout the various programmes.

Quality assurance with regard to secondary education-facilitating processes is aimed at optimal and efficient provision of services to the programmes, both from the student perspective and from the faculty perspective. The quality assurance described here is limited to work processes that are directly related to educational processes and their organisation.

The system of quality assurance is organised using the five steps in Figure 1 for both types of processes. In the following paragraphs these steps are explained and elaborated for both processes separately. As much as possible, these processes use the procedures and instruments presently used by the university, and they are aimed at establishing the responsibilities for Education Quality and Education Quality Assurance and ensuring the actual implementation of quality assurance at the institutional level.



1. Education policy processes

1.1 Quality definition

A quality definition must be drawn up for the institutional level (see Part I, Paragraph 2). At this level, the definition is described by the formulated quantitative and qualitative objectives with regard to the following aspects:

- The achievement levels of the degree programmes at the national and international level (benchmarking).
- Interaction between education and research.
- Intake/transfer/output rates per programme.
- Transparent and explicit system of Education Quality Assurance.
- Student satisfaction.
- Staff satisfaction.
- Implementation of education policy.
- HRM policy in relation to education policy.
- Minors policy.
- Internationalisation¹²: policy, numbers of international MSc students, numbers of exchange students (incoming and outgoing).

In addition to these objectives, additional objectives are formulated at this level on the basis of education policy.

Note

Starting points and preconditions that must be taken into account:

- Statutory accreditation frameworks.
- 3TU-wide harmonisation.
- Harmonisation with Leiden University.
- National developments in education policy.
- International developments and frameworks.

12_ Internationalization is cited explicitly here because it is a specific TU Delft theme.

1.2 **Quality assessment and analysis**

To be able to assess the quality of education, the following aspects are monitored at the institutional level:

- Presence and quality of Faculty Education Quality Assurance Systems (together with Internal Audits¹³ and accreditations).
- Faculty Education Quality Assurance annual reports¹⁴ (Faculties).
- Indicators and targets (intake/throughflow/output/yield) (Faculties/E&SA).
- Results of education innovation projects, EC Focus, etc. (E&SA and faculties).
- Minors annual report¹⁵ (Implementation of Minors monitoring group - Monitorgroep Invoering Minoren).
- Staff professionalisation information (in relation to education, for example BTQ and ETV) (HRM).

The information resources and instruments available to the university include:

- TU Delft Education Quality Assurance System (E&SA).
- Minors annual report (Implementation of Minors monitoring group).
- Policy plans (E&SA, IB and Faculties).
- Faculty Quality Assurance Plan¹⁶ (Faculties).
- Faculty examination policy¹⁷ (Faculties).
- Faculty Education Quality Assurance annual reports (Faculties).
- Faculty Long-range Plans (Faculties).
- Educational Change Plans (Faculties).
- Plans of action following inspection reports (three months after publication of the inspection report) (Faculties).
- Study Progress System (E&SA).
- TU Delft-wide evaluation system: EvaSys (E&SA).
- Audits (Internal Programme Audit, Internal Thematic Audit and Internal Central Audit, see Appendix 2).
- Logistics Quality Monitor (on behalf of TU Delft) (External party).
- National Student Survey (External party).
- WO Monitor (External party).
- National and international ranking data (External party).

Moreover, annual bilateral meetings are held between the faculties and the EB within the framework of the Planning & Control Cycle. In addition to research and knowledge valorisation, these meetings also discuss education quality.

13_ The internal audits are a new instrument for TU Delft; the audits are explained in Appendix 2.

14_ The Faculty Education Quality Assurance annual reports are a new instrument for TU Delft. The format of the annual reports is described in Appendix 4.

15_ The Minors Annual report is a new instrument for TU Delft; the Implementation of Minors monitoring group must in any case report to the EB on the quality of the minors in relation to the Minor Policy targets.

16_ The Faculty Quality Assurance System is a new instrument for TU Delft; the aspects that in any case must be included in a Faculty Quality Assurance System are explained in Appendix 5.

17_ The faculty assessment policy is a new instrument for TU Delft; the aspects that in any case should be treated in a faculty assessment policy are described in Appendix 6.

The following aspects are discussed in relation to education quality:

- Education Change Plans.
- Faculty targets and how these can be achieved.

1.3 Quality Improvement

Each year the university publishes an Education Quality Assurance annual report in which the current situation is described with regard to education quality and in which the proposed improvements are described. The education policies of the university and faculties build on the results of the quality assessment and analysis on the basis of the quality definition.

Education quality is stimulated and facilitated at the institutional level by:

- Education policy: policy memorandums such as Focus on Education, WO Sprint, ICTO policy, Implementation of Strategic Educational Resources (SOM), etc.
- Embedding in personnel policy.
- Embedding in the policies of other boards.
- Alumni policy.
- Didactic opportunities for professionalisation (for example BTQ and English language proficiency courses).
- Audits.
- Specific procedures such as those for implementing new degree programmes.

Note

Starting points and preconditions that must be taken into account:

- Statutory accreditation frameworks.
- 3TU-wide harmonisation.
- Harmonisation with Erasmus University Rotterdam and Leiden University.
- National developments in education policy.
- International developments and frameworks.

1.4 Quality Organisation

An organisational structure is required to achieve the aforementioned. The following paragraph describes this structure. The Dean is responsible for Faculty Quality Organisation. At the institutional level, the TU Delft Education Quality Assurance System falls under the responsibility of the EB: the Vice President Education (VPE). The portfolio holder delegates part of his/her responsibilities to the E&SA Director.

It goes without saying that more responsibilities can be distinguished and delegated at the institutional level with regard to education quality, for example in cases where education policy overlaps the domains of the other directors. These are:

- the Human Resources Director.
- the Facility Management and Real Estate Director.
- the Marketing & Communication Director.
- the ICT Director.
- the TU Delft Library Director.
- the Finance & Control Director.

The University Corporate Office Directors' Team is thus an important body with regard to the harmonisation of education quality.

Many educational support processes are centralised in the Board of E&SA. The Board of E&SA is also responsible for education policy. Part of the function of the E&SA faculty heads is that of university Education Policy Advisor.

TU Delft has an effective consultative structure with regard to education. The consultative bodies described below all have education quality on their agendas:

- Annual bilateral consultation between the faculties and the EB (part of the Planning & Control Cycle).
- Joint Meeting (legally embedded).
- Operational Committee.
- Education Directors Meeting.
- TU Delft E&SA consultation.
- Education Quality Assurance Group.
- Implementation of Minors monitoring group.
- Joint Education Assessment Committee.
- 3TU Graduate School.

The importance that TU Delft attaches to education ambitions, education quality and the curriculum is also expressed in the approved processes and procedures, the execution of which was the responsibility of the Board of E&SA:

1. TU Delft Degree programmes Register.
2. TU Delft New Degree programmes Protocol.
3. Joint Education Assessment Framework.
4. Self-study Assessment Procedure.
5. Education Inspection Follow-up Procedure.

1.5 Summary

Quality Definition	<p>Targets have been formulated at the institutional level with regard to the following aspects:</p> <ul style="list-style-type: none"> - The achievement levels of the degree programmes at the national and international level (benchmarking). - Interaction between education and research. - Intake/throughflow/output rates per programme. - Transparent and explicit system for Education Quality Assurance. - Student satisfaction. - Staff satisfaction. - Implementation of education policy. - HRM policy in relation to education policy. - Minors policy. - Internationalisation¹⁸: policy, numbers of international MSc students, numbers of exchange students (incoming and outgoing). <p>The university's targets are in line with the national and international frameworks.</p>
Quality Assessment and Analysis	<p>The following will be monitored at the institutional level:</p> <ul style="list-style-type: none"> - Presence and quality of Faculty Education Quality Assurance Systems (together with internal audits and accreditations). - Faculty Education Quality Assurance annual reports (Faculties). - Indicator and targets (intake/throughflow/output/yield) (Faculties/E&SA). - Results of education innovation projects, EC Focus, etc. (E&SA and faculties). - Minors annual report (Implementation of Minors monitoring group). - Staff professionalisation information (in relation to education, for example BTQ and ETV) (HR). <p>The university has access to various information resources and instruments for monitoring:</p> <ul style="list-style-type: none"> - TU Delft Education Quality Assurance System (E&SA). - Minors annual report (Implementation of Minors monitoring group). - Policy plans (E&SA, IB and faculties). - Faculty Quality Assurance Plan (Faculties). - Faculty examination policy (Faculties). - Faculty Education Quality Assurance annual reports (Faculties). - Faculty Long Term Plans (Faculties). - Educational Change Plans (Faculties). - Plans of action following inspection reports (three months after publication of the inspection report) (Faculties).

18_ Internationalization is cited explicitly because it is a specific TU Delft theme.

	<ul style="list-style-type: none"> - Study Progress System (E&SA). - TU Delft-wide evaluation system: EvaSys (E&SA). - Audits (Internal Programme Audit, Internal Thematic Audit and Internal Central Audit, see Appendix 2). - Logistics Quality Monitor (on behalf of TU Delft) (External party). - National Student Survey (External party). - WO Monitor (External party). - National and international ranking data (External party).
Quality Improvement	Each year the university publishes an Education Quality Assurance annual report in which the current situation is described with regard to education quality and in which the proposed improvements are described. The education policies of the university and faculties build on the results of the quality assessment and analysis on the basis of the quality definition.
Quality Organisation	<p>The Dean is responsible for Faculty Quality Organisation. At the institutional level, the TU Delft Education Quality Assurance System falls under the responsibility of the EB: the Vice President Education (VPE). The portfolio holder delegates part of his/her responsibilities to the E&SA Director.</p> <p>The University Corporate Office Directors' Team is also an important body with regard to the harmonisation of education quality.</p> <p>Harmonisation in institution-wide policy implementation is achieved through the fact that the E&AS faculty heads are also TU Delft Education Policy Advisors.</p> <p>TU Delft has an effective consultative structure in the field of education. Moreover, The importance that TU Delft attaches to education quality is also expressed in a number of approved processes and procedures in relation to education and education quality.</p>



2 Secondary Processes

2.1 Quality definition

Education quality is also influenced by the quality of logistic processes. Some of these processes are organised by the faculties individually and a part is organised centrally. The Faculty Education Quality Assurance System covers the processes organised by the faculties. The centrally organised secondary processes do have an influence on the faculties' education quality, but they fall outside of the faculties' immediate sphere of influence. These processes must be so organised that they make the best possible contribution to education quality and the organisation of education. These secondary processes are managed by the University Corporate Office boards, these being Education & Student Affairs, ICT, Facility Management, Marketing & Communication, TU Delft Library, Personnel & Organisation and Finance & Control. The processes are operationalised from both the student perspective (as education customers) and the faculty perspective (as customers of the processes). Both operationalisation approaches are described for all of the boards in Appendix 3. They are listed in order of the influence on education quality.

Example

E&SA Board (student perspective):

Student progress data are registered correctly and on time; a student can access the most recent status at any time.

M&C Board (faculty perspective):

Information for present and future graduates supplies them with a clear and realistic picture of what they can expect from the degree programmes.

2.2 *Quality Assessment and Analysis*

To gain insight into the secondary processes that influence education quality at the institutional level, the planning and results of the University Corporate Office (with regard to education) need to be kept in sight; the University Corporate Office is responsible for the secondary processes, after all. The following information resources are available to this end:

- Strategic Plan.
- University Corporate Office Long Term Plan.
- TU Delft Education Quality Assurance System.

The following instruments can be used:

- SSC customer surveys.
- Logistics Quality Monitor.
- Teaching staff satisfaction with facilities and support services¹⁹.

Furthermore, the deployment of the Service Departments in relation to education is to be discussed during the annual bilateral meetings between the faculties and the EB.

Example

With the use of an extensive Logistical Quality Monitor, not only are the students informed of the quality of the services, but the faculty contact points too.

2.3 *Quality Improvement*

The results are submitted to the domain directors. Improvement actions are communicated, among others via the University Corporate Office Long Term Plan, and approved by the EB.

2.4 *Quality Organisation*

The SSCs fall under the responsibility of the EB, Vice President Education. The portfolio holder will delegate part of his/her responsibilities to the boards that govern the SSCs.

The quality of the secondary processes is monitored by the following consultative bodies:

- Annual bilateral consultation between the faculties and the EB (part of the Planning & Control Cycle).
- University Corporate Office Directors Team.
- Education Directors Meeting.
- TU Delft E&SA Meeting.

19_ This is a new instrument within TU Delft (could, for example, be linked to the three-yearly Risk Inventory and Evaluation of Welfare survey (RI&E Welfare)).

2.5 Summary

Quality Definition	<p>Secondary processes that are organised centrally and on which the faculty has no immediate influence are organised in such a way that they make an optimal contribution to education quality and the organisation of education.</p> <p>Operationalisation of these processes must take place both from the student and the faculty perspective.</p>
Quality Assessment and Analysis	<p>Om op instellingsniveau inzicht te verkrijgen in de kwaliteit van de To gain insight into the secondary processes that influence education quality at the institutional level, the planning and results of the University Corporate Office (with regard to education) need to be kept in sight. The secondary processes are the responsibility of the University Corporate Office, after all. The following instruments can be used:</p> <ul style="list-style-type: none"> - SSC customer surveys. - Logistics Quality Monitor. - Staff survey.
Quality Improvement	<p>The results are submitted to the domain directors. Improvement actions are communicated via the University Corporate Office Long Term Plan, among others.</p>
Quality Organisation	<p>The SSCs fall under the responsibility of the EB, Vice President Education. The portfolio holder will delegate part of his/her responsibilities to the boards that govern the SSCs.</p>

Part III

The Faculty / Degree programmes

TU Delft's degree programmes have an effective system of quality assurance. These systems received a positive assessment in the first phase of the programme accreditation process. TU Delft's Education Quality Assurance System is developed on the basis of, and integrated in, these existing procedures and instruments for Education Quality Assurance within TU Delft, and adds a number of new elements. Furthermore, a number of minimum conditions have been set for the Faculty Quality Assurance System. This provides for more univocality and comparability of data on education quality at the central level, without impinging too much on the individual faculties' culture.

It is explicitly not the aim to provide an extensive description of a Faculty Quality Assurance System at the level of the faculty and degree programmes. Instead the minimum conditions are described that the system must meet to be able to supply the EB with the essential information. The faculty can decide for itself how to meet these conditions in accordance with the TU Delft Education Quality Assurance Plan. The diagram 'The Degree programme as System' (see Appendix 1) can be used as starting point. The faculty has the responsibility to meet the NVAO criteria per degree programme.



Minimum achievement at the faculty level

Quality Definition	<p>The faculty has formulated targets for at least the following aspects:</p> <ul style="list-style-type: none"> - Degree programme framework: profile and final achievement levels. - Degree programme (Bachelor's, Master's, minor): structure, didactic concept, cohesion, 'studiability' and supervision. - Examination policy, including graduation work. - Relationship between education and research. - Quality of the teaching staff. - Intake/throughflow/output/yield. - Student satisfaction. - Logistic Quality. - Internationalisation: policy, numbers of international MSc students, numbers of exchange students (incoming and outgoing). - Implementation of TU Delft-wide education policy. <p>The faculty targets conform with the targets formulated at the institutional level (e.g. the Strategic Plan, Focus on Education, etc.). These do not necessarily match the NVAO criteria on a one-to-one basis.</p>
Quality Assessment and Analysis	<p>The faculty records how and how often the above aspects are evaluated and whether the targets are achieved. The minimum requirements are:</p> <ul style="list-style-type: none"> - All subjects in a degree programme are evaluated at least once every four years, whereby the TU Delft set of standard factors is used (study load, course material, relevance of preliminary knowledge, relevance of subject for the degree programme, organisation/logistics, examination)²⁰.

20_ It would make sense to add English Language Proficiency for teaching staff of the Master's programmes to this set.

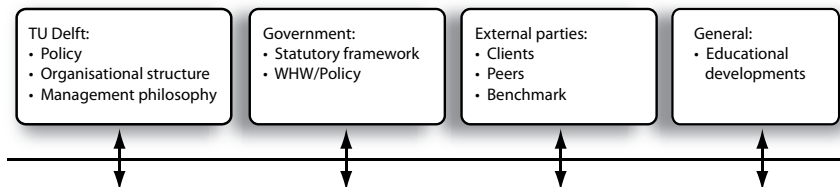
	<ul style="list-style-type: none"> - An evaluation at the programme level takes place once every four years (Bachelor's/Master's/minor). - A consultation with field professionals takes place once every three years to discuss the profile and achievement levels. - The examination policy is evaluated regularly. - The results of the evaluations are made available to students and teaching staff (these are involved in the evaluation); the follow-up on the results is an important area of attention (e.g. via publication on a website). - The Internal Programme Audit takes place once every six years, on the basis of the external accreditation cycle (planned in between two programme accreditations). - Participation in the Logistics Quality Monitor. - Participation in the WO Monitor. - Education Quality Assurance annual reports are drawn up and submitted to the EB per degree programme (see Appendix 4 for the annual report requirements).
Quality Analysis and Improvement	<p>The faculty acts on the basis of the quality assessments in the annual reports, as well as the education change plans and plans of action (and thus also the Long Term Plan).</p> <p>The faculty includes education quality in the R&D cycle.</p>
Quality Organisation	<ul style="list-style-type: none"> - The VPE is responsible for the TU Delft curriculum; the Dean is responsible for the curriculum of his/her faculty. - The Dean shall delegate some of his/her responsibilities to the Director of Education. - The Boards of Studies advise the Deans on education quality. - The faculty has a contact point for education quality (for both internal and external stakeholders). - The faculty has a Quality Handbook (see Appendix 5 for the format). - The faculty prepares a Quality Assurance Activities Plan every year in which is described which evaluation activities will take place in that year and who bears responsibility for this. - The faculty structurally involves students, teaching staff, alumni and the professional field in its Education Quality Assurance System. - The faculty includes education quality in the R&D cycle.

Appendices

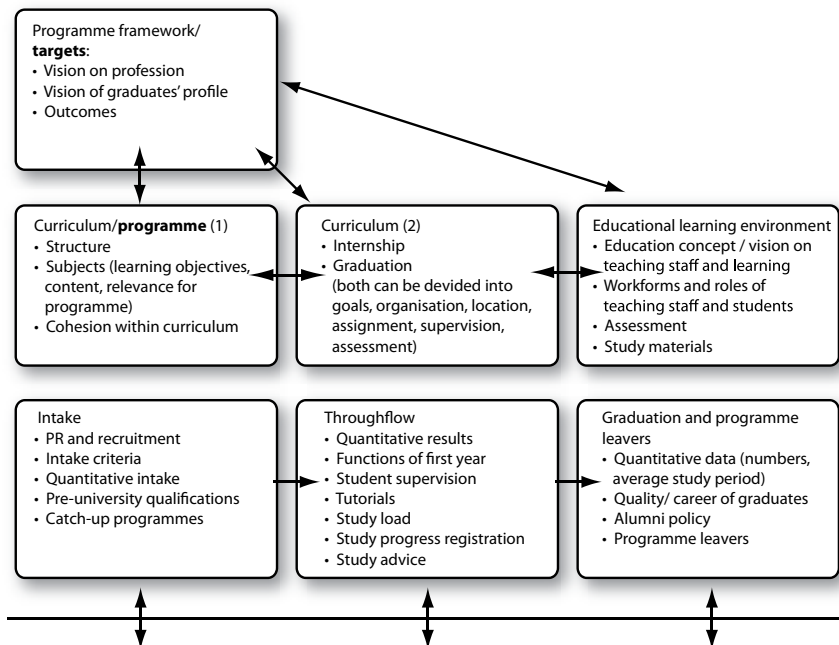
1.

The degree programme as system

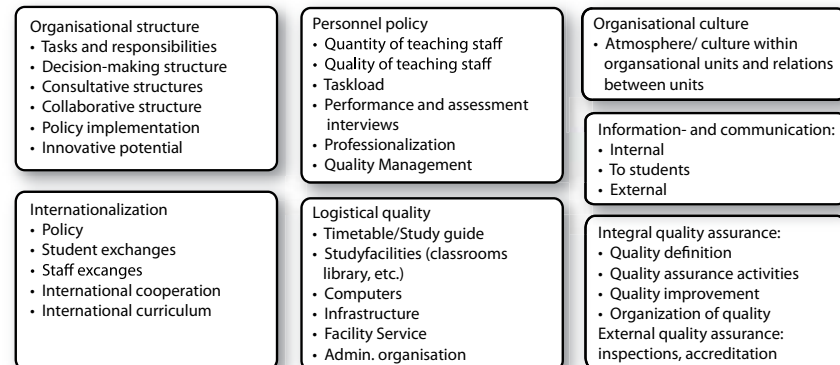
External influences



Educational subsystem



Organisational subsystem



2.

Audits

Introduction

The new accreditation system, as proposed by the Ministry of Education, Culture and Science, is a mixed system of programme accreditation and institution accreditation. The six yearly programme accreditation always takes place at the level of the degree programme. At the institutional level, the NVAO can also carry out a so-called Institutional Audit. If, during such an Institutional Audit, the NVAO determines that internal quality assurance, personnel policy and education facilities etc. are in order, such that the quality of the programmes is continually improved and that the institution has a 'sustained culture of quality', then the university is assessed according to a different accreditation method, leading to the classification 'trusted institution'. Using this method, institutional aspects are no longer assessed at the programme level, and instead the inspectors, a panel of independent experts, concentrate on the programme content: the Limited Programme Assessment. The panel can restrict itself to three questions: (i) what is the aim of the programme, (ii) how is this realised, and (iii) what are the results? The NVAO then evaluates this programme report and decides whether or not to accredit the programme on the basis of its findings.

So an Institutional Audit assesses the system of quality assurance that is required of all degree programmes and the quality assurance of the institutional services (Shared Service Centres). A Limited Programme Assessment assesses the quality of the programme content. One could say that the Institutional Audit is focused on processes, while the Limited Programme Assessment focuses on content.

21_ The Minister of Education, Culture and Science sent the proposal for the starting points of the new accreditation system to the House of representatives in February 2008. This was discussed there on 27 March 2008. The NVAO is developing the new system in consultation with the involved parties. Pilots took place at a number of education institutions at the end of 2008 and in early 2009. The following documents were used: Handreiking voor instellingen bij de instellingsaudit en de beperkte opleidingsbeoordeling (pilotfase) and Kaders ten behoeve van de ontwikkeling van een nieuw accreditatiestelsel in Nederland en Vlaanderen (pilotfase), NVAO, June-July 2008 (see www.nvao.net/nieuw-accreditatiestelsel).

This appendix describes a system of internal audits with which TU Delft can demonstrate, during an Institutional Audit, that its quality processes are adequately safeguarded at all organisational levels. These audits are used as instrument for attaining the classification 'trusted institution' in the NVAO accreditation system during an Institutional Audit. It is emphasised that the system of audits is also intended to stimulate a TU Delft-wide culture of quality with regard to education.

Three types of audits are distinguished: the Internal Programme Audit, the Thematic Audit and the Internal Central Audit²². These are explained in detail below.

The Internal Programme Audit

The Internal Programme Audit is limited in scale and aimed at assessing the quality assurance process. If a degree programme so wishes it can also assess additional aspects, whereby preference is given to programme targets, achievement levels, content and results.

The first point (quality assurance process) is not only important for the external Institutional Audit, but also for the degree programme itself. It is in the university's interests that, at the institutional level, confidence is built that the Quality Assurance System of the degree programmes' functions effectively and that the quality of the programmes is up to the mark. It is in the degree programmes' interests that they receive feedback on the functioning of the Quality Assurance System in the programme.

The second point, concerning the additional aspects on which a degree programme voluntarily chooses to be assessed, is not only important for the programme itself, but also for the Limited Programme Assessment²³. The Limited Programme Assessment, after all, is mainly interested in the programme targets, achievement levels, content and results. This entails that an Internal Programme Audit offers an excellent opportunity to obtain feedback on these aspects, which are extremely important for the programme.

For both assessment aspects, it is the intention to obtain feedback, to reveal strengths and weaknesses and to receive suggestions for possible improvements. In this sense, the Internal Programme Audit is also an instrument in the Faculty Education Quality Assurance System.

In summary, the aim of the Internal Programme Audit is:

1. To gain insight into the functioning of the Quality Assurance System of the degree programmes²⁴ at both the central and the programme level (see Part III under Quality Assessment and Analysis), not only for feedback, but also to prepare for the external Institutional Audits.
2. To gain insight into degree programme targets and content at the programme level, and the realisation and results of these, not only for feedback, but also to prepare for the Limited Programme Assessment (if part of the audit).

22_ This is therefore not an 'Institutional Audit' that is presupposed to part of the new accreditation system, but an audit initiated by TU Delft itself. The term 'Institutional Audit' will only be used to refer to a presupposed element of the new accreditation system.

23_ The term 'Limited Programme Assessment' refers to a presupposed element of the new accreditation system.

24_ This also involves related aspects such as the policy on teaching staff professionalization, keeping facilities up to date and the periodic evaluation of achievement levels.

The primary aim of the Internal Programme Audit is to build confidence in the programmes' Quality Assurance Systems. This confidence should be founded on documented, positive results of the Internal Programme Audits. Using these results, TU Delft can acquire the desired 'trusted institution' accreditation for the external Institutional Audits.

Frequency

Every six years, halfway through the period between two Limited Programme Assessments (NVAO accreditation phases, assuming that these take place every six years). This entails that an inspection will take place every three years: either for the NVAO accreditation or for the Internal Programme Audit (see also Figure 2).

Organisation

The involved institution organises this audit itself. The individual degree programmes prepare an audit programme and appoint an audit commission themselves.

Preconditions:

- The audit programme and audit commission are evaluated at the central level.
- The audit process is monitored at the central level.
- The audit cycle is described in the Faculty Quality Assurance Plan.

Audit guidelines

- The audit follows a centrally developed format which forms part of the TU Delft Education Quality Assurance System²⁵.
- The audit includes suggestions for possible improvement.
- The audit incorporates the recommendations of the previous official inspection.

Actors

- Central: Quality and accreditation policy advisors.
Task: process monitoring, advising the EB on audit programmes and audit commissions.
- Central: EB (VPE)
Task: formal approval of audit programme and commission
- Faculty: Dean, Director of Education, Director of Studies, head of E&SA.
Task: organisation, execution, evaluation, follow-up.

Audit commission members

The faculty submits a proposal for the members of the audit commission to the EB. The commission members must represent various disciplines and the selection of these members must take the specific requests of the degree programme into account. An audit commission could be composed as follows:

- 1 educationalist.
- 1 Director of Studies.
- 1 pre-university (VWO) teacher with a university degree²⁶.
- 1 student from another faculty.

25_ The centrally developed format will be one of the implementation phases of the TU Delft Education Quality Assurance Plan. The frameworks that follow from the new accreditation system will also be used in this format.

26_ This particularly applies to the bachelor programmes, as it mainly concerns the transition from pre-university to university.

Should the degree programme also wish to have its programme content assessed, then external experts should probably be sought, such as a Director of Studies of a similar programme, a peer in the IDEA League, or a field professional. In most cases, internal TU Delft peers can fill the positions in audit commissions for the assessment of a degree programme's Quality Assurance System²⁷. This will also have a positive spin-off: the colleagues can learn from each other's procedures.

Required information

The degree programme makes the following information available to the audit commission:

- Quick-scan report based on the centrally developed format (see footnote 25) and the ensuing SWOT analysis.
- The Faculty Quality Handbook.
- Degree programme's interim reports or annual reports.
- Board of Studies' and Board of Examiners' annual reports (possibly as part of the degree programmes' annual reports).
- Education policy plans²⁸.
- If programme content forms part of the audit, then the degree programme's achievement levels and the learning objectives of all study components.
- Other documentation at the audit commission's request.

Product

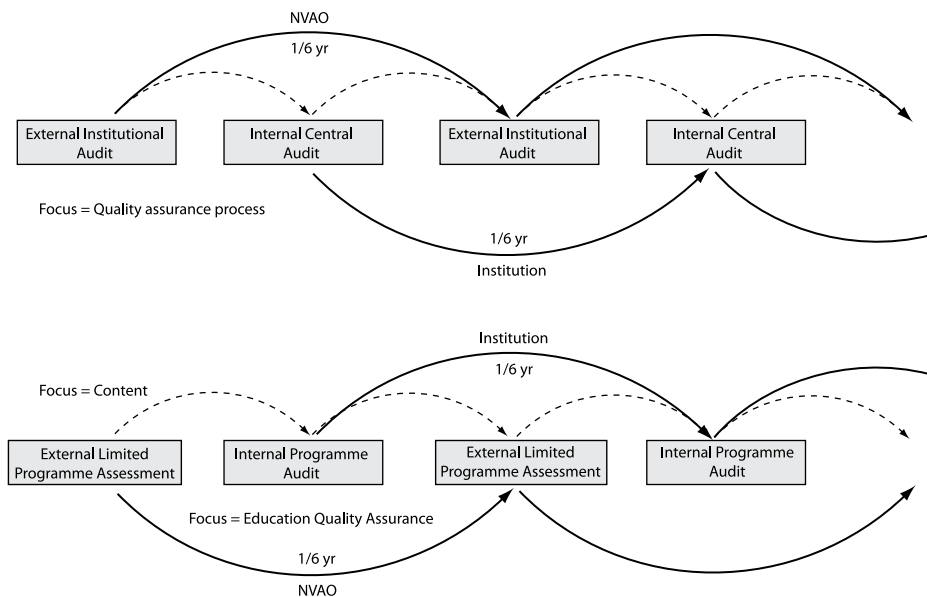
A documented report and analysis based on the central format and recommendations. Size: approx. 10 pages.

Follow-up

The results of the Internal Programme Audit and the follow-up to the audit are discussed during the management meetings held between the EB and the Deans and Directors of Education. The Board of E&SA monitors the follow-up.

27_ During the recent QANU inspection, various programmes organized so-called 'trial inspections', whereby colleague education directors were members of the 'trial inspection commissions'. The programmes involved were positive about the functioning of the system.

28_ An education policy plan can contain elements of quality assurance.



Figuur 2 Samenhang tussen visitaties en audits

Internal Thematic Audit

Internal thematic audits focus on the implementation of central education policy in one or more of a faculty's degree programmes, such as implementation of the 'bachelor-before-master rule' and the consequences hereof for the degree programme. This type of audit is thus intended to provide insight into the degree to which the implementation of central education policy is successful. Audit inspections have a duration of 2 to 4 hours and are more formal than, for example, the present inspection visits for the 'faculty education calendars' (facultaire onderwijsagenda's)²⁹. Comparable situations could be the implementation of the 'bachelor-before-master rule' or the implementation of 'ICT in Education' (ICT in het onderwijs). An Internal Thematic Audit informs the EB of the current state of affairs with regard to the implementation of such policy in the various faculties or degree programmes. The EB can adjust its policy on the basis of the outcomes of the audit, whereby the Internal Thematic Audit also becomes an instrument for the adjustment of central policy.

Frequency

Ad hoc basis.

²⁹_ These visits are carried out by one or two members of the Board of E&SA and are very informal.

Organisation

The Internal Thematic Audit is organised centrally at the request of the EB.

Preconditions:

- The EB takes the initiative for such an audit.
- The User Panels can ask the EB to initiate a thematic audit.

The Board of E&SA is responsible for organising the audit.

Audit guidelines

- Provide an idea of the faculties' efforts and progress to the central level following the implementation of new policy.
- Provide an idea of the points of concern in the area of education quality or education renewal.

TU Delft actors

- EB
Task: initiate audit, problem definition.
- Board of E&SA
Task: implementation and organisation.
- Faculty
Supplies requisite information such as policy documents.

Audit commission members

The Board of E&SA proposes a commission to the EB, which is required to provide formal approval. The commission will normally be made up of internal TU Delft staff and students, with external parties if applicable.

Required information

The audit commission determines which information it requires for the audit.

Product

A short report with substantiated conclusions. The length of the report will depend on the problem definition.

Follow-up

The Board of E&SA and/or the faculties will prepare a plan of action on the basis of the audit report (depending on the scope and focus of this audit). The Board of E&SA monitors the follow-up; the EB has final responsibility.

Internal Central Audit

The aim of the Internal Central Audit³⁰ is to determine whether the processes at the central level are running properly. This level is also subject to a quality assurance cycle. The Service Departments thus require a definition of 'quality' and assessment must take place according to predetermined quality criteria, after which the assessment results will be analysed. The last stage of the cycle involves the actions to improve the processes.

30_ Not to be confused with the external 'Institutional Audit' in the new accreditation system.

Two kinds of processes are differentiated at the central level which should be included in the system of Internal Central Audits:

1. Education policy processes.
2. The secondary, education-facilitating processes of the Shared Service Centres (SSC).

The documented results of the Internal Central Audits are used by TU Delft as information resource for the NVAO Institutional Audit. Other information resources used for this audit are the documented outcomes of the Internal Programme Audits and the Internal Thematic Audits. These information resources are indispensable ingredients for attaining the 'trusted institution' accreditation. With these, TU Delft can demonstrate that it has a properly functioning Quality Assurance System, as described in the TU Delft Quality Assurance Plan, both at the central and the programme level.

Frequency

The Internal Central Audit is organised at the EB's request once every six years as a mid-term self-evaluation between two Institutional Audits.

If an external Institutional Audit or an Internal Central Audit reveals serious shortcomings, an interim Internal Central Audit can be programmed earlier, e.g. after two years.

Organisation

- TU Delft organises this audit at the central level.
- The EB decides the audit programme and appoints an audit commission.
- The Board of E&SA is responsible for the execution.

Audit guidelines

- The audit assesses the education policy processes as described in Part II, Section 1, and the secondary processes as described in Part II, Section 2 and elaborated in Appendix 3 'Operationalisation of secondary processes'.
- The audit includes suggestions for possible improvement.
- The audit incorporates the recommendations of the previous official external inspection.

TU Delft actors

- Central: EB
Task: decides audit programme and appoints commission.
- Board of E&SA
Task: organisation, execution, evaluation, follow-up.

Audit commission members

The Board of E&SA proposes a commission to the EB, which is required to provide formal approval. The audit commission must be representative. An example commission could be:

- 1 Director of Education.
- Professional external business processes and/or operational auditor.
- an external E&SA director.

Required information

Education policy processes	Service Departments’ ³¹ processes
Documents concerning central education policy	University Corporate Office Long Term Plan
Faculty education plans	SWOT analyses and Service Department Improvement Plans
SWOT analysis of education policy (self analysis)	Evaluation material of the User Panels or staff surveys
Reports of User Panels and Education Directors meetings	Logistics Quality Monitor and other student surveys
Documents on bilateral agreements between EB and Deans	Service Departments’ Quality handbooks
TU Delft Quality Assurance Plan Handbook	

Product

Audit report with substantiated analysis of the two central processes, including a summary and points for improvement. Size: approx. 50 pages.

Follow-up

A plan of action is drawn up on the basis of the results of the audit. This plan of action is approved in the consultation between the University Corporate Office Directors Team and the EB.

31_ For so far education related.

3.

Operationalisation of secondary processes

These processes must be so organised that they make the best possible contribution to education quality and the organisation of education.

The faculty has limited influence on these processes and the optimal realisation thereof; the faculties are dependent in this respect, while the influence on education quality and the organisation of education is of great consequence.

The processes of the following Shared Service Centres must be included in the evaluation:

- Education & Student Affairs.
- ICT/Facility Management.
- Marketing & Communication.
- TU Delft Library.
- HR management/Finance & Control.
- Strategic and Management Support

SSC	Student Perspective	Faculty Perspective
E&SA	<u>Intake</u> <ul style="list-style-type: none"> - Unambiguous admission criteria - Registration: <ul style="list-style-type: none"> o Registration processing speed o Correctness of registration o Housing/visa/summer school (for registration of international students) - Speed and usefulness of Admissions Office info 	<u>Intake</u> <ul style="list-style-type: none"> - Unambiguous and acceptable admission criteria - Admissions Office selection satisfactory
E&SA	<u>Throughput</u> <ul style="list-style-type: none"> - Timetables: <ul style="list-style-type: none"> o Available on time o Timetable quality (e.g. readability) o Accessibility via the web (WEBBER) - Prospectus quality (ease of use, structure, layout, etc.) - Student progress registration – can student easily keep track of his/her progress and see what needs to be done to get the diploma? Was the registration correct? - Support and training available to students from Deans and psychologists - Communication and information: Speed and quality of service provided by the SSC helpdesk, the Service Desk, osaFac@tudelft.nl - Digital sales of readers (service/ website/processing) - Information on minors - Information on internships 	<u>Throughput</u> <ul style="list-style-type: none"> - Timely availability, quality and flexibility of timetables - Central legislation: <ul style="list-style-type: none"> o Invigilation o Student charter o Shared sections of the OER (Teaching and Examination Regulations) - Decentralised marks entry; user friendliness for teaching staff - Communication and information: Speed and quality of service provided by the SSC helpdesk, the Service Desk, osaFac@tudelft.nl - Digital reader sales: <ul style="list-style-type: none"> o Supply o Pro-rights - OMI (Education Management Information) reports - Educational support for teaching staff at the central level (EC Focus): <ul style="list-style-type: none"> o Advice o Training
E&SA	<u>Output</u> <ul style="list-style-type: none"> - Diploma/supplement: process between SSC and faculty is efficiently organised. Correctness and timely availability. 	<u>Output</u> <ul style="list-style-type: none"> - Diploma/supplement: process between SSC and faculty is efficiently organised. Correctness and timely availability.
ICT / FM	<u>Intake</u> <ul style="list-style-type: none"> - Implementation of campus card/ account etc. within predetermined periods. 	

SSC	Student Perspective	Faculty Perspective
ICT / FM	<u>Throughput</u> <ul style="list-style-type: none"> - Quality and quantity of the teaching areas (partly faculty areas; central part yet to be defined, e.g. exam halls, self-study facilities) - ICTO areas (computer rooms, etc.): <ul style="list-style-type: none"> o Quality and availability of software o Design (anti RSI) o Quality of wireless network o Facilities - Blackboard and other ICT resources (Smartboard/ Collegerama): <ul style="list-style-type: none"> o User friendliness - Quality of Service Desks - Communication and information: <ul style="list-style-type: none"> o Speed and quality of issues processing by ICT and ICTO support - Laptop project (product range, processing, purchase and helpdesk service) - Examination Registration System: <ul style="list-style-type: none"> o System design o Link with Blackboard o User friendliness - Canteen: <ul style="list-style-type: none"> o Product variety o Price/quality ratio o Personnel o Atmosphere/ambience 	<u>Throughput</u> <ul style="list-style-type: none"> - Quality and quantity of the teaching areas (partly faculty areas; central part yet to be defined, e.g. exam halls, self-study facilities) - ICTO areas (computer rooms, etc.): <ul style="list-style-type: none"> o Quality and availability of software - Blackboard and other ICT resources (Smartboard/ Collegerama): <ul style="list-style-type: none"> o Educational opportunities o Support o User friendliness - Quality of Service Desks - Canteen: <ul style="list-style-type: none"> o Product variety o Price/quality ratio o Personnel o Atmosphere/ambience
M&C	<u>Intake</u> <ul style="list-style-type: none"> - Information - Website (accessibility/up-to-dateness/ease of use) 	<u>Intake</u> <ul style="list-style-type: none"> - Information, PR
M&C	<u>Throughput</u> <ul style="list-style-type: none"> - Information on the Master's - Website/student portal (accessibility/up-to-dateness/ease of use) 	<u>Throughput</u> <ul style="list-style-type: none"> - Information on the Master's - Website/staff portal (accessibility/up-to-dateness/ease of use)

SSC	Student Perspective	Faculty Perspective
M&C	<u>Output</u> <ul style="list-style-type: none"> - Clear information on the formal consequences of graduating (deregistration, etc.) - Clear information on the informal opportunities (how the student can stay involved with TU Delft) 	
BTUD	<u>Throughput</u> <ul style="list-style-type: none"> - Range of textbooks - Accessibility: <ul style="list-style-type: none"> o Building o Collection o Catalogue o DelftSpecial o VKC 	<u>Throughput</u> <ul style="list-style-type: none"> - Range of textbooks - Speed of purchase/availability - Accessibility: <ul style="list-style-type: none"> o Building o Collection o Catalogue o VKC
P&O / F&C		<u>Throughput</u> <ul style="list-style-type: none"> - Processing of staff recruitment and selection - Attention for education in assessments and career development (e.g. in relation to the working method and standards of Full Professor commissions) - Timely payment of invoices (within predetermined periods) - Traceability of spending, budgeting - Management information

4.

Faculty teaching quality annual reports

Introduction

In an effective Quality Assurance System, every degree programme prepares an annual report which describes a number of core elements of the quality of the education provided by that programme, and in which analyses, conclusions and plans for improvement are incorporated.

These reports can serve as checks at the institutional level (have the results been properly substantiated?), but also as instruments to compare degree programmes and, by exchanging and comparing reports, to optimise thinking and doing in the area of education quality.

The point of departure is that the reports must be kept as simple as possible and that, in particular, they must be usable for internal degree programme evaluation. Programme-specific information can be added to the reports if desired.

The TU Delft Quality Assurance Plan commission has prepared a compulsory format for standard Bachelor's programme annual reports. This format has been distributed to the faculties.

In October 2007, the faculties were asked to provide an Education Quality Assurance Plan for at least one Bachelor's programme according to the format prescribed by the TU Delft Quality Assurance Plan commission. This was to be handed in by 1 January 2008.

Six of the eight faculties participated in the trial. The conclusion of this exercise was that the format for the annual report was workable. A number of points for attention did arise in the implementation of the format:

- The aim of the reports must be clearer (required for TU Delft quality policy: what are the reports used for?).
- The reports must be usable at both the central and the programme-level (efficiency!).
- Some definitions need to be more defined.
- The standard OMI Business Objects reports to be used for reporting need to be more efficiently designed.

It is safe to ascertain that the implementation of standard Bachelor's programme annual reports is sufficiently supported by the Education Quality Assurance System (EQA) staff.

A format is being developed for a standard annual report for the Master's degree programme in collaboration with the EQA staff of the faculties. It is assumed that the faculties will want a single report that encompasses all their Master's degree programmes.

Format of the Bachelor's programme reports

The format for the Bachelor's programme is approximately as follows:

1. General
2. Intake, drop-out, throughflow rates
 - a. Intake table, incl. M/F
 - b. Previous education and/or pre-university maths and physics results
 - c. Intake yield and progress, P-in-1, P diplomas (including target standards)
 - d. Post-P yields (including target standards)
 - e. Drop-out rate: numbers, characteristics, motivation for leaving programme
 - f. Delay rate: overview of throughflow of student intakes
 - g. Credits achieved by first years: average total, categories linked to study recommendation
 - h. Progress and yield per subject (first year, second year, third year)
3. Evaluations
 - a. Study components in detail (including lecture response groups, student surveys)
 - b. Minors
4. Most important observations and action points

Reports are requested over at least three semesters to be able to follow the long term trends.

The format described above was distributed among the faculties during the try-out. The format was modified based on the experiences and wishes expressed in the trial. The faculty EQA staff were involved in this process.

5.

Faculty quality handbook format

In this appendix the format of a Faculty Quality Handbook is described. The TU Delft Quality Assurance Basic Concept (2004) was used to prepare this format.

Part A

Short description of the Faculty Quality Assurance System, in which the following are explained:

- Quality definition
- Quality assessment
- Quality analysis and improvement
- Organisation of quality assurance (who is responsible for what and when; how the results are reported)

Part B

Table in which the following is described per quality aspect³²:

- The quality standard
- The information resources (who can supply information on the status of the quality standards)
- The quality instrument (which instrument is used to gather information on the quality of the quality aspect)

³²_ The quality aspects that are in any case to be described in the handbook are explained in Part III of this report.

Quality definition		Quality assessment	
Quality aspect	Quality standard	Information resources	Quality instruments
Profile and achievement levels	Professional field approves profile and final achievement levels Profile and achievement levels correspond to achievement levels of similar university programmes	Professional field Alumni Similar degree programmes	Commission of professionals Alumni research WO Monitor Benchmark
Assessment	Assessment methods correspond to aims and instruction modes of a course Clear assessment criteria are formulated	Students Outcomes of assessment policy	Course evaluation Exam matrix Assessment policy
Student satisfaction	Students give the degree programme a positive evaluation	Students	Course evaluation Programme evaluation Logistics Quality Monitor National Student Survey

Part C

Explanation of the instruments described in part B.

The instruments used by a faculty are described here. The following is given per instrument:

- A summary of the instrument by describing what it is, what its function is, for which information resources it is used, which quality aspects are assessed with it, when it is implemented, how often, by who, what process is followed (procedural and methodological), which standards apply, the method of reporting³³.
- An example of the instrument (e.g. an EvaSys Survey for evaluation of the courses, the first year survey)
- A 'User Guide' (if applicable). This is a procedural description of the way the instrument is used in the faculty.

33_ This information is also used for describing the quality instruments in the TU Delft EQA instrument database.

6.

Faculty assessment policy format

In this appendix the format of a faculty assessment policy is described. The TU Delft Quality Assurance Plan project team believes that university has the responsibility to develop and implement an adequate assessment policy. It is also the university's responsibility to ensure that the faculties develop and implement assessment policies. The university can thus delegate some of the responsibilities to the faculties. Education targets and education outcomes come together in assessment policy, both of which fall under the domain of the degree programme and thus the faculty too.

The guidelines below are provisional, because TU Delft's assessment policy has received insufficient attention up till now. The characteristics of an assessment policy described below are intended as a policy development initiative. This guideline must be elaborated, whereby the developments in assessment policy taking place at the various faculties and the ensuing best practices must be taken into account.

In the following paragraphs a definition of assessment policy is provided, followed by the preconditions for this policy, and finally a number of guidelines for assessment policy are described³⁴.

Assessment policy definition

Assessment policy is the sum of all guidelines and procedures related to assessment and examinations that provides assurance that the students are achieving the prescribed targets (academic criteria) of the degree programmes.

Precondition for assessment policy

A precondition for an adequate assessment policy is that both the targets of the degree programme and the learning objectives and achievement levels of the study components are clearly described and that these are periodically evaluated and brought up to date.

34_ The components of assessment policy described in this appendix are based on EEMCS Faculty Assessment Policy ('Toetsbeleid bij de Faculteit EWI'), TU Delft, 2008.

Guidelines for assessment policy

Assessment policy must in any case take account of the following three aspects. Detailed guidelines are then provided per aspect:

1. The role of assessment in the education process.
2. The role of the Board of Examiners.
3. Assessment policy quality assurance.

The role of assessment in the education process

This entails:

- The degree programme's view of the relationship between the degree programme's targets and the achievement levels and learning objectives of individual study components.
- Which responsibilities lecturers and other teaching staff (such as student assistants) have, and how students can find information on what is expected of them.
- How individual and group work is assessed and how assessment criteria are determined.
- How the examinations and retakes are organised.

The role of the Board of Examiners

The Board of Examiners has a number of statutory responsibilities³⁵. These need to be elaborated, whereby attention is paid to:

- The role of the Board of Examiners in the assessment of Bachelor's and Master's final projects.
- How the Board of Examiners monitors the assessment policy and, if applicable, how it adapts the assessment policy cycle.

Assessment policy quality assurance

Assessment policy is to be implemented effectively, whereby at least the following is determined:

- How the Quality Assurance System is organised with regard to assessment and what opportunities the teaching staff have for support and training.
- How the assessment policy is safeguarded. In other words, who holds which responsibilities resulting from the assessment policy, and how is this evaluated.

35_ E.g. Higher Education Act, article 7.12, paragraphs 3 and 4.

7.

Overview of accreditation dates until 2014 and degree programme audit dates until 2011

Faculty	Level	Degree programme	Accreditation Expiry Date	Internal Programme Audit before
3mE	Bachelor	Maritime Engineering	31 December 2013	31 December 2010
3mE	Bachelor	Mechanical Engineering	31 December 2013	31 December 2010
3mE	Master	Biomedical Engineering	31 December 2013	31 December 2010
3mE	Master	Marine Technology	31 December 2013	31 December 2010
3mE	Master	Materials Science and Engineering	31 December 2013	31 December 2010
3mE	Master	Mechanical Engineering	31 December 2013	31 December 2010
3mE	Master	Offshore Engineering	31 December 2013	31 December 2010
3mE	Master	Systems and Control	31 December 2013	31 December 2010
Arch	Bachelor	Architecture	31 December 2013	31 December 2010
Arch	Master	Architecture, Urbanism and Building Sciences	31 December 2013	31 December 2010
Arch	Master	European Postgraduate Master in Urbanism	22 February 2015	22 February 2012
CEG	Bachelor	Civil Engineering	31 December 2013	31 December 2010
CEG	Bachelor	Applied Earth Sciences	31 December 2013	31 December 2010
CEG	Master	Applied Earth Sciences	31 December 2013	31 December 2010
CEG	Master	Civil Engineering	31 December 2013	31 December 2010

Faculty	Level	Degree programme	Accreditation Expiry Date	Internal Programme Audit before
CEG	Master	Construction Management and Engineering	24 January 2013	24 January 2010
CEG/ 3mE/ TPM)	Master	Transport, Infrastructure and Logistics	31 December 2013	31 December 2010
EEMCS	Bachelor	Electrical Engineering	20 February 2012	19 February 2009
EEMCS	Bachelor	Applied Computer Science	31 December 2014	31 December 2011
EEMCS	Bachelor	Applied Mathematics	31 December 2014	31 December 2011
EEMCS	Master	Applied Mathematics	31 December 2014	31 December 2011
EEMCS	Master	Computer Engineering	20 February 2012	19 February 2009
EEMCS	Master	Computer Science	31 December 2014	31 December 2011
EEMCS	Master	Electrical Engineering	20 February 2012	19 February 2009
EEMCS	Master	Embedded Systems	30 March 2012	30 March 2009
EEMCS	Master	Media & Knowledge Engineering	31 December 2014	31 December 2011
IDE	Bachelor	Industrial Design	31 December 2014	31 December 2011
IDE	Master	Design for Interaction	31 December 2014	31 December 2011
IDE	Master	Integrated Product Design	31 December 2014	31 December 2011
IDE	Master	Strategic Product Design	31 December 2014	31 December 2011
AE	Bachelor	Aerospace Engineering	31 December 2014	31 December 2011
AE	Master	Aerospace Engineering	31 December 2014	31 December 2011
AE	Master	Geomatics	31 December 2013	31 December 2010
TPM	Bachelor	Engineering and Policy Analysis	27 September 2011	26 September 2008
TPM	Master	Engineering and Policy Analysis	27 September 2011	26 September 2008
TPM	Master	Management of Technology	27 September 2011	26 September 2008
TPM	Master	Systems Engineering, Policy Analysis and Management	27 September 2011	26 September 2008
AS	Bachelor	Life Science and Technology	31 December 2013	31 December 2010
AS	Bachelor	Chemical Technology and Bioprocess Technology	31 December 2013	31 December 2010

Faculty	Level	Degree programme	Accreditation Expiry Date	Internal Programme Audit before
AS	Bachelor	(Sustainable) Molecular Science and Technology	29 November 2010	29 November 2007
AS	Bachelor	Applied Physics	31 December 2014	31 December 2011
AS	Master	Applied Physics	31 December 2014	31 December 2011
AS	Master	Biochemical Engineering	31 December 2013	31 December 2010
AS	Master	Chemical Engineering	31 December 2013	31 December 2010
AS	Master	Chemistry Education	31 August 2010	31 August 2007
AS	Master	Computer Science Education	3 April 2012	3 April 2009
AS	Master	Life Science and Technology	31 December 2013	31 December 2010
AS	Master	Mathematics Education	31 August 2010	31 August 2007
AS	Master	Nanoscience	31 December 2013	31 December 2010
AS	Master	Physics Education	31 August 2010	31 August 2007
AS	Master	Science Education and Communication	26 August 2013	26 August 2010
AS	Master	Sustainable Energy Technology	6 June 2012	6 June 2009

8.

Quality assurance plan project team members

The project team was made up of the following members as of 1 May 2006:

- Chairperson: Geerlinge Pessers – van Reeuwijk
- Members: Ellen Bos, IDE teaching advisor
Sandra van der Hulst, student member
Aldert Kamp, BSc AE Director of Studies
Dr Eric Logtenberg, Head of E&SA 3mE
Dr Hans Tonino, TI Director of Studies
- Secretary: Anne Smit, MPhil, trainee with the E&SA policy group

Following a period of inactivity after the departure of a number of members, the project team continued in July 2007 with the following members:

- Chairperson: Dr Hans Tonino, TI Director of Studies
- Members: Ellen Bos, Head of E&SA IDE
Aldert Kamp, AE Director of Education
Dr Eric Logtenberg, Head of E&SA 3mE
Ilse van Weperen, Applied Physics student, member of TU Delft Student Council
- Secretary: Jenny Brakels, E&SA policy advisor

The TU Delft Quality Assurance Plan project team was made up of the following members as of September 2008:

- Chairperson: Dr Hans Tonino, TI Director of Studies
- Members: Nel Pouw, IDE teaching advisor
Aldert Kamp, AE Director of Education
Dr Eric Logtenberg, Head of E&SA 3mE
Jorrit van 't Hart, member TU Delft Student Council shadow cabinet
- Secretary: Jenny Brakels, E&SA policy advisor

The TU Delft Quality Assurance Plan project team was made up of the following members as of October 2009:

- Chairperson: Dr Hans Tonino, TI Director of Studies
- Members: Nel Pouw, IDE teaching advisor
Aldert Kamp, AE Director of Education
Robert Sloof, member of TU Delft Student Council
- Secretary: Jenny Brakels, E&SA policy advisor

9.

Terms and abbreviations

Accreditation	The allocation of a quality mark that indicates that certain standards have been met.
AKA	Quality & Accreditation Advisory Council (Adviesraad Kwaliteit & Accreditatie). TU Delft had an AKA between 1 November 2004 and 1 November 2006.
Audit	Assessment of the Quality Assurance System
BTQ	Basic Teaching Qualification. The Basic Teaching Qualification (BTQ) programme aims to provide new university teaching staff with the opportunity to develop competencies necessary to carrying out their teaching duties effectively. On completing the programme, participants should meet the requirements of the basic qualification.
BMO	Executive Board of Strategic and Management Support (Directie Bestuurlijke en Management Ondersteuning)
EB	Executive Board
ETV	English language proficiency (Engelse Taalvaardigheid)
EUR	Erasmus University Rotterdam
FSR	Faculty Student Council (Facultaire Studentenraad)
GV	Joint Meeting (Gezamenlijke Vergadering). The Joint Meeting of the Works Council and the Student Council has right of approval with regard to the Executive and Management Regulations, the Strategic Plan and the Quality Assurance System.
IB	University Policy (Instellingsbeleid)

ICT	Information and Communication Technology
ICTO	ICT in education
Institutional Accreditation	Quality is assessed at the institutional level; the quality mark is given for this level.
Institutional Audit	Education Quality Assurance System audit at the institutional level.
Knowledge Valorisation	The integration of scientific knowledge in the business community and government.
Quality Aspects	The aspects of a degree programme which give a measure of quality.
Quality Culture	An institutional culture in which quality is sustained by the entire organisation.
Quality Cycle	The Quality Assurance System is cyclical and is characterised by successive phases: quality definition, quality assessment, quality analysis and quality improvement.
Quality Handbook	A faculty handbook which describes the Quality Assurance System at the faculty level.
Quality Assurance Activities	Activities that are carried out to guarantee that the quality of education-related services to the faculties is sufficient to ensure optimal education.
Quality Assurance Protocol	An overview of the Quality Assurance Activities and the corresponding step-by-step plan.
Quality Assurance System	A system made up of procedures and instruments with which education quality can be monitored and improved.
E&SA	Board of Education and Student Affairs
OC Focus	FOCUS Centre of Expertise in Education
EQA	Education Quality Assurance (Onderwijskwaliteitszorg)
OMI reports	Education Management Information reports (Onderwijs Management Informatie-rapportages)
Education Quality Assurance Plan	Plan for Education Quality Assurance at the institutional level.
Programme accreditation	The allocation of a quality mark to a degree programme that indicates that it meets the basic requirements for quality.
PDCA	Plan, Do, Check, Act. A PDCA circle or Deming circle is a set of four successive, mutually connected activities (Plan, Do, Check, Act), with which the quality of an object can be systematically improved.

R&D	Result and Development
Logistics Quality Monitor	Student survey on the core quality aspects of the logistical services.
Secondary Processes	Processes to facilitate education, not the educational process itself.
SOM	Strategic Education Resources (Strategische Onderwijs Middelen), EB budget.
'User Guide'	Contains procedures for the use of Quality Assurance Instruments
SSC	Shared Service Centre
UD	University Corporate Office (Universiteitsdienst)
VKC	Virtual Knowledge Centre
VPE	Vice President for Education, member of EB
VWO	Pre-university Education
WEBBER	Internet application for consulting timetables.
WO Monitor	National survey of university alumni to ascertain whether the degree programmes are tailored to the labour market.
WO Sprint	Incentive Programme for Innovative Scientific and Technical Higher Education.

Colofon

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