

Quality Assurance Policy Industrial Design Department

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June, 2021

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1. Introduction

This document introduces the Quality Assurance Policy (QAP) of the Industrial Design (ID) department. The quality assurance system, i.e., monitoring, evaluation and improvement plans, comprises both the quality assurance cycle at course level, the so-called '*kleine kwaliteitszorg*', as well as the quality assurance cycle at program level. In addition, the quality assurance system has two objectives, *accountability*, and *improvement*. The relevance of the monitoring and the evaluation of the quality of education is essential towards becoming accountable to both internal (ID internal fora such as the ID Departmental Board, Departmental Council, Program Committee (PC), Examination Committee (EC)), as well as external bodies (i.e., TU/e Executive Board, CCKO¹, Supervisory Board, NVAO², etc.) upon which the ID educational management is responsible to. In addition, the monitoring and evaluation of the quality of education is fundamental towards meeting the NVAO accreditation standards. Finally, improving the quality of education is a continuous goal and leads all improvement actions in order to maintain the AP department, TU/e and accreditation standards. The information collected in the context of Quality Assurance is used to improve courses, projects, squads but also the set-up of the complete curriculum³.

In compiling this policy document, the following documents have been used as a starting point:

1. TU/e Kwaliteitszorgkader Onderwijs (2020)
2. Kwaliteitszorg Evaluatiecyclus Bachelor College
3. Adviezen van de projectgroep kleine kwaliteitszorg
4. Het ontwikkelplan Ketenproces Kwaliteitszorg (versie mei 2018)
5. Beschrijving kwaliteitszorgsysteem i.h.k.v. de ITK in 2013

In the following, we provide a description of the Quality Assurance, how teachers are supported, what criteria are used, and support to staff. However, we will start by explaining the background of the ID QAP consisting of relevant theory and context information that influence the arrangement of it.

2. Educational quality: Background

An adequate Quality Assurance Policy needs a definition of quality. To define quality, at least three questions are important: quality with respect to what? Quality as perceived by whom? And, what are the criteria for a positive evaluation?

2.1. Quality of education

Quality can be determined for different elements of an educational program. It can be determined per course, for learning lines, for topics across courses, for elements of a course, etc. In general, an approach with different variables and indicators is used in determining the

¹ Centrale Commissie Kwaliteitszorg Onderwijs (CCKO) – Central Committee for Quality Care in Education

² Nederlands-Vlaamse Accreditatieorganisatie (NVAO) – The Accreditation Organization of the Netherlands and Flanders

³ In this document the terms curriculum and programs are used interchangeably. Strictly spoken, though, the term program refers to the Dutch word 'opleiding' and the word curriculum refers to a coherent learning plan.

quality of education (Scheerens, Luyten, & Ravens, 2010). The NVAO⁴, an institute involved in the reviews of Dutch Higher Education institutes and programs provides standards that influence the design of the QAP. It is an unwritten law that it takes about five years before educational innovations and curricula become fully mature. For this reason, an international panel of domain experts visits the ID programs once per six years to assess the quality of the educational program applicable to all Higher Education programs in the Netherlands. These six-year periods can be seen as the long time-span of QAP consisting of shorter QA cycles of for example one year. It's beginning and ending is thus marked by the visit of an assessment panel of experts. These experts assess the quality of programs on four standards. The standards are about the intended learning outcomes, the teaching-learning environment, the assessment procedure and the end-level of student work (see Appendix A). These four standards provide the framework for our QAP and provide direction for long-term improvement plans. Jointly, they capture important elements of a curriculum (An overview of the ID programs can be found in the paper study guide). A curriculum can be seen as a plan for learning (Talba, 1962). An important function of the curriculum is to promote goal-directedness of learning and provide a frame of reference for policy-making and actions in practice.

2.2. TU/e Educational Strategy and Vision 2030 and the link with ID vision on quality

We are living in the era of the technological revolution⁵. The demand of Industrial Designers is on those hands-on professionals who can use technology to investigate interactions between people and technology, measuring, modelling and designing the user experience while interacting with social-technology networks. We educate designers that can make agile transformations to meet societal needs. These are experts who *develop competencies* and learn through doing. The ID department prepares designers to meet these societal challenges. The ID education model lies on remarkable values i.e. *Research-driven; vertical model of education and squads*: to integrate disciplines in education and bridging the gap with research; *diversity* by having TU/e Strategy 2030 (2018) students making choices of projects and courses in a flexible curriculum towards designing own playlist and individual learning path; *interdisciplinary* and involvement of technology in education; *learning through doing; self-directed learning; competency-based learning; coaching* students in small-scale education; contact with industry to link with labour market needs; involvement of liaisons and alumni in education through partnerships and networks; and *community*. These values make the ID educational program exceptional and unique in the Netherlands. The integration of *research-driven education* into the *squads* and into the *challenges* of the projects are an essential part of the educational model of Industrial Design. Educating the designers for the future requires connections between research and education shifting from research-inspired education towards a more structured *research-driven education* in the *squads* where a *community* of designers learn together based on a *vertical educational model*.

Coaching is an essential component in the ID educational model. Coaching centers around supporting students to become *self-directed learners* (Ryan & Deci, 2000), to develop *competencies, vision and identity* as designers in order to foster employability. Strengthening

⁴ NVAO means Nederlands Vlaamse Accreditatie Organisatie.

⁵ TU/e Strategy 2030 (2018)

coaching in *challenge-based learning* is fundamental where students learn through doing in *small-scale groups* and *make choices* based on *own design of learning path*.

The new TU/e educational developments have impact also on the quality of education. Following the bottom-up approach to carry out pilots and experiments in courses and projects, the ID quality assurance system includes a mechanism to (re-)design and evaluate innovations with some quality elements such as providing advice from ID-ESA in the re-design to create an alignment between the learning outcomes, the learning activities and the assessment plans (i.e. constructive alignment). In addition, the course evaluations include questions to evaluate the new added elements in a course due to the innovations.

2.2.1 Quality Assurance in the squads⁶

Challenge-based learning is one of the most important pillars of the TU/e 2030 and the Industrial Design curricula. Industrial Design has almost 20 years of experience with organizing small-scale and challenge-based education. The important organizational structure for ID has been the formation of educational communities. ID initially called these communities 'units', has evolved towards 'domains', 'themes' and recently choose for 'squads'. Different names, yet they share the underlying values of Communities of Practice (CoP) [Lave and Wenger, 1991] where students from different levels (Bachelor, Master and PhD), researchers (academic staff) and professionals (industry or society) form a professional, authentic and social setting and work together on challenges for the duration of one (or more) semesters. These collaborative communities within the squads share an interest in a specific application domain. Squads integrate the research interests of three to four academic staff members and PhD candidates, with the societal interest of clients, user groups and experts from practice, often represented by one or two Industry Liaisons, and the educational interest of 2nd and 3rd year Bachelor students and 1st year Master and 2nd year Master research students.

There are interesting challenges in the implementation of Challenge-based education which needs specific attention for the quality. Within the innovation project, new aspects in the implementation need to be formulated so that these can be researched and, in an iterative form, learn from this implementation in order to make improvements. Some of these aspects to be identified could be (still to define within the project) investigating the benefits on students' learning and researching educational practices towards carrying out agile iterations; the impact of self-directed learning, development of competencies and identity towards fostering employability; etc.; that can contribute to learn to improve the quality of education. In this regard, indicators of the quality of squads will be later defined.

The QA process for the squads follows the same mechanism and structure as the rest of the ID courses and projects following the QA organization described in this document (e.g. project/squads evaluation, discussions with students in the year councils, discussion and feedback with teachers/coaches responsible for the squads, reporting to the PC, etc.).

2.3. Perceptions on quality of education

Different stakeholders hold different conceptions of what is important and what constitutes quality. All stakeholders interpret information about the quality of educational curricula from their own point of view, with their own interests and so on. For this reason, we make use of the

⁶ Text taken and adapted from the Innovation project submitted for the Innovation calls funds.

opinions of different stakeholders who express their opinion on (elements) our educational programs. We distinguish both internal stakeholders (e.g. program management, scientific staff and students) and external stakeholders (e.g. clients, companies, employers, and alumni). Because of the many perspectives that exist, it is important that information is considered carefully taking the relevant perspectives into account. Depending on the issue at stake, more value can be attached to certain perspectives. With respect to different perspectives, Van den Akker (2004) made a very useful distinction between different representations of curricula and learning activities. These perspectives are outlined in Table 1. (next page).

Table 1. Perspectives of curriculum levels

Perspectives		Meaning	Potential information source
Intended	Ideal	Rationale or basic philosophy underlying a curriculum.	Program Management
	Formal/Written	Intention as specified in curriculum documents and/or materials.	Program management
Implemented	Perceived	Curriculum as interpreted by its users (especially teachers)	Teachers, coaches, teaching assistants and student-assistants
	Operational	The actual process of teaching and learning (also: curriculum in-action)	Teachers, coaches, teaching assistants and student-assistants
Attained	Experiential	Learning experiences as perceived by learners	Students
	Learned	Resulting learning outcomes of learners	Deliverables and other performance indicators

Differences in perspectives help to analyze, evaluate and reflect on curricular changes. Similarities between perspectives can provide important indications for the adoption of innovations or measures for improvement. In chapter 5. the table with curricular perspectives of Van den Akker (2004) is specified for the strategy, policy and operational level and filled out with available sources covering the different perspectives. This approach makes clear which aspects are not included in the QAP of ID.

2.4. Criteria for a positive evaluation?

The goals of educational programs and courses form a reference point to determine what quality is. In general, there are different ways to have a look at the quality. At Industrial Design, the following quality criteria are used on a program level: 1) the productivity or output of the S; 2) the efficiency of the S; 3) the efficacy of the S, and 4) the impact of the S on for example the labor market (Scheerens, et al., 2010). These criteria are addressed in the annual reports (see also section 3.7 on communication in the QAP. More detailed information on criteria, processes and products is provided in section 3.6.

3. The QAP at ID: a general description.

3.1. The process of Quality Assurance

As indicated, the Industrial Design department needs to adhere to the NVAO and TU/e standards concerning the quality of education. To guarantee sufficient quality of our program and separate learning activities, and to seek for continuous improvement, the S is based on the Plan-Do-Check-Act (PDCA) cycle (see Figure 1). It is a circular, iterative and continuous process of feedback loops to formulate measures for improvement in an evidence-based way. As becomes clear from Figure-1, below, the method consists of evaluating the quality of education, deciding upon what to maintain and what to improve, formulating a plan for improvement, carrying out the improvements and monitoring and evaluating the effects of the measures for improvement. The cycle is applied on a regular and continuous base on both the course level (each quartile) and the program level (annually).

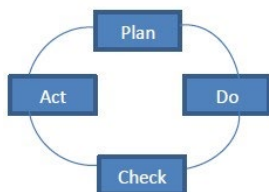


Figure 1. PDCA method

3.2 Quality Assurance instruments for both the course and program level

Several instruments are used by the ID management to maintain and improve the quality of its education. Different actors apply these means at different levels of the curriculum. In Table 2, a summary of the means for data collection and their function are provided. The table is composed according to university policy standards.

Table 2. Means for data collection for quality assurance

Instruments	Function and purpose
Course level	
Course evaluations.	Questionnaires ⁷ used to measure how satisfied students are with a course, to provide the outcomes as feedback to the responsible teacher and the students and the internal forums.
Students' year-councils.	Feedback on courses running in the quarter at the time of holding the council meetings. Every quarter, the council create a quartile report with all the relevant outcomes, those are sent to the PC and the Program Director. Overall purposes: 1. Provide rich student information to explain course evaluations and come up with suggestions for improvement, and 2. to receive information to take just on-time actions before courses end. The meetings are organized twice per quarter.
Learning activity review meetings.	The QA officer organizes review meetings with the faculty staff (and/or provide advice and feedback) to discuss and reflect on course results and advice on improvements. Special attention is devoted to courses with many item scores below 3, new courses, courses where actions for improvement were needed, and courses with <60% and >90% pass rates.
Program Committee	The program committee ⁸ by its legal task advises the board about the education. For this input from both student and staff members as well as input from the QAP is used.
Examination committee	The Examination Committee for its legal task is responsible for safeguarding the quality of (final) examinations and the achievement of the learning outcomes of students who graduate. The EC monitors the level of education through internal supervision of the examinations in terms of content, assessment method and level. Furthermore, recommendations for improvement are made.
Program level	
Annual report	At the request of the Departmental Board, the Program Director summarizes the most relevant information on the study program in the Ba and Ma annual reports. These reports provide an overview of relevant management information, an evaluation of past actions, a reflection and the intentions for future actions. For accountability purposes, reports are sent to both internal (PC and DC) and external (Deans BC and GS, CCKO, TU/e Executive Board) stakeholders.
Students' year-councils.	Feedback on a curriculum as a whole and topics that pertain to the whole curriculum. Every quarter, the council create a quartile report with all the relevant outcomes, those are sent to the PC and the Program Director. Overall purposes: 1. Provide rich student information to explain course evaluations and come up with suggestions for improvement, and 2. to receive information to take just on-time actions before courses end. The meetings are organized twice per quarter.
University board meetings	Each semester, the TU/e Executive Board, Deans BC and GS organize meetings with the Departmental Board of ID. One of the goals of these meetings is to review the quality of education and discuss strategical issues and future plans.

⁷ The concept of questionnaire refers to a range of different evaluation instruments applied at both the course level and the program level.

⁸ A formal description of the PC will be taken from once the departmental regulations have been established.

BC and GS Deans-Program Director meetings	Each semester, the BC and GS Deans and Program Director meet to discuss course evaluations, management information and discuss educational innovation.
Departmental Council meetings	The ID Board invites the Program Director on a regular base to review, of the quality of education and discuss educational strategies and plans.
Program Committee	The program committee ⁹ by its legal task advises the board about the education. For this input from both student and staff members as well as input from the QAP is used.
Board of Examiners	The board of examiners for its legal task is responsible for safeguarding the quality of (final) examinations and the achievement of the learning outcomes of students who graduate. The EC monitors the level of education through internal supervision of the examinations in terms of content, assessment method and level. Furthermore, recommendations for improvement are made.
Ba end-of-first, second & third year questionnaire (curriculum questionnaire)	This questionnaire is distributed at the request of the Bachelor College at the end of each academic year. The goal of the questionnaire is to appraise how first, second and third year students have experienced their study program. Amongst others questions focus on coaching, study approach and professional skills.
GS – Transfer questionnaire	This questionnaire is distributed at the request of the Graduate School (BC) to appraise how first year master students have experienced the transfer from bachelor to the master program.
National level	
National Student Questionnaire (NSE)	The NSE is a large-scale annual questionnaire that invites nearly all bachelor and master higher education students indicate how they perceived the quality of the content of degree programs; lecturers; information provision by the program; learning and study facilities; study load; and assessment and grading.
TU/e Alumni monitor	Once per two years the TU/e distributes TU/e Alumni monitor to alumni of all departments.
National Alumni Questionnaire	The National Alumni Questionnaire is a national questionnaire for all recent graduates of Dutch universities. The focus of the questionnaire lies in gathering information on first job experiences and how the study is experienced. The outcomes provide insight into the connection between the master's program and the labor market.

⁹ A formal description of the PC will be taken from once the departmental regulations have been established.

3.3 The procedures for Quality Assurance

The central supporting service of the TU/e distributes all questionnaires that have been used for data-collection and provides a management summary of course evaluations. This management summary is provided to the Program Director, the QA officer and is put on the TU/e-wide sharepoint environment. The chair of the PC also has access to this sharepoint side. The QA officer of ID analyses the results. The results, then, are discussed with the Program Director. For topics within courses that are negatively valued (<3 on a five point scale), the Program Director composes a plan of action. For topics that only have received low student satisfaction rates within specific courses (3 < on a five-point scale) a joint action plan is composed by the Quality Assurance and/or Teacher Support officer and the responsible teacher during a meeting. Summaries of these meetings and the action plans are sent to the program director and to the Program Committee. Twice per year, the Program Director discusses management reports, actions for improvement and the results of these actions with the Deans of the BC and GS. The summary of the management reports and action plans are also provided to the PC. Starting from the academic year 2018-2019, the PC will also receive these plans to check on implementation and improvement. The PC is also provided with a historical overview of the course evaluations. The quality cycle with courses runs each quartile. The quality cycle on a program level takes place once per year. Each cycle ends with the annual year report written by the Program Director wherein all findings are integrated and reflected upon. On the following pages, figure-1 and figure-2 are provided. These figures provide an overview of the Quality Assurance procedure related to courses and to programs. After these figures, Table-3 is provided. This table provides an overview of the curriculum procedure.

The management reports providing an overview of the course (quartile) and squads (semester) results, including information of the last 4 years to compare developments, are sent to the Program Director, Manager ESA-ID, Program Committee and Examination Committee. The Program Director and Manager ESA-ID also received the reports of the year councils. The combination of sources of information helps gain a broad overview of students' perceptions on courses. Based on results and scores in the survey items, the Program Director holds a meeting with responsible teachers of courses/squads with low scores categorized in red to agree on points of improvement, supported by a didactical approach. Responsible teachers of courses/squads with medium scores categorized in orange are asked to reflect on improvements and how these will take place. Regarding courses with positive outcomes in green category along the years are encouraged to keep performing optimally. Finally, both Program Director and Manager ESA hold frequent meetings with LUCID representatives to follow students' comments on courses/squads and carry out 'just-in-time' actions for improvement during course implementation.

Figure 2. Overview monitoring and evaluation quality of education at the course level.

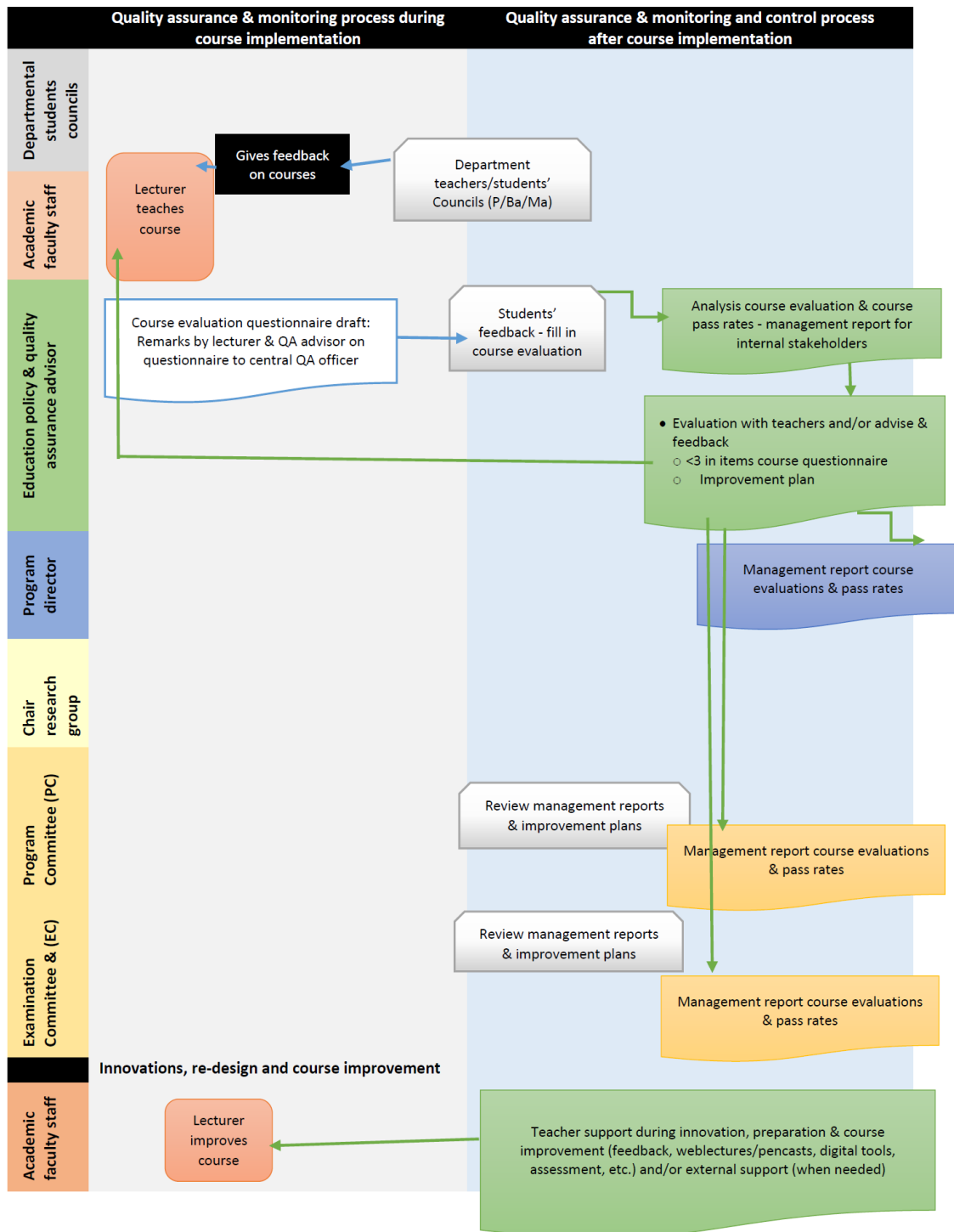


Figure 2. Quality of education flow – Course level

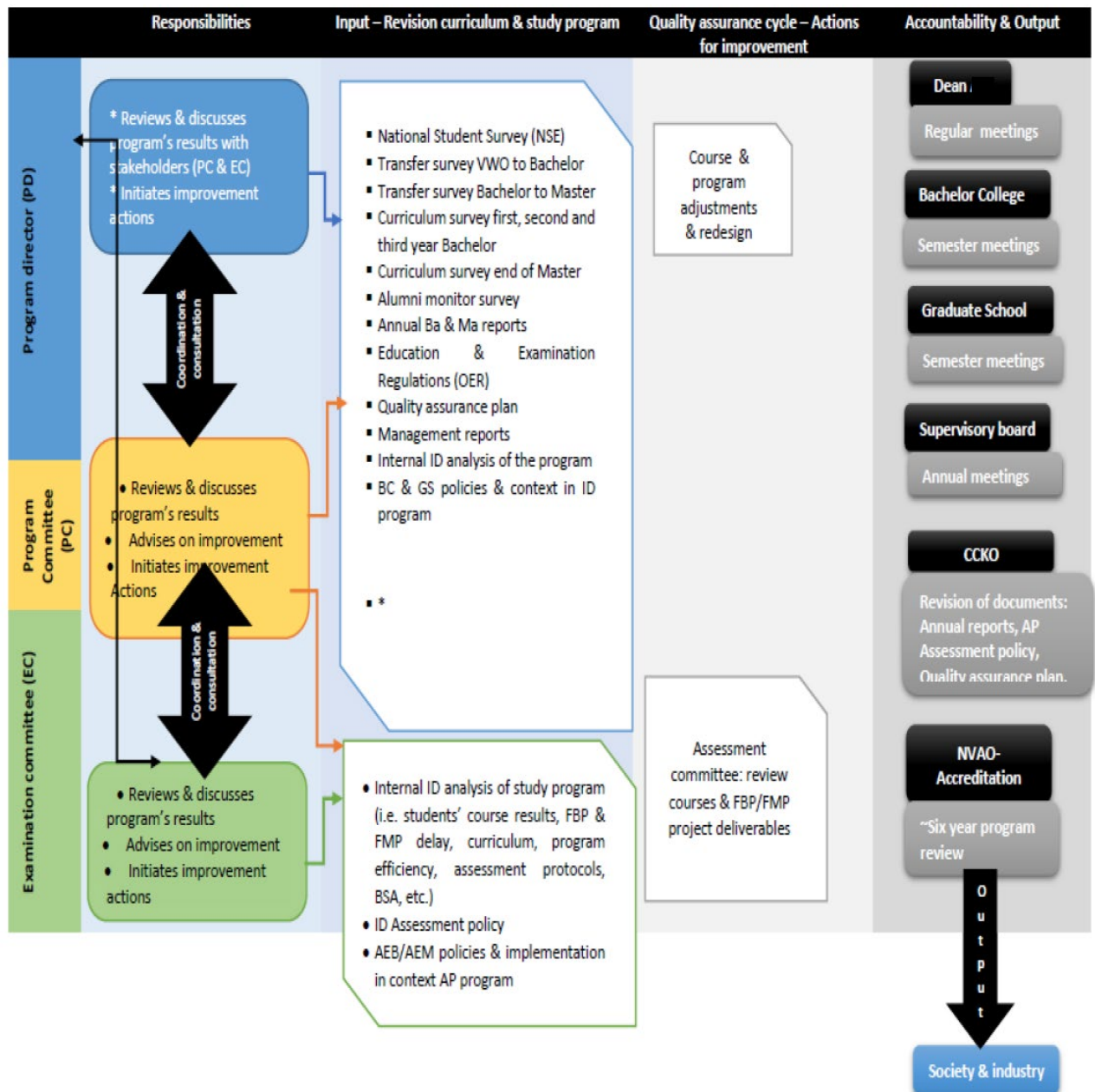


Figure 3. Overview monitoring and evaluation of quality of education at the program level.

Table 3. Procedure for composing and approval of the curriculum

Actions	Deadline	Content Responsible	Process Responsible	Support/input	Results in...
Evaluation Previous Curriculum	July/August 2021	Program Director	Manager ESA	Results accreditation Course/Squad Evaluations, Expertise Area Research Groups Coordinators, Quality Assurance, Program Committee	Document: 'Reflections on Previous Curriculum & accreditation'
Educational Vision & Strategy Update	Education Day, August 27th 2021	Program Director	Program Director	Curriculum Committee, Expertise Area Research Groups Coordinators, Quality Assurance, Program Committee ID Teaching staff	Document: 'Educational Vision & Strategy'
Preparation curriculum adjustments	Sept. 1st/Nov. 15 th , 2021	Program Director	Manager ESA	Curriculum Committee, EA responsible coordinators Research Group Coordinators Manager ESA	Draft curriculum adjustments
Align capacity with research groups according to curriculum needs	Nov. 15 till Nov. 30 th , 2021	Manager ESA	Manager ESA	Education coordinators from research groups & Manager ESA	Capacity for curriculum 2021/2022 is aligned
Curriculum to PC for advise	Dec. 15th, 2021	Manager ESA	Manager ESA		Curriculum approved
Communicate ID Teaching staff Implementation Curriculum	Jan. & Feb. 2022	Manager ESA	Manager ESA		Revised Document: 'Implementation New Curriculum'
Curriculum Approvals (FB, PC, Lecturers)	Jan & Feb. 2022	FB, PC, Lecturers	Manager ESA		Approval New Curriculum
Curriculum sent to TU/e central office	Feb. 1 st , 2022	Manager ESA	Manager ESA		Meeting TU/e deadline for curriculum submission
Curriculum ready (Course & Squads, Pre-Master)	Feb 2021	Program Director	Manager ESA	BA/MA coordinator	
Evaluation course descriptions draft	March 2022	Lecturers	Manager ESA	Program Committee	
Timeslots	March 2022		Manager ESA	CSA-ID ESA	
Course descriptions in Osiris	April 1st, 2022	Course Lecturers	Manager ESA	CSA-ID ESA	
Education Day	April 15th, 2022	Program Director	Manager ESA	ID departments	Highlights & future plans
Project Market	~May 15th, 2022	Squad Leaders	Manager ESA	CSA-ID ESA	

Schedule Semester A	August 1st, 2022	Manager ESA	Manager ESA	Program Committee CSA-ID ESA	
Schedule Semester B	October 1st, 2022	Manager ESA	Manager ESA	Program Committee CSA-ID ESA	

3.4 Evaluating the quality of exams

In the ID assessment policy, it is described in detail how the ID department defines quality in the context of assessments and exams. This ID assessment policy is updated each academic year and can be found on the intranet. In order to meet quality of exams, it is important that the assessments and exams are valid, reliable, and transparent and it is important that it is assured that fair decisions have been made. To realize this, the examination regulations are written. At ID these regulations are called Examination Regulations (ER). This document is used on an institute's level and provides the rules and regulations with respect to assessments and examinations. Also, general guidelines and procedures for Quality Assurance and actions on how the quality of both course assessments and project assessments is monitored are formulated in the Examination Regulations (ER). It describes how the Examination Committee (EC) can assure the quality of the assessments and exams.

To determine and monitor the quality of education both processes and products are evaluated on both the course level and the program level (see Table 4). The processes and products are used at the whole institute.

Table 4. Overview of criteria applied to monitor and evaluate the quality of education at the course and at program level: description of instruments used for the monitoring of quality of education

Levels of monitoring quality of education	What aspects of the quality of education are monitored?	How is quality monitored? Instruments Frequency: When is quality monitored? Each quarter
Course level	Process criteria	
	<p>1. Students' satisfaction Education (set-up & organization)/Prior knowledge Lectures/Instructions/Supervised self- study/Projects Lecturers Study material Workload Course/project's overall rate</p> <p>2. Assessment Quality of assessment (i.e. reliability, validity, transparency, quality of questions, assessment methods, etc.)</p> <p>3. Support in the re-design and evaluation of innovations</p>	<ul style="list-style-type: none"> • Course evaluation questionnaires • ID Management reports: an overview of analysis item scores in subsequent years • Overview pass rates • Feedback from students' councils • Interviews with lecturers • Discussions with teachers, students and ID committees i.e. PC & EC • BC & GS Management reports • Year councils¹⁰ • Analysis pass rates in subsequent years • Test analysis • Additional questions in course evaluations to evaluate innovations, comparing pass rates across old and new versions of the course, feedback from students' councils, interviews with lecturers, discussions with teachers, students and ID committees i.e. PC & EC.

¹⁰ Year-councils have an informal advisory role. Primary objective of the year-councils is to act as adherents of the Program Committee. Secondary objective is to foresee in a short feedback loop between students, the Program Director and the quality assurance officer. Appendix two provides a 'draaiboek' for the year councils (in Dutch only).

Levels of monitoring quality of education	What aspects of the quality of education are monitored?	How is quality monitored? Instruments Frequency: When is quality monitored? Once a year
Course and program level	Product criteria	
	<p>1. Students' satisfaction</p> <ul style="list-style-type: none"> - Coaching and counselling - PRV - Curriculum choices - Expectations on ID program - Education and assessment methods - Teaching methods, i.e. tutor groups, video-lectures, etc. - Etc. <p>2. Assessment</p> <ul style="list-style-type: none"> - Effectiveness of rubrics 	<ul style="list-style-type: none"> • National Student Survey (NSE) • Transfer survey VWO to Bachelor • Transfer survey Bachelor to Master • Curriculum survey first, second and third year Bachelor • Curriculum survey end of Master • Year Councils • Annual Ba & MA reports • Alumni monitor survey (Every two years) • TU/e and internal ID analysis of study program (i.e. students' course results, interim tests, FBP & FMP delay, curriculum revision, program efficiency, assessment protocols (As frequent as needed) • BC & GS policies & context in ID program

	<p>3. Professionalization of lecturers</p> <ul style="list-style-type: none"> - BKO portfolios - Innovations in education (i.e. blended learning, hands-on, etc.) - Use of new tools, educational methods and approaches in courses <p>4. Study program</p> <ul style="list-style-type: none"> - Pass rates course level - Learning yield/Pass rates cohort level - Analyses of curriculum changes - Choices in study paths - BSR - Study delays - # Female/male students - # International students - New English bachelor program - New PRV approach (after audit) - Etc. 	<ul style="list-style-type: none"> • # BKO certificates • Quality of education improved • Support to lecturers <ul style="list-style-type: none"> • Annual Ba & MA reports • Management reports: an overview of pass rates • Internal ID analysis of study program (i.e. students' course results, FBP & FMP delay, curriculum revision, program efficiency, assessment protocols, etc.) • BC & GS policies & context in ID program • Tasks forces and working groups to revise curriculum • Supervisory Board • Contact with alumni • ID Accreditation reports • TU/e accreditation (Instellingsaccreditatie – ITK-)
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The ID department uses the standard indicators as provided by the Bachelor College and Graduate School or evaluating separate learning activities. Table 5. Bachelor College and Graduate School standard indicators for students' surveys*

Indications				
		Grade	aspects	Level and Workload
	betekenis	Scale 1- 10	Scale 1-5	Optimum answer is 3 (of 5) <3 is less >3 is more
Red	Insufficient	< 5,5	< 3	<2,5 en >3,5
Orange	below average	5,5 → 6	3 → 3,2	2,5→2,7 en 3,3→3,5
	average	6 → 8	3,3 → 4	2,7 →3,3
Blue	excellent	≥8	≥4	

Figure 4. BC & GS Indicators quality of courses.

*These indicators are taken as a reference framework to decide to take actions by the ID Teacher Support and plan meetings with teachers and program director to agree on course improvements.

The course ratings are used as one of the aspects indicating that actions for improving a learning activity are needed. Obviously, the decisions are made based on multiple indicators and in close collaboration with the responsible lecturers.

3.2 Communicating information on monitoring the quality of a course and program level

There are several communication channels for the evaluation results both at course and program level. Course level: Results collected from questionnaires together with courses' and projects' results are analyzed and, in the form of management reports are discussed and sent to the Program Committee, Examination Committee, Program Director and Manager ESA-ID. Based on the analysis and following the BC and GS survey score indicators, the Teacher Support together with the Program Director hold review meetings in order to evaluate course problems and agree on an improvement plan. Short reports from these meetings are sent by the Teacher Support to the Program Committee to inform about the improvement plans and agreements with the teachers. This allows the PC to evaluate yearly the course' developments.

In addition, courses' results are communicated via the year councils, and on the department website. (See also graph below: Overview of Quality Assurance process).

Program level: The outcomes of questionnaires at program level, such as the NSE, are presented during the semester-kick off with staff and students. These indicators together with other study program and management reports, form the management of education tool that serve to carry out an evaluation of the program and curriculum every year so that improvements and new steps can be formulated. This information is shared in the ID education day(s).

Third, the evaluation results are communicated via the annual report wherein all findings of evaluations are integrated. A reflection on the current situation and what the next improvement steps are, are also mentioned in the annual report. In terms of external accountability, the annual report is sent to both the Deans Bachelor College and Graduate School. Points of attention and new actions are formulated so that developments can be evaluated annually according to TU/e and departmental targets. Internally, the Program Committee and the Departmental Board, review also the progress of the study program. A general accountability moment takes place when the annual evaluation of the curriculum is presented in the education day.

It must be noted though that the institutional human resource management policy is currently redesigned. The evaluation results will also be presented and discussed in bi-yearly capacity group meetings.

It is the responsibility of educational staff to introduce the evaluation results in the annual development meetings with their Capacity Group Leader. The ID Board wishes to await the outcomes of this redesign before the current procedures for the intersection of QA and HRM will be evaluated, redesigned if needed, and described in a policy-document.

4 Support to faculty staff in the improvement of the quality of education

In order to adequately implement changes, the Department of ID offers support to its teachers. The staff can get support from a variety of sources. First, the Teacher Support (TS) with educational and didactical background, can provide pedagogical support and advice on how to (re)design a course and on using digital tools in education. It is also the contact person for teachers regarding questions on Canvas. The teacher support officer advises the teacher on whom to contact or which question to address. Teacher trainers of DPO TEACH can provide teachers with courses and coaching for their professional development. This is also the unit where teachers follow courses to obtain their BKO. Fourth, teacher support unit of the central ESA team can provide assistance with practical or technical issues with for example new online platforms and to make courses blended.

5 Criteria and frequency to monitor the quality of education at the course level

Following institution policy, ID uses the following criteria to evaluate courses:

- It is a new course;
- There is a new teacher responsible for the course;
- There are (some) items in the course evaluations which score lower than the general standard indicators;
- The course has low/high pass rates (according to standards);
- Significant changes have been made to the course as a result of the previous evaluation;
- There is a lecturer involved in the course who follows the UTQ/BKO program;
- Specific themes need to be followed up and/or evaluated, i.e., PRV; drop-out BC regulations on interim test in the second and third year; math learning line, etc.;
- New departmental or curriculum changes are integrated, i.e., English bachelor study program;
- The lecturer has introduced innovations

With the implementation of the new Bachelor and Master curriculum, and in line with the Bachelor College QA policy, it was decided to use the guideline of evaluating all courses at least three times. The evaluation rate will be decreased when it appears that courses have been evaluated positively by students for two years in a row.

6. Analysis of the current situation

To close the circle of the QAP the table with curricular perspectives of Van den Akker (2004) is specified for the strategy, policy and operational level and filled out with available sources covering the different perspectives. This approach makes clear which aspects are not included in the QAP. If a cell is empty it means that the perspective combined with the level of strategy/policy/operation is not covered by documents or initial actions (yet). The color codes mean respectively:

- Black: nothing yet and nothing will be developed.
- Orange: not developed yet but considered to be developed or under construction
- Green: sufficiently covered.

The orange cells can be used as a starting point for determining what additional actions should be undertaken in the context of QAP. It is important to bear in mind that it is not about filling all the cells but merely to find out where the gaps are and identify where the action is needed. This is precisely the final action points for semester one of 2021-2022.

Table 6. Curricular perspectives specified Van den Akker (2004)

	Intended		Implemented		Attained		ASSURED
	Ideal rationale	Written	Interpreted	Operational	Experienced	Learned	to be added..
Strategy							
Policy		PER/ER/assessment policy and QAP documents	Means for data-collection is developed and implemented Semester A & B every year	Means for data-collection is developed and implemented Semester A & B every year	Education-Day additional means for data collection is developed and implemented in semester A & B every year	Means for data-collection should be developed and implemented Semester A & B every year	Year reports of PC/EC/ Program Director
Operation		Digital study-guide/written study-guide/guides for teachers/ Expertise Area rubrics/course descriptions	Means for data-collection is developed and implemented Semester A & B every year 2020-2021	Means for data-collection is developed and implemented Semester A & B every year	Questionnaires for courses/ curricula/project rubrics and course rubrics		

6 Follow-up

This document has been written to give an overview of the ID QAP. The document will be updated annually. One of the characteristics of a QAP is that it is future-oriented and a continuous process of monitoring and improving education. This document also rise some points for improvement to be realized in the next Academic year 2021-2022 and to be included in the next version of this policy document. These points from last year are:

- Include a vision on education and link it to this QA policy document, with attention to Vision 2030 and innovations in education. This action has been realized in the 4-year innovation project proposal that has been awarded by TU/e central office.
- Include a formal description of the PC from the departmental regulations as soon as these regulations are approved; (see appendix 3 below from the BBR (Bestuur en Beheersreglement- Departmental Regulations).
- Include a paragraph on the QA mechanisms related to squads as mentioned in section 2.2.1 in this document. This requirement has been realized.

References

1. Scheerens, J., Luyten, H., & Ravens, J. (2010). Visies op onderwijskwaliteit": met illustratieve gegevens over de kwaliteit van het Nederlandse primair en secundair onderwijs.
2. Tabla, H. (1962). Curriculum Development.
3. Van den Akker, J. (2004). Curriculum perspectives: An introduction. In *Curriculum landscapes and trends* (pp. 1-10). Springer Netherlands.

Appendix 1 – NVAO standards

Intended learning outcomes

Standard 1: The intended learning outcomes tie in with the level and orientation of the program; they are geared to the expectations of the professional field, the discipline, and international requirements.

Teaching-learning environment

Standard 2: The curriculum, the teaching-learning environment and the quality of the teaching staff enable the incoming students to achieve the intended learning outcomes

Student assessment

Standard 3: The program has an adequate system of student assessment in place.

Achieved learning outcomes

Standard 4: The program demonstrates that the intended learning outcomes are achieved. (Cf. the paragraph on initial accreditations, Exception: ex-ante assessment in initial accreditations).

Appendix 2 Opzet Jaar Raden Draaiboek

Geschreven door: Simon Bavinck op 12/04/2018
met ondersteuning van Lesley Lock en Lianne de Jong

Doel jaarraden

De primaire functie van jaarraden is het fungeren als achterban voor de opleidingscommissie, de jaarraden wordt gevraagd om input en feedback over vakken, projecten en andere onderwijsgerelateerde vraagstukken.

Secundaire functies zijn het creëren van een snelle feedbackloop tussen studenten en de director of education (DoE) en de kwaliteitszorgmedewerker.

Opzet jaar raden

Samenstelling

Er zijn drie jaar raden: een Propedeuse-Raad, een Bachelor-Raad en een Master-Raad. Elke raad bestaat ten minste uit een OC-lid uit de betreffende subgroep (OC vertegenwoordiger)-bijvoorbeeld in de B-Raad, een bachelor lid uit de OC-, 4 andere studenten uit de subgroep, en twee jaarraad coördinatoren. Uit de praktijk is gebleken dat een groep van rond de 8 tot 10 personen ideaal is. Vaak kunnen niet alle leden aanwezig zijn, met een groep van 8 tot 10 personen zijn er minimaal 4 leden maar meestal rond de 6 leden aanwezig. De jaarraden worden gecoördineerd door twee studenten, de student assistent kwaliteitszorg en de commissaris onderwijs van studievereniging Lucid.

Vergader structuur

De raden vergaderen gemiddeld één maal per maand, dit komt uit op ongeveer twee vergaderingen per kwartiel. Deze vergaderfrequentie zorgt voor een goed en representatief beeld van vakken, projecten en andere langerlopende onderwerpen, omdat er twee feedback momenten per onderdeel zijn. Ook waarborgt deze frequentie dat vergaderpunten die binnen korte tijd behandeld dienen te worden niet te lang blijven liggen. Denk hierbij aan beleidsveranderingen, een goed voorbeeld hiervan in collegejaar 17/18 is het invoeren van MomenTUM waar binnen korte tijd besluit over genomen moest worden.

Verantwoordelijkheden OC vertegenwoordiger

De OC vertegenwoordiger zorgt voor een goede informatiestroom tussen de OC en de jaarraden. Dit betekent dat de OC vertegenwoordiger wordt betrokken bij het opstellen van de vergaderagenda's voor de jaarraden (zie taken jaarraad coördinatoren), hierbij is het de verantwoordelijkheid van de OC vertegenwoordiger dat alle relevante vraagstukken van de OC terecht komen bij de jaarraden, de CO van Lucid is hierbij ondersteunend. Deze verantwoordelijkheid werkt ook andersom, de OC vertegenwoordiger deelt ook de relevante punten uit de jaarraden tijdens de OC vergadering, hierbij is de CO Lucid wederom ondersteunend

Omschrijving taken jaarraad coördinatoren

Om de kwaliteit van de inhoud van de vergadering en de vergaderstructuur te handhaven is het van belang dat er voldoende tijd en kennis van inhoud is om de jaarraden te coördineren. Er zijn twee jaarraad coördinatoren, de CO van studievereniging Lucid en de student assistent kwaliteitszorg. Het plannen en notuleren van deze vergaderingen is een taak van de student assistent kwaliteitszorg. Concreet bestaan deze taken uit:

- Meetings inplannen en vergaderverzoeken aan genodigden sturen
- Vergaderruimtes en lunch reserveren via het secretariaat
 - Email naar: secretariaat.education@tue.nl voor deze afspraken. Het is aan te raden dit aan het begin van het jaar te doen maar ten minste 3 weken van tevoren.
- Tijdens de vergadering notuleren, deze notulen uitwerken en uitsturen naar de genodigden
- Het delen van de relevante informatie met de kwaliteitszorgmedewerker wanneer nodig.
- Het waarborgen van de zichtbaarheid van de jaarraden binnen de faculteit
 - Updaten jaarraad bord, dit bord bevat:
 - Namen, foto's en mailadressen raadsleden
 - Te bespreken en besproken onderwerpen
 - Data eerstvolgende vergadering
 - Uitleg over processen binnen de faculteit en de betrokken gremia bijvoorbeeld door middel van een infographic
 - Communiceren naar Educational Affairs wanneer er mutaties zijn binnen de raden; aan het ID kantoor van ESA via: communication.id@tue.nl
Hierdoor kan de website geupdate worden.

De CO van Lucid is verantwoordelijk voor het voorzitten en voorbereiden van de vergaderingen. Concreet betekent dit dat de CO van Lucid:

- Verantwoordelijk is voor het opstellen van de vergaderagenda's
 - Hierbij is het de bedoeling dat de CO vanuit alle gremia's input verzameld
 - De vergaderagenda's worden vastgesteld in samenspraak met de OC vertegenwoordiger (zie: verantwoordelijkheden OC vertegenwoordiger)
- De vergaderingen voorziet en zorgt voor een goede constructieve discussie over de onderwerpen
- De relevante informatie deelt met de opleidingsdirecteur en eventueel faculteitsbestuur
- De OC vertegenwoordiger steunt tijdens OC vergaderingen in het delen van de relevantie informatie uit de jaarraden met de OC
- De OC vertegenwoordigers ondersteunt bij communicatie tussen de OC en de Jaarraden.

Appendix 3 – Role of Program Committee (from the ‘Bestuur en Beheersreglement (BBR)’ - Departmental Regulations)

Paragraaf 5 Opleidingscommissie

Artikel 3.17 Opleidingscommissie (art. 9.18 WHW)

1. Het bestuur van de faculteit stelt voor elke opleiding, genoemd in artikel 2.2 leden 1 en 2 van dit reglement of groep daarvan, een opleidingscommissie in. De commissie heeft tot taak te adviseren over het bevorderen en waarborgen van de kwaliteit van de opleiding. De commissie heeft voorts:
 - a. Instemmingsrecht ten aanzien van de onderwijs- en examenregeling, bedoeld in artikel 7.13 WHW, met uitzondering van onderwerpen genoemd in het tweede lid, onder a, f, h tot en met u en x, en met uitzondering van de eisen bedoeld in de artikelen 7.28 WHW, vierde en vijfde lid, en 7.30b WHW, tweede lid,
 - b. als taak het jaarlijks beoordelen van de wijze van uitvoeren van de onderwijs- en examenregeling,
 - c. adviesrecht ten aanzien van de onderwijs- en examenregeling, bedoeld in artikel 7.13 WHW, met uitzondering van de onderwerpen ten aanzien waarvan de commissie op grond van onderdeel a 9.18 WHW instemmingsrecht heeft, en
 - d. als taak het desgevraagd of uit eigen beweging advies uitbrengen of voorstellen doen aan de opleidingsdirecteur, bedoeld in artikel 9.17 WHW, eerste lid juncto artikel 2.22 van dit reglement, en het bestuur van de faculteit over alle aangelegenheden betreffende het onderwijs in de desbetreffende opleiding. De commissie zendt adviezen en voorstellen, bedoeld onder d, ter kennisneming aan de faculteitsraad.
2. Op een advies als bedoeld in het eerste lid, zijn artikel 9.35 WHW, aanhef en onderdelen b, c en d, van overeenkomstige toepassing.
3. Indien de commissie een voorstel als bedoeld in het eerste lid, onderdeel d, doet aan de opleidingsdirecteur of het bestuur van de faculteit, reageert opleidingsdirecteur onderscheidenlijk het bestuur van de faculteit binnen twee maanden na ontvangst op het voorstel.
4. Artikel 9.31 WHW, derde tot en met het achtste lid, zijn van overeenkomstige toepassing op de opleidingscommissie. In overleg tussen de opleidingsdirecteur onderscheidenlijk het bestuur van de faculteit en de faculteitsraad kan in het faculteitsreglement een andere wijze van samenstelling van de opleidingscommissie worden vastgelegd dan verkiezing. Jaarlijks wordt vastgesteld of het wenselijk is de andere wijze van samenstelling te handhaven.
5. De opleidingscommissie is bevoegd de opleidingsdirecteur onderscheidenlijk het bestuur van de faculteit ten minste twee maal per jaar uit te nodigen om het voorgenomen beleid te bespreken aan de hand van een door haar opgestelde agenda.
6. Indien een faculteit slechts een opleiding omvat, kan het faculteitsreglement bepalen dat de taken en bevoegdheden van de opleidingscommissie worden uitgeoefend door de faculteitsraad, bedoeld in artikel 9.37 WHW.
7. In aanvulling op het eerste lid stelt het college van bestuur een gemeenschappelijke opleidingscommissie in, welke de taken en bevoegdheden van de opleidingscommissie uitoefent met betrekking tot de opleidingsoverstijgende elementen van de bachelor- en masteropleidingen van de TU/e zoals vastgelegd in de betreffende richtlijnen ex artikel 9.5 WHW. Deze commissie kent twee kamers: een kamer bacheloropleidingen en een kamer masteropleidingen. De samenstelling van beide kamers geschiedt door middel van afvaardiging door de opleidingscommissies als bedoeld in het eerste lid van telkens één stafid en één student-lid uit hun midden naar de kamer(s) waarvan hun opleiding(en) deel uitmaakt of deel uitmaken. Hierbij treden de dean TU/e Bachelor College respectievelijk de

dean TU/e Graduate School in de plaats van de opleidingsdirecteur, het college van bestuur in de plaats van het bestuur van de faculteit en de universiteitsraad in de plaats van de faculteitsraad als bedoeld in het eerste tot en met zesde lid van dit artikel.