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1. Introduction

Exam policy is a cohesive system of measures and provisions taken by a study program (or department) to monitor and enhance the quality of testing and examinations (definition by Education Inspectorate). The purpose of the exam policy is to provide justification for the method of testing, and to enhance, monitor, and safeguard the quality of testing.

In today's university education, exam policy forms a major area of focus, given the importance of meaningful exam results for motivational education, of giving appropriate study recommendations, of referrals, and self-selection (BSA, for example). Exam policy should be compatible with the Program and Examination Regulations (OER). The starting points are formed by the university's vision on teaching and testing, and the vision on teaching and testing at program level derived, as well as the descriptors that apply to a program.

As well as a vision, exam policy encompasses a description of measures and provisions, organizational and procedural aspects concerning testing and assessment, and the method used for safeguarding the quality of exams and assessments. This outline policy document states the terms and conditions that have been set down at university level, which apply to every program at TU/e. The terms and conditions are in keeping with the quality assurance system, accreditation requirements, and the Higher Education and Research Act (WHW).

The Executive Board and the dean have final responsibility at university and departmental level respectively for the quality of teaching and the awarding of degrees. Their role involves safeguarding and enhancing quality at their respective levels, with regard to teaching and testing, and ensuring that any measures and support that are needed are forthcoming. The Examination Committee has a specific task here with regard to safeguarding the level of the program and the quality of exams (see Appendix 4 for a diagrammatical representation of the safeguarding and monitoring duties).

This exam framework follows the TU/e Test Policy outline document that was adopted by the Executive Board on 24 June 2013. A pilot scheme was launched in July, in accordance with the timetable, for describing the departmental exam policy, using a format contained in an appendix, in the Departments of Industrial Engineering & Innovation Sciences and Applied Physics. The experiences and products of these departments were shared with the other departments and via the relevant TU/e consultation bodies, such as those involving program directors, the departmental examination committees and program committees, the Bachelor’s education advisory committee, the Bachelor’s programs examinations advisory committee, and the chairmen and secretaries of the examination committees. At the same time, the Implementation of Exam Policy and Examination Committees project was launched as a support mechanism, in accordance with the WHW. There has been a description of departmental exam policy in every department since 15 July 2014. The evaluation of these policy documents has resulted in modifications to the policy outline agenda. The exam framework will from now on be evaluated every year by the Central Committee for Educational Quality Assurance (CCKO) to then be updated.

2. TU/e vision of testing

TU/e is training a new generation of future-proof academic engineers. The TU/e Bachelor College has decided on an ambitious study climate where, for students, enrollment is synonymous with participation, and participation is synonymous with success. The ‘studiability’ of the programs is achieved through an optimum balance between contact hours and private study, motivational teaching and types of exam, a standardized structure and timetabling of teaching, intensive supervision of students, and clear work and performance requirements. The Graduate School offers
students the option of putting their own course of studies together, with the support of a mentor or thesis supervisor. They alternate between individual and group-based work.

The Department of Industrial Design organizes its teaching differently. It has a competency-based teaching concept in which a holistic approach is used to assess students’ development as designers. Reflection and interim feedback are important aspects of this.

TU/e is aware of the influence that tests have on the behavior of students and what students learn, and therefore aims to use exams as a ‘tool of learning’ and as a ‘tool for learning’. The interrelationship between the final exam and the interim exams fulfills both functions in the Bachelor College. The interim exams are intended to motivate students, to give them prompt feedback on how they stand, and to enable them to prepare properly for the final exam. In order that the interim exams are effective and are properly embedded in the teaching process, a number of guidelines have been drawn up, such as the requirement that compensatory exams be introduced to study components so that no more than 70% of the final mark for the study component is determined by the final exam, that for every study component an exam schedule should be available showing the position of the exam within the course, that interim exams may not be retaken, and that the validity of exam results is limited in order to prevent students deferring their studies, and that exams should be assessed on the basis of clear criteria so that the assessments can be used by students as feedback (see TU/e Bachelor College Guideline, adopted by the Executive Board on 5 April 2012).

In addition, TU/e is following developments concerning blended learning (one of the definitions of which is a mix of learning with and without ICT) and, inherent thereto, blended assessment and digital testing. Wherever possible, hardware and software will be used to implement or support the various stages of the exam cycle. The starting points here, in relation to the various stages of the exam cycle, are the optimization and safeguarding of processes so that they take place efficiently and without fraud; in relation to the tool for learning, giving students feedback effectively, individually, and as quickly as possible; and, in relation to blended learning and blended assessment, enabling students to shape and evaluate their own learning processes.

On 8 September 2014, TU/e started the digital exam program in which a number of projects are combined (e.g., controlled digital exams, exam analyses, rubrics, and detection of plagiarism).

3. TU/e vision of the quality of testing
Examiners have primary responsibility for assessing students on study components. TU/e assumes an appropriate level of professionalism on the part of teachers when it comes to ensuring that exams are valid and reliable and that the exams have a clear link to learning objectives and teaching activities (of the course), and that they are also relevant to the descriptors of the curriculum/competency framework and the TU/e and departmental education vision (such as the departmental interpretation of the OGO (Design-Based Learning)). The program management ensures that this vision is conveyed as broadly as possible and that the relevant bodies (program committee, or examination committee) safeguard the quality of how the vision is put into practice.

1 The exam cycle shows the various stages of the exam process: 1. Design of exam, 2. Exam construction, 3. Exam composition, 4. Holding an exam, 5. Exam processing and analysis, 6. Determining grades, 7. Evaluation, data interpretation, and registration of grades. In phase 1 of the next cycle, the results of the evaluation from phase 7 of the previous cycle are taken into consideration.
Every examiner/assessor is competent and preferably qualified in their specific role in the examination program; the ‘testing and assessment’ competency, as described in the university teaching qualification, is the minimum starting point here:

- When devising an exam and how it is to be assessed, the examiner is able to apply quality rules based on examination committee guidelines, as well as rules and guidelines in the Program and Examination Regulations;
- To effectively devise and use the instruments needed for testing and assessing (including an exam matrix, exam materials, and assessment criteria and models);
- To evaluate the exam and to analyze the results, and to pay due regard to the prevailing guidelines when drawing up, holding, assessing, and analyzing exams, and during the relevant administrative and archiving procedures.

There are additional requirements at ID relating to holistic assessments and student coaching. There are also additional requirements for members of the examination committees.

The quality of examiners is safeguarded through monitoring and through the provision of feedback on the quality of exams and assessments. The annual reports by the examination committees include reports on the activities relating to the expertise of the examiners.

TU/e believes there are several ways of guaranteeing the quality of exams (that is, their reliability, validity, and transparency). This can be achieved by using independent reviewers or a departmental exam committee mandated by the examination committee, but also by a system of exam meetings, for example, where a preset exam matrix is used to construct the questions, including the draft answer model, in combination with an assessment by independent reviewers. It is essential that before an exam is held, a check takes place to see whether it is relevant to the learning objectives, whether the questions are properly constructed, and whether an adequate assessment model is available. Afterwards, when the exam has been held and assessed, the exam results are analyzed and evaluated by course surveys, for example. If the analysis makes it necessary, the pass mark or assessment model will be adjusted. The quality assurance circle is closed by using the results from the analyses and evaluations to improve the quality of the exams.

The way in which the departments actually put these processes into practice may be partly prompted by the quality-assurance culture that exists in the department, or by the expertise, sources and resources available to the department. The education management ensures that the various stages of the exam cycle proceed as efficiently and effectively as possible. Ultimately, it is the relevant examination committee, acting proactively as much as possible, that safeguards the level of quality achieved. It presents its findings and areas for improvement in its annual report.

For students, transparency is the most obvious quality criterion. An important element here is that the exams and assessments are fair. This is achieved by giving students a clear and timely understanding of what subject matter is being tested and how grades are arrived at (the chances of guessing an answer, pass mark, how grades are rounded up or down), and by adhering to agreements (such as those laid down in the Program and Examination Regulations, Student Statute, the TU/e academic code of conduct, and the examination regulations). There is a careful balance between the rights and obligations of students regarding rules, procedures, and penalties. The Bachelor’s education advisory committee, the Bachelor’s programs examinations advisory committee, and the Master’s programs examinations advisory committee have an important task here.

In addition, students have to be able to prepare properly for an exam. Homework assignments, interim exams and final exams are interlinked in a logical fashion. Giving information on, preventing, detecting and imposing penalties for fraud are also part of a system of fair testing. A sound fraud
policy is very much in keeping with a sound academic culture, and will be available throughout TU/e from 1 April 2015.

4. Support and the enhancement of expertise

In order to assist teachers, program management, and committees, specific training courses and master classes are available, as are examples of applications and good practices and formats, and manuals. There also are resources on hand for deploying expertise during teaching days, conferences or workshops, and when giving feedback on exam plans and when analyzing exam data and the like.

The use of ICT in the exam cycle is explicitly part of the digital university and is a point of attention within the objective of the digital testing program and the ICT program team in education. Examples of current and future pilot schemes and projects are the use of clickers as a tool during interim exams, the deployment of PEACH during peer review, the subsequent development and dissemination of the survey and peer assessment tool in OASE, holding exams securely on students’ laptops, the detection of plagiarism, the implementation of a data-item-base with the possibility of digital processing of multiple-choice questions (exam analysis) and the use of a rubric app.

Support is also given in the provision of services. A number of these services are centrally based, including the scheduling of exam timetables, arranging of invigilators, and safe printing. There is also an option available for teachers to present their exams to a central point, after which the duplication of the exam papers, the distribution of forms, the holding of the exam, the collection of the forms and the answers, as well as the distribution of the work among the examiners, can take place in a safe manner. These services will be optimized with the help of a description and analysis of all exam-related processes.

5. Regulations

A further aspect of exam policy is the drawing up of the Program and Examination Regulations (WHW, Section 7.13) and rules and regulations of the examination committee (the TU/e examination regulations) concerning assessment and fraud, among other things (WHW, Section 7.12b). The Program and Examination Regulations contain proper and clear information about the program or group of programs.

The composition of the examination committee must comply with the law (WHW, Section 7.12a) and with the department regulations model (Section 2.10b).

There is a complaints procedure (about exams and exam-related aspects) and appeal options for students. Students can easily find and view all relevant information on regulations, such as the Program and Examination Regulations and the examination committee guidelines.

6. Departmental policy

Since 2012, a number of programs at TU/e have been assessed by review committees in accordance with the new framework (including standard 3: Testing and final qualifications). From the assessments by these various committees, it was apparent that the programs concerned have an adequate system of testing and that the testing procedures are properly implemented. However, the examination committees should play a more active role regarding the checking of the quality of the exams, the testing procedures, and the final theses. Specific reference was made to the lack of objectives in courses, exam matrices, and objective assessment forms. The review committees
stated that the programs (and the examination committees in particular) should have a clear plan of action on how the quality of testing is to be guaranteed and safeguarded in practice. With this feedback from the review committee and the initial version of the policy outline document, the departments have fleshed out exam policy documents, in which the proactive approach by the examination committee is set out in explicit terms. Examples of a proactive approach are the deployment of an exam committee or reviewers, the carrying out of random checks on the level of final theses, encouraging and discussing analyses and evaluations of exams, and the promotion of activities designed to enhance overall standards of professionalism. Assistance is available to the examination committees to enable them to carry out this proactive role effectively.

Departmental interpretation of the exam policy should be a joint product, under the responsibility of the program director, of the program management, the examination committees, and the program committee. The most important aspects of a departmental exam policy, the exam policy document, is included in Appendix 1. Appendix 2 contains a list of contents of a logically constructed departmental exam policy document, based on these aspects. These overviews are primarily intended to help the departments identify relevant components that could feature in the exam policy document; therefore, they are not intended to be comprehensive or prescriptive. However, it is the case that many of the points mentioned in the appendices are derived from current legal requirements concerning testing, which now place a greater emphasis on the measurability and transparency of performances by institutes of higher education (both at central and departmental level) and students.

7. Roles and powers

For the parties involved (such as the dean, program director, examination committee, teachers, or students), a description and a detailed version of the roles, duties, responsibilities and powers in relation to everything regarding testing and assessing is available. An understanding of each other’s roles, duties, etc. and holding each other to account in respect of responsibilities are a precondition for a functional testing organization. Mutual coordination and communication play an important role here. A brief overview of the responsibilities covered by the exam policy is shown below, as well as the various interrelationships and the desired method of coordination. Appendix 3 includes an overview of the duties and responsibilities of various parties in the testing procedure.

The examination committee fulfills an essential and authoritative role regarding testing and exam policy at program level. The examination committee, whose members are appointed by the dean, operates according to the role, responsibilities and duties set out in the WHW, and in a visibly independent and expert manner. Since 2013, following changes to the WHW, the area of focus of the examination committee has emphatically encompassed the substantive quality of exams and assessments, in addition to the setting down of guidelines and instructions within the framework of the Program and Examination Regulations; the examination committees ensure that exams/tests (and their organization) are in order and guarantee that students who obtain their diploma fulfill the descriptors. If necessary, the examination committee will initiate further investigations to this end. In the event of any problems, the committee will inform the parties responsible, and monitor the measures taken and their effects.

The safeguarding of the quality of testing and assessing is covered in the TU/e examination committee examination regulations; there is also an additional focus on the composition, appointments, work methods, and duties of the examination committee. For the details of the departmental approach to testing and exam policy, reference is made in the examination regulations to the departmental exam policy document.
8. Plan of action

According to the TU/e exam policy of 24 June 2013, two projects needed to be launched, in addition to the implementation of the departmental exam policy – one for describing and optimizing the central processes, and one for embedding expertise and support in the area of testing and examining. These projects have now been incorporated into the Implementation of Exam Policy and Examination Committees project in accordance with the WHW and the TU/e Anti-Fraud project.

An audit will be organized to see whether the departmental exam policy is up to standard and in accordance with TU/e exam policy. The results of the audit will be used to modify departmental exam policy (and its effects), wherever necessary.

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<th>Subject</th>
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<td>November 2013</td>
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<td>Description of central processes</td>
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Appendix 1: Departmental exam policy format

Below are six ingredients for the departmental exam policy document, as indicated in the TU/e Exam Policy outline document. These components, which are set out point by point, are intended as guidelines/a format for the departments for the purpose of shaping the exam policy document.

Quality assurance for exam policy and testing
- Exam policy is set down at departmental and/or program level. This implies that a department and/or program has an exam policy, carries it out, and modifies it (quality assurance cycle). There is a prominent focus in the policy plan on the departmental vision on teaching and the related vision on digital and other forms of testing, and a focus on testing as an instrument for enhancing ‘studiability’ and influencing study behavior. It also contains the responsibilities for its implementation, as well as the method used for holding periodic evaluations.
- The program has a testing plan stating how all the descriptors are assessed. The testing plan is based on the teaching method, the curriculum, and their learning trajectories. Because of the changeable nature of teaching and education, there is a description of how to ensure that the testing plan is kept up to date (monitoring, or implementing changes).
- The program has guidelines for drawing up, holding, assessing, and analyzing exams, for determining the pass mark, and for the administrative and archiving procedures. There is an archiving system for the all the relevant exam material (in accordance with the prevailing Program and Examination Regulations).
- The quality of testing and assessing, and the level of education attained by the students, are regularly checked at program level, with prompt and appropriate action being taken whenever any problems are identified.
- Examination committee members possess the expertise needed for fulfilling their roles to the desired level. The dean gives the members a hearing and appoints them, and has final responsibility for their performance, and for that of the committee. There are schooling, advice, and support options available to the examination committees.
- The examination committee accounts for (and reflects on) its activities in an annual report. The annual report is discussed with the dean and the program director.
- The department ensures that the expertise of the examiners is transparent in relation to testing and assessing. They create opportunities for schooling, advice, and support by exam experts.

Safeguarding the final level of attainment by students
- When monitoring the final level of attainment, specific attention is paid to the authenticity and standard of the theses and final assignments as an indication of the level of attainment of the graduates. Clear assessment criteria can be a useful guide for achieving this.
- With regard to the authenticity of the work of students, the program has set out a fraud policy covering the following aspects: providing information on fraud, preventing fraud, detecting fraud, and penalties imposed on those guilty of fraud.
- There is a quality assurance system for monitoring and safeguarding the final level of attainment by students (Bachelor’s and Master’s level).
- Any investigation into the level of attainment by students may involve the professional field, experts, and alumni. International benchmarking may also be considered.

Subject of testing
- Clear descriptors have been formulated for the program, which are in keeping with the Dutch qualification structure and meet international requirements. The starting points are the Dublin Descriptors and the 3TU Criteria for Academic Bachelor’s and Master’s Curricula.
The descriptors are translated into learning trajectories and learning objectives for the various curriculum components.

- The program ensures a clear and sound relationship between the descriptors of the program, the learning trajectories and learning objectives, and the testing of the learning objectives.

- Exam methods depend on the learning objectives, and are sufficiently relevant to them.

- The exam methods selected are consistent with the mode of teaching and the learning objectives of the curriculum component.

Exam schedule

- The exam schedule is set up in such a way that it quickly becomes clear, especially in the early stages, whether a student is going to be able to successfully complete his or her studies.

- By the authority of the examination committee, the exam timetable for any given semester is published at least one month before the start of the semester in question, including the dates and times of the exams. The time or location of a scheduled exam may only be altered with the permission of the examination committee.

Types of exam and requirements of exams

- For each curriculum component or course, there is a visible link between the learning objectives, modes of teaching, and the type of exam. There are checks on the links between learning objectives, modes of teaching, and type of exam. Account is also taken of the functions of the ‘tool of learning’ and ‘tool for learning’ exam aspects.

- Every exam meets the admission criteria, is transparent, valid, and reliable:
  - Transparent: before the exam, it is made clear to students how they are being tested, and on what subject matter.
  - Valid: the exam covers the learning objectives. Content (consistent with the learning objectives), level (the degree of difficulty) and a good representation of the subject matter are key aspects of validity.
  - Reliable: the exam makes a meaningful distinction between the students who easily meet the learning objectives, and those who do not. The quality of the exam plays a role here (individual ability, minimal chance of guessing the right answers, lack of ambiguity), as do the circumstances in which the exam is held (standardization and objectivity) and the method used for assessing the results (objective, not random, accurate).

- Appropriate assessment procedures and models (such as answer models, assessment criteria, rubrics) are available for each exam. The means by which the pass mark is determined is set down in advance, with the reasons.

- Exams are evaluated on the basis of an analysis of the results. If the analysis of the exam gives rise for doing so, the pass mark and assessment may be adjusted. The course evaluation data may result in the teaching and the exam being modified for the next academic year.

Organizational matters, procedures, rules and guidelines

- Accountability for how attention is paid to the adequate regulation of various matters is given in the exam policy document, including:
  - the period within which exams must be assessed, administration, publication of the results;
  - the drawing up, holding, assessment, analysis, and evaluation of exams;
  - communication with students;
  - scheduling of exams;
  - preventing, identifying, and dealing with plagiarism and fraud;
- complaints, appeals options for students.

A clear distinction is made here between ensuring and safeguarding.

- The examination committee has drawn up rules and guidelines (for examiners in particular) concerning assessing, as stated in WHW, Section 7.12b.

- The program has guidelines for drawing up, holding, assessing, and analyzing exams, and for administrative and archiving procedures (all in accordance with the Program and Examination Regulations).

- There is a good archiving system available for the exam material, students’ answers, and assessments.

- The rules and guidelines drawn up by the program and the examination committee are actively brought to the attention of the examiners (teachers) and other relevant parties. The information is easy to find and understand.

- There is a complaints procedure (about exams and exam-related aspects) and appeal options for students.

- All relevant information about regulations, such as the Program and Examination Regulations, the Student Statute, the complaints procedure (about exams and exam-related aspects) and appeals options, is easily available for students, and is set out in clear terms.
Appendix 2: Example of contents of departmental exam policy document

Introduction
Ideally, the introduction should contain a description (and an organizational chart) of the organizational structure behind exams.

1. Vision of teaching and examinations
   1.1 Vision of teaching
   - Descriptors of the program
     see Subject of Testing aspect, subject 1:
     - Clear descriptors have been formulated for the program, which are in keeping with the Dutch qualification structure and meet international requirements. The starting points are the Dublin Descriptors and the 3TU Criteria for Academic Bachelor’s and Master’s Curricula.
   - Translating descriptors into learning objectives
     see Subject of Testing aspect, subjects 2 and 3:
     - The descriptors are translated into learning trajectories and learning objectives for the various curriculum components.
     - The program ensures a clear and sound relationship between the descriptors of the program, the learning trajectories and learning objectives, and the testing of the learning objectives.
   - Connections between learning objectives and types of exam
     see Types of Exam aspect and requirements of exams, subject 1 first part + Subject of Exam, subjects 3, 4, and 5:
     - For each curriculum component or course, there is a visible link between the learning objectives, modes of teaching, and the type of exam.
     - The program ensures a clear and sound relationship between the descriptors of the program, the learning trajectories and learning objectives, and the testing of the learning objectives.
     - Exam methods depend on the learning objectives, and are sufficiently relevant to them.
     - The exam methods selected are consistent with the mode of teaching and the learning objectives of the curriculum component.
   - Monitoring
     see Types of Exam aspect and requirements of exams, subject 1 second part + Subject of Exam, subject 4:
     - There are checks on the links between learning objectives, modes of teaching, and type of exam.
     - Account is also taken of the functions of the ‘tool of learning’ and ‘tool for learning’ exam aspects.

1.2 Vision of exams
   see Quality assurance for exam policy and testing aspect, subject 1 second part and Scheduling of Exams, subject 1:
   - There is a prominent focus in the policy plan on testing as an instrument for enhancing ‘studiability’ and influencing study behavior. It also contains the responsibilities for its implementation, as well as the method used for holding periodic evaluations.
   - The exam schedule is set up in such a way that it quickly becomes clear, especially in the early stages, whether a student is going to be able to successfully complete his or her studies.
   - The vision on digital testing.
It is important that a link be made between the vision of teaching and exams of the department and TU/e.

2. Safeguarding the quality of exams

see Quality assurance for exam policy and testing aspect, subject 1 first part:
- Exam policy is set down at departmental and/or program level. This implies that a department and/or program has an exam policy, carries it out, and modifies it (quality assurance cycle).
- Policy on fraud is set out centrally and implemented by each department.
- The board ensures the quality of exams and describes this in its documents. The examination committee safeguards the quality of exams and describes how it does so in its documents.

2.1 Exam plan

see Quality assurance for exam policy and testing aspect, subject 2:
- The program has an exam plan stating how all the descriptors are assessed. The exam plan is based on the teaching method, the curriculum, and their learning trajectories.
- Because of the changeable nature of teaching and education, there is a description of how to ensure that the exam plan is kept up to date (monitoring, modifications).

see Scheduling of Exams aspect, subject 2:
- By the authority of the examination committee, the exam timetable for any given semester is published at least one month before the start of the semester in question, including the dates and times of the exams. The time or location of a scheduled exam may only be altered with the permission of the examination committee.

2.2 Procedures for drawing up, submitting (by teachers), holding, and assessing exams

see Organizational matters, procedures, rules and guidelines aspect, subject 1:
- Accountability for how attention is paid to the adequate regulation of various matters is given in the exam policy document, including:
  o the period within which exams must be assessed, administration, publication of the results;
  o the drawing up, holding, assessment, analysis, and evaluation of exams;
  o determining the pass mark;
  o communication with students;
  o scheduling of exams;
  o preventing, identifying, and dealing with plagiarism and fraud;
  o complaints, and appeals options for students.

see Quality assurance for exam policy and testing aspect, subjects 3 and 4:
- The program has guidelines for drawing up, holding, assessing, and analyzing exams, for determining the pass mark, and the administrative and archiving procedures.
- There is an archiving system for the all the relevant exam material (in accordance with the prevailing Program and Examination Regulations).

see Organizational matters, procedures, rules and guidelines aspect, subject 5:
- The rules and guidelines drawn up by the program and the examination committee are actively brought to the attention of the examiners (teachers) and other relevant parties. The information is easy to find and understand.

• Procedure for drawing up exams

see Types of Exam aspect and requirements of exams, subject 2:
- Every exam meets the admission criteria, is transparent, valid, and reliable:
  o Transparent: before the exam, it is made clear to students how they are being tested, and on what subject matter.
Valid: the exam covers the learning objectives. Content (consistent with the learning objectives), level (the degree of difficulty) and a good representation of the subject matter are key aspects of validity.

Reliable: the exam makes a meaningful distinction between the students who easily meet the learning objectives, and those who do not. The quality of the exam plays a role here (individual ability, minimal chance of guessing the right answers, and lack of ambiguity), as do the circumstances in which the exam is held (standardization and objectivity) and the method used for assessing the results (objective, not random, and accurate).

- Procedures for delivering the exams (by teachers)
- Procedures for holding exams
  see Organizational matters, procedures, rules and guidelines aspect, subjects 6 and 7:
    - There is a complaints procedure (about exams and exam-related aspects) and appeal options for students.
    - All relevant information about regulations, such as the Program and Examination Regulations, the Student Statute, the complaints procedure (about exams and exam-related aspects) and appeals options, is easily available for students, and is set out in clear terms.
- Procedures for assessing exams
  see Types of Exam aspect and requirements of exams, subject 3 and Organizational matters, procedures, rules and guidelines aspect, subject 2:
    - Appropriate assessment procedures and models (such as answer models, assessment criteria, and rubrics) are available for each exam.
    - The means by which the pass mark is determined is set down in advance, including reasons.
    - The examination committee has drawn up rules and guidelines (for examiners in particular) concerning assessing, as stated in WHW, Section 7.12b. See aspect.

2.3 Measuring results: instruments for measuring the quality of exams
  see Quality assurance for exam policy and testing aspect subject 4:
    - The quality of testing and assessing, and the level of education attained by the students, are regularly checked at program level, with prompt and appropriate action being taken whenever any problems are identified.
  see Types of Exam aspect and requirements of exams, subject 4:
    - Exams are evaluated on the basis of an analysis of the results. If the analysis of the exam gives rise to doing so, the pass mark and assessment may be adjusted. The course evaluation data may result in the teaching and the exam being modified for the next academic year.

2.4 Fraud policy
  see 2.2 Procedures for drawing up, delivery (by teachers), holding, and assessing exams: preventing, identifying, and dealing with plagiarism and fraud;

2.5 Responsibilities of examination committee and dean
  see Quality assurance for exam policy and testing aspect, subjects 5 to 7:
  Examination committee members possess the expertise needed to fulfil their roles to the desired level. The dean gives the members a hearing and appoints them, and has final responsibility for their performance, and for that of the committee. There are schooling, advice, and support options available to the examination committees.
  The examination committee accounts for (and reflects on) its activities in an annual report. The annual report is discussed with the dean and the program director.
  The department ensures that the expertise of the examiners is transparent in relation to testing and assessing. They create opportunities for schooling, advice, and support by exam experts.
3. Safeguarding the final level of attainment by students

3.1 Level of BSc and MSc theses
   - When monitoring the final level of attainment, specific attention is paid to the standard of the theses and final assignments as an indication of the level of attainment of the graduates. Clear assessment criteria can be a useful guide for achieving this.

3.2 Quality assurance of BSc and MSc theses
   - There is a quality assurance system for monitoring and safeguarding the final level of attainment by students (Bachelor’s and Master’s level).

3.3 Involvement of stakeholders
   - Any investigation into the level of attainment by students may involve the professional field, experts, and alumni. International benchmarking may also be considered.
## Appendix 3: Roles and powers

### Exam policy responsibilities

<table>
<thead>
<tr>
<th>Preconditions</th>
<th>Parties responsible</th>
<th>Harmonization/relationship with</th>
<th>Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Composition of and appointments to examination committee</td>
<td>Dean</td>
<td>Program Director + Examination Committee</td>
<td>WHW, Section 7.12, 7.12a and 7.12b, and Departmental Regulations model, Article 2.10B and 2.11B</td>
</tr>
<tr>
<td>Appointment of examiners</td>
<td>Examination Committee</td>
<td>Program Director + Dean</td>
<td>WHW, Section 7.12c paragraph 1</td>
</tr>
<tr>
<td>Examination committee annual report</td>
<td>Examination Committee</td>
<td>Program Director + Dean</td>
<td>WHW, Section 7.12b paragraph 5, and Departmental Regulations model, Article 2.13B</td>
</tr>
<tr>
<td>Program and Examination Regulations program</td>
<td>Executive Board + Dean</td>
<td>Program Director + Dean + Program Committee</td>
<td>WHW, Section 7.13 and Section 7.14</td>
</tr>
<tr>
<td>University-wide exam policy</td>
<td>Executive Board + Dean</td>
<td>Program Director + Dean + AEB + ACB</td>
<td>TU/e exam policy framework</td>
</tr>
<tr>
<td>Program exam policy</td>
<td>Program Director</td>
<td>Examination Committee + Program Committee + Dean</td>
<td>TU/e exam policy framework</td>
</tr>
<tr>
<td>Examination regulations (assessment guidelines)</td>
<td>Examination Committee</td>
<td>Program Director + Program Committee + Dean</td>
<td>availability of Program and Examination Regulations + WHW, Section 7.12b paragraph 1b</td>
</tr>
<tr>
<td>Quality of examiners</td>
<td>Dean</td>
<td>Examination Committee + Program Director + Dean</td>
<td>TU/e exam policy framework</td>
</tr>
<tr>
<td>Safeguarding the quality of testing</td>
<td>Examination Committee</td>
<td>Program Director + Program Committee + Dean</td>
<td>Examination Regulations (WHW, Article 7.12b)</td>
</tr>
</tbody>
</table>

### Teaching and examination process

<table>
<thead>
<tr>
<th>Parties responsible</th>
<th>Harmonization/relationship with</th>
<th>Requirements</th>
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</thead>
<tbody>
<tr>
<td>Program descriptors</td>
<td>Program Director</td>
<td>Examination Committee + Program Committee + Dean</td>
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<tr>
<td>Task</td>
<td>Role</td>
<td>Responsible Parties</td>
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<tr>
<td>Program exam plan (learning trajectories/learning objectives based on descriptors)</td>
<td>Program Director</td>
<td>Examination Committee + Program Committee + Dean</td>
</tr>
<tr>
<td>Learning objectives for each course</td>
<td>Program Director</td>
<td>Examiners + Examination Committee + Program Committee + Dean</td>
</tr>
<tr>
<td>Making sample exams available</td>
<td>Examiner</td>
<td>Co-examiners + Examination Committee</td>
</tr>
<tr>
<td>Exam matrix/exam schedule</td>
<td>Examiner</td>
<td>Co-examiners + Examination Committee</td>
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<tr>
<td>Exam + exam quality</td>
<td>Examiner</td>
<td>Co-examiners + Examination Committee</td>
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<tr>
<td>Assessment procedures and model</td>
<td>Examiner</td>
<td>Co-examiners + Examination Committee</td>
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<td>Determining the pass mark</td>
<td>Examiner</td>
<td>Co-examiners + Examination Committee</td>
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<tr>
<td>Assessment</td>
<td>Examiner</td>
<td>Co-examiners + Examination Committee</td>
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<tr>
<td>Exam analysis and evaluation</td>
<td>Examiner</td>
<td>Co-examiners + Examination Committee</td>
</tr>
<tr>
<td>Organization of testing</td>
<td>Parties responsible</td>
<td>Harmonization/relationship with</td>
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<tr>
<td>Registering for scheduled exams</td>
<td>Student</td>
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<tr>
<td>Holding an exam</td>
<td>Student</td>
<td>STU + Department + Dean</td>
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<tr>
<td>Scheduling of exams</td>
<td>Program Director</td>
<td>Examination Committee + Department</td>
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<tr>
<td>Fraud and complaints</td>
<td>Parties responsible</td>
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</tr>
<tr>
<td>Fraud and detection of plagiarism</td>
<td>Examiner</td>
<td>Examination Committee</td>
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<tr>
<td>Dealing with cases of fraud</td>
<td>Examination Committee</td>
<td>Examiner</td>
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<tr>
<td>Dealing with complaints in relation to exams</td>
<td>Examination Committee</td>
<td>Examiner and/or Examinations Appeals Board</td>
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<tr>
<td>Exemptions and degree certificates</td>
<td>Parties responsible</td>
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<tr>
<td>Exemptions</td>
<td>Examination Committee</td>
<td>STU + Department</td>
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<td>Degree certificate</td>
<td>Examination Committee</td>
<td>STU + Department</td>
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<tr>
<td>Module certificate</td>
<td>Examination Committee</td>
<td>STU + Department</td>
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</tbody>
</table>
Appendix 4: Ensuring versus safeguarding

The division of the responsibilities of the examination committee and management at TU/e

Based on Van Zijl & Jaspers (2012), Joosten-ten Brinke & Van der Linen-Straatman (2012). Reviewers can assess the quality of an exam before it is held, a test committee may be appointed by the examination committee, whether or not with specific points of attention concerning the safeguarding of the quality of exams.