
QUALITY POLICY 2020

IT University of Copenhagen

Version 5

NOVEMBER 25, 2019
IT UNIVERSITY OF COPENHAGEN
Rued Langgaards Vej 7, DK 2300 S

| Preamble of the Quality Policy | |
|--------------------------------|---|
| Summary | <p>The Quality Policy defines Quality Standards of the IT University of Copenhagen (ITU). Further, the document names ITU’s (<i>Quality</i>) <i>Work Processes</i> (e.g., the work processes through which the Quality Standards are maintained and monitored); and describes the <i>Alarm Handling Processes</i>, i.e., the processes that are invoked upon discovery of breach of quality standards.</p> |
| Context for the Quality Policy | <p>The Quality Policy is sub-ordinate to ITU’s overall strategy and strategic framework contract, which contain development goals agreed with the Ministry. The university reports on all development goals in its Annual Report and the reporting is audited by the university’s Auditor and the Auditor General.</p> <p>The Quality Policy is approved by Executive Management.</p> <p>At ITU, a study programme is said to be <i>ideal</i>, if [1]</p> <ol style="list-style-type: none"> 1) it attracts a large number of well-qualified students; and 2) the academic contents and the teaching are both world-class; and 3) the students acquire competences that are in high demand in the labour market. <p>ITU systematically works towards all of its study programmes becoming ideal. This quality enhancement work is formalised through <i>development goals</i>, present in the university’s strategic framework contract [2] and strategy [1].</p> <p>Any failure to reach development goals is obviously a challenge that the university must address, but it is not necessarily a sign of poor quality in existing study programmes.</p> <p>By contrast, the university has defined a set of <i>quality standards</i>, the breach of which is a sign of quality issues that need to be dealt with in a manner, which has been thought out in advance. That is the quality assurance part of the quality work.</p> <p>We use this distinction between <i>goals</i> and <i>standards</i> throughout this Quality Policy.</p> <p>The Quality Policy has been designed in accordance with the European Standards and Guidelines (ESG) for internal quality assurance within higher education institutions [3] and the guidelines for institutional accreditation by the Danish Accreditation Institution [4].</p> |
| Purpose | <p>Ideal study programmes arise not just (or even primarily) through reporting and monitoring but, more importantly, through the day-to-day work that faculty perform with other faculty, with external stakeholders and with students.</p> <p>To assure and continuously enhance quality, however, it is necessary to know the current state of affairs, to record the arguments for changes and to ensure</p> |

| | |
|------------------------------------|--|
| | <p>that good ideas are tested and, if successful in test, adopted in practice. This requires appropriate organizational structures and coordination of efforts. The purpose of the Quality Policy is to describe the organisation and coordination of efforts through which ITU continuously and systematically assures and enhances educational quality.</p> <p>The day-to-day users of the Quality Policy include teachers; those with managerial responsibilities for teaching or research at ITU; all student and faculty representatives serving on Subject Area Teams and the Board of Studies; and administrative staff working with education.</p> |
| <p>Scope of the Quality Policy</p> | <p>The Quality Policy defines ITU's Quality Standards; names ITU's (<i>Quality</i>) <i>Work Processes</i> (e.g., the work processes through which the Quality Standards are maintained and monitored); and defines the <i>Alarm Handling Processes</i>, i.e., the processes that are invoked upon discovery of breach of quality standards. Some alarm handling actions are <i>mandatory</i> (described using words like "must"); other actions (described using words like "may" or "suggest") are <i>recommendations</i>, which may be replaced with other ones which, in the eyes of those responsible for the quality standards, are at least as effective as the ones listed in this document.</p> <p>The Quality Policy applies to all Bachelor, MSc and part-time programmes at ITU. The procedures for starting new study programmes are described in a separate document [18].</p> |
| <p>Policy Areas</p> | <p>The Quality Policy has three <i>Quality Policy Areas</i>, corresponding to ITU's definition of what it means for a study programme to be ideal:</p> <ol style="list-style-type: none"> 1) Recruitment and Admission of Students 2) Teaching and Learning 3) Graduates' Careers <p>For each Quality Policy Area, we state in the Quality Policy:</p> <ol style="list-style-type: none"> a) Relevant context in which the Quality Policy Area resides, e.g., relevant development goals; b) Definition of the quality standards for that area. <p>Every quality standard is either decidable by itself or broken down into sub-ordinate standards, which are decidable; in the latter case, we say that the standard is met, if all the sub-ordinate standards are met.</p> <p>For each standard, the Quality Policy states who is responsible for the standard.</p> |
| <p>Responsibility</p> | <p>The Vice Chancellor is responsible for the Quality Policy; the implementation of the policy takes place through processes anchored in Executive Management.</p> <p>The implementation of the policy respects delegations given by law or by delegation from the Vice Chancellor. For example, by law, the Board of Studies is responsible for the quality assurance of individual study programmes, whereas, by delegation from the Vice Chancellor, the Heads of Department are responsible for hiring of faculty.</p> |

| | |
|----------------------|--|
| | <p>Throughout the Quality Policy, to be responsible for a quality standard means:</p> <ul style="list-style-type: none"> • At regular intervals (which are defined in the Quality Policy), one must find out whether the standard is met or not • One must record the documentation showing that the standard is met or not at the place indicated in the Quality Policy • If the standard is not met, one must initiate follow-up actions, as stated in the quality standard. <p>The Quality Policy lists responsibilities by quality standards rather than by roles. Thus, the definition of a standard within a Quality Policy Area contains the following fields:</p> <ul style="list-style-type: none"> • Summary (optional): A brief summary about what the quality standard says; • Terminology (optional): Introduction of concepts or notation used in this (and perhaps subsequent) quality standards; • Predicate: a decidable, boolean predicate defining when the standard is met; • Responsible: reference to role or collegial body which is responsible, in the sense defined in this Preamble; • (Quality) Work Process: reference to or description of a process which contains the monitoring and follow-up actions of the standard; see [16] for descriptions of all processes; • Place of record: where is documentation of the fulfilment or otherwise of standard to be stored; • Alarm-handling Process: description of process describing corrective steps in cases the standard is <i>not</i> met, i.e., if the predicate of the standard is <i>false</i>. |
| Primary Quality Data | <p>Some standards and goals refer to or rely on <i>Primary Quality Data</i>, of which there are the following:</p> <ul style="list-style-type: none"> • Recruitment and Admission of Students <ul style="list-style-type: none"> a) Number of applications, number of applicants offered admission, number of admitted students and origin of admitted students (BSc and MSc) b) Percentage of female students admitted to BSc SWU and BSc DS after early dropout • Teaching and Learning <ul style="list-style-type: none"> c) For full-time study programmes: drop out after first year, average delay, compared to Curriculum Document¹ schedule, and rate of students who complete within scheduled time plus one year d) Research-based teaching (VIP/DVIP-ratio) e) Course Evaluation Results f) Student Evaluations of Final Projects and Other Projects g) Uddannelseszooom, students (selected questions) |

¹ In this document, we use the term “Curriculum Document” is used for what in Danish is called “studieordning”. We use the term “curriculum” to refer collectively to all learning objectives and learning activities.

| | |
|------------------------------|--|
| | <ul style="list-style-type: none"> • Graduates' Careers <ul style="list-style-type: none"> h) Gross unemployment rate of MSc graduates 4 to 7 quarters after graduation (study programme, ITU, national average) i) Rolling, weighted average unemployment rate of MSc graduates 4-7 quarters after graduation (study programme, ITU, national average) j) Gross employment rate of BSc and MSc graduates (study programme, ITU) k) Uddannelseszoom, graduates (selected questions) <p>The definitions of the Primary Quality Data are found in <i>Appendix A Definitions of Primary Quality Data</i>.</p> <p>The University Director is responsible for making Primary Quality Data available to all employees who partake in the (Quality) Work Processes in time for when the data is to be used in the process in question. ITU uses QlikSense (ITU's data warehouse) to achieve this.</p> <p>Data provided by the Ministry of Higher Education and Science will be used, whenever available.</p> <p>Clearly, quality of education cannot be reduced to Primary Quality Data. Primary Quality Data can show obvious strengths or issues, but the reports of the Quality System consider a broader range of aspects of quality.</p> |
| <p>Reports and their Use</p> | <p>The Study Programme Report</p> <p>At the level of individual study programmes, the key document is the annual <i>Study Programme Report</i>, in which the Head of Study Programme, after hearing the Subject Area Team of the study programme, reports to the Education Group and Head of Department, cc the Programme-Specific Employers' Panel for the study programme, following a template that all study programmes share. See Figure 1. The Study Programme Report contains:</p> <ul style="list-style-type: none"> • Primary Quality Data for the study programme for the past three calendar years (provided by the Administration) • Follow-up on the action plan of the previous period; • Status of goals from the strategic framework contract pertaining to the study programme • Status of quality standards pertaining to the study programme, including descriptions of follow-up actions initiated by standards that were not met; • A description of changes made to the study programme with arguments for the changes and observed effects • A description of changes made to the study programme as a results of recommendations made by the employers' panel • A summative analysis of the study programme's strengths and challenges; and • An action plan for the quality work for the coming period. <p>The Study Programme Report forms the basis of a recurring <i>Study Programme Quality Status Meeting</i> between the Head of Study Programme, the Education Group and relevant Head of Department.</p> |

Cycle time: 1 year.

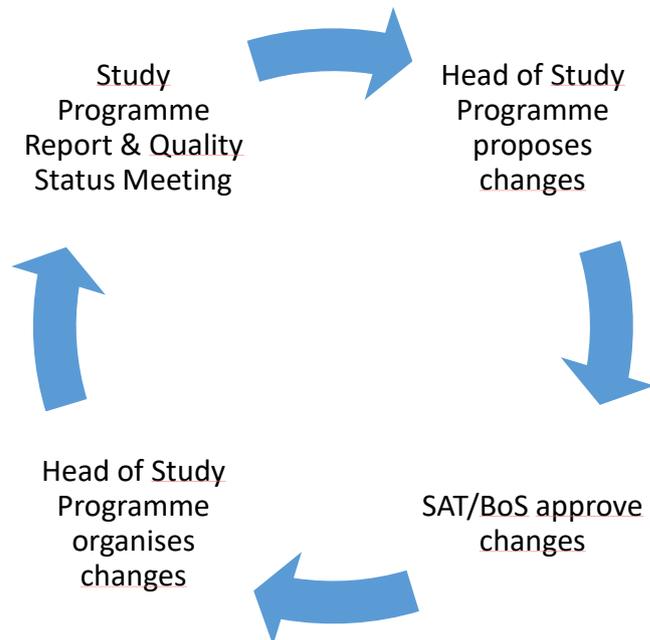


Figure 1, Context of Process Study Programme Report (simplified)

The Education Portfolio Report

Based on the Study Programme Reports, the Education Group prepares an *Education Portfolio Report* and, after consulting the Board of Studies, submits the report to Executive Management. See Figure 2. The report describes:

- Strengths and successes of study programmes, including contributions to reaching development goals
- Opportunities for the university
- Threats and Weaknesses
- A tabular summary of the extent to which ITU's study programmes has met the goals and standards (red/green)
- Recommendations to Executive Management concerning the future of study programmes with breaches of quality standards
- Recommendations to Executive Management concerning how the quality assurance system itself might be improved.
- An action plan for the quality work for the coming period.

The Education Portfolio Report forms the basis of a recurring *Portfolio Quality Status Meeting* between the Education Group, the Heads of Department and Executive Management.

Cycle time: 1 year.

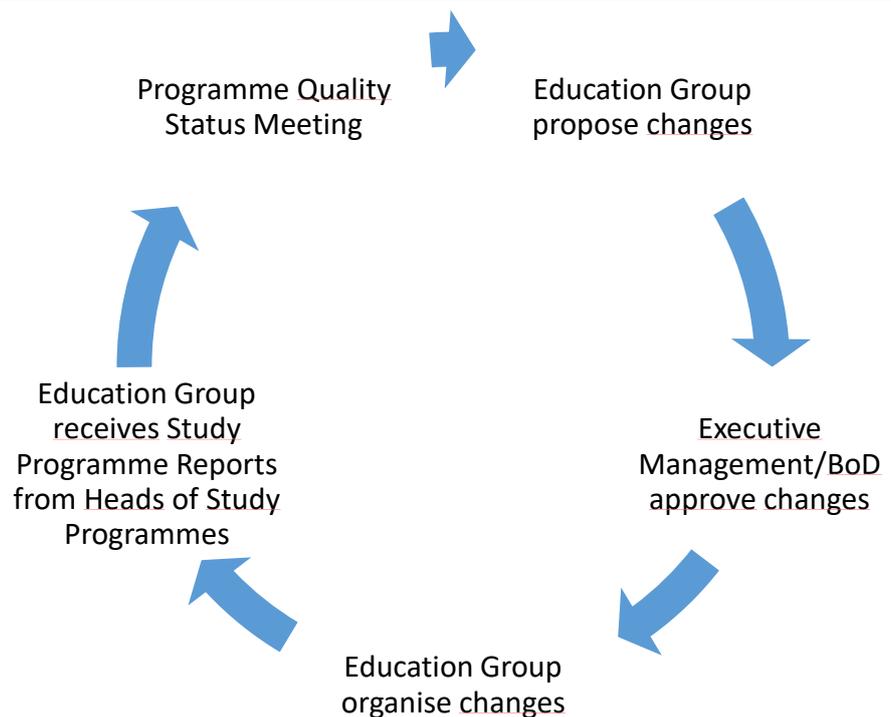


Figure 2 The Education Portfolio Report and its use in Portfolio Quality Status Meetings (simplified)

Executive Management follow-up

The Education Group's action plan and recommendations for the coming period are discussed and decided on at the status meeting. The Education Portfolio Report is adjusted accordingly.

Executive Management, Education Group and Heads of Department meet twice during the next year to follow-up on the action plan.

The Education Portfolio Report and its action plan enter into Executive Management's plan for the coming period. Executive Management can decide

- To reduce or increase admission numbers;
- To terminate a study programme
- To initiate the development of a new study programme
- To make changes to the organisation of the quality system;

The ITU Board of Directors read and discuss the Education Portfolio Report and question Executive Management about their follow-up actions.

Cycle time: 1 year.

The Programme-Specific Employers' Panel Report

The Programme-Specific Employers panels [5] each write a *Programme-Specific Employers' Panel Report*. The report is used by the Executive-level Employers' Panel; the Heads of Study Programme of the programmes in question; the Head

of Studies; the Education Group, the Heads of Department and the Vice Chancellor. The Programme-Specific Employers' Panel Report is discussed by the Subject Area Team and serves as input to the Study Programme Report.

Cycle time: 1 year.

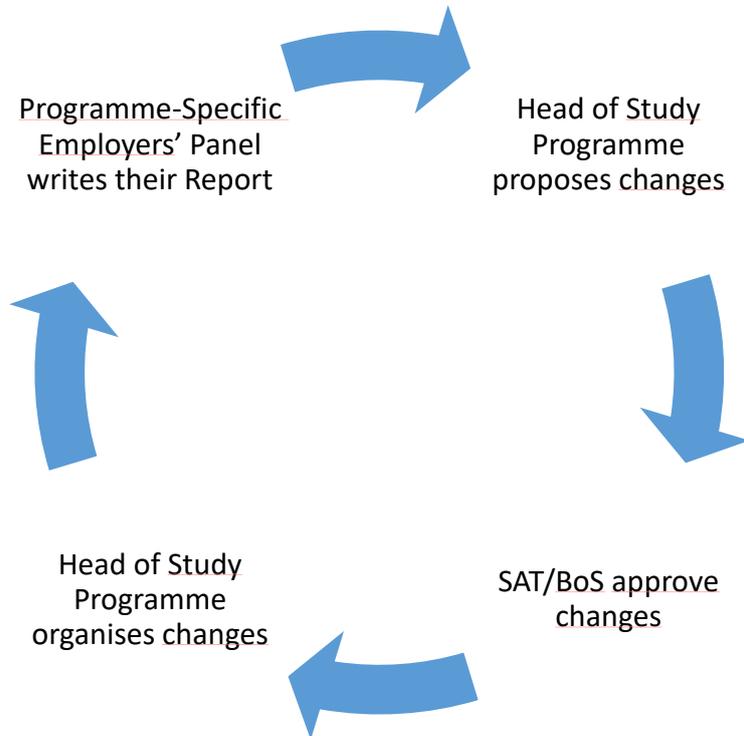


Figure 3 Programme-Specific Employers' Panel meetings (simplified)

The Executive-Level Employers' Panel Report

The Executive-Level Employers panel [6] writes an *Executive-Level Employers' Panel Report*, which it submits to the ITU Board of Directors through Executive Management, cc the Head of Studies and Heads of Department. The report is discussed with Heads of Department at one of the follow-up meetings concerning the Education Portfolio Report. The report is also discussed at a meeting in the Board of Directors. Executive Management is responsible for implementing whatever changes the Board of Directors decide.

Cycle time: 1 year.

Programme Review Reports

ITU organizes regular reviews of its study programmes [7, 8]. Each review involves the formation of an external panel, which, upon completion of the review, produces a *Programme Review Report*, which it submits to the Education Group, Head of Department and Head of Study Programme. The Programme Review Report serves as input to the writing of the Study Programme Report.

Cycle time: 4-5 years (two study programmes are reviewed every year).

| | |
|---------------------------------|---|
| | <p>Study Environment Assessment (Danish: “undervisningsmiljøundersøgelse”) The Study Environment Assessment is part of the Læringsbarometer survey carried out by the Ministry of Higher Education and Science. Follow-up actions pertaining to the individual study programmes are recorded in the Study Programme Reports and the Education Portfolio Report.</p> <p>Cycle time: biannual (2018, 2020, ...)</p> <p>Data on Graduates ITU’s Strategic Framework Contract 2018-2021 contains the following goals concerning graduates:</p> <ol style="list-style-type: none"> 1. Graduate unemployment rates For each of ITU’s MSc study programmes, it is the case that the rolling weighted average for unemployment for the past three calculated years, measured four to seven months after graduation, is lower than or equal to the rolling weighted national average for unemployment for the past three calculated years, measured four to seven months after graduation from an MSc programme. 2. Relevance (Uddannelseszoom, graduate survey) The average score for IT University of Copenhagen must be at least 4.0 for the question “My education has prepared me for my current or previous job”. 3. Relevance (Employment Ticket) All study programmes must have an Employment Ticket, which is approved and evaluated annually by the relevant Programme-Specific Employers’ Panel. <p>Cycle time: biennially</p> |
| <p>(Quality) Work Processes</p> | <p>By (Quality) Work Processes we mean documented work processes which play a role in the quality assurance and quality enhancement work. We put the word Quality in parentheses to emphasise that ITU does not have a separate kind of work process for “quality work” but view quality assurance and development as part of day-to-day work processes.</p> <p>In order to support continuous improvement, (Quality) Work Processes are cyclical in nature. Since activities implementing the Quality Policy are embedded in production processes which are also cyclical in nature (due to the yearly or half-yearly cycles that permeate all study programmes), (Quality) Work Processes are often described as cyclic processes (Danish: “årshjul”).</p> <p>Cyclic improvement processes follow the following pattern: collect data; suggest changes; approve changes; and organise changes. These phases are time boxed within the cyclic processes. Some changes take longer than one cycle to implement. That is why there is no time boxed “implement” phase in the cyclic processes. Rather, <i>organising</i> changes may mean <i>implementing</i> changes (if they can be made quickly) or <i>planning</i> larger changes, for example as PPG projects.</p> |

| | |
|----------------------------|---|
| | The Quality Coordinator maintains the cyclic processes (årshjul) and keep operators informed on deadlines etc. |
| Decision Powers | <p>The Work Processes are designed with the following principles in mind:</p> <ol style="list-style-type: none"> 1. Responsibility and Decision Powers must be aligned: those who have the responsibility must also have the decision powers needed to live up to that responsibility; 2. Decisions must be made as close to the actual teaching as possible. For example, a course manager is free to make changes on a course which have no significant bearing on the intended learning outcomes of the course; other course-level changes must be approved at the appropriate level, for example a Subject Area Team or Board of Studies, depending on the scope of the consequences of the change; 3. Collective bodies (including Subject Area Teams, Board of Studies and Employers' Panels) must be involved in matters that, by law or by their terms of reference, they are supposed to discuss or approve. For example, <ol style="list-style-type: none"> a. Changes on a study programme proposed by a course manager which may in some significant way impact the learning outcomes of the course or the study programme should be approved by the appropriate Subject Area Team; b. Changes on one study programme proposed by a Subject Area Team that may impact more than that study programme should be approved in the Board of Studies; c. While the university decides what is taught in its study programmes, the relevant Employers' Panel(s) should be heard about changes to study programmes that may impact the employability of graduates; d. Executive Management recommends the creation and termination of study programmes to the Board of Directors, after hearing of the Board of Studies, the Education Group and, in the case of termination, the relevant Employers' Panel. |
| Revision of Quality Policy | <p>Executive Management review the Quality Policy Preamble when the policy is updated. In addition, Executive Management can at any time initiate revision of the Quality Policy or parts thereof and is obliged to consider doing so, if the Education Portfolio Report reveals systemic quality issues. The Board of Studies and the Education Group can submit requests for changes to the Quality Policy to the Executive Management.</p> <p>The Development goals and quality standards of the Quality Policy are revised once a year, although the Development Goals are given by the Strategic Framework Contract, which has goals for four consecutive years. Executive Management formulate study programme-specific goals and standards once a year. It is the responsibility of the Executive Management to ensure that fulfilment of the study programme-specific goals and standards is sufficient for the achievement of the institutional goals and standards decided by the Board of Directors.</p> |
| References | <ol style="list-style-type: none"> 1. ITU Strategy 2017-2021 2. Strategic Framework Contract for the IT University of Copenhagen 2018-2021 |

| | |
|---------------------|--|
| | <ol style="list-style-type: none"> 3. European Standards and Guidelines 4. The Danish Accreditation Institution: Institutional Accreditation (guide) 5. Terms of Reference Programme-Specific Employers' Panels 6. Terms of Reference Executive-Level Employers' Panel 7. Concept for Review of ITU Study Programmes 8. Template for Terms of Reference for Programme Reviews 9. Role Description for Head of Studies 10. Role Description for Head of Study Programme 11. Role Description for Head of Board of Studies 12. Role Description for Head of Department 13. Role Description for Vice Chancellor 14. Subject Area Team Meetings 15. Description of Education Group 16. IT University of Copenhagen: Compendium of Work Processes Supporting the Quality Policy of the IT University of Copenhagen 2016 17. The role of the Board of Studies is described in § 15 of "Vedtægter for IT-Universitetet i København", signed June 20, 2012 18. Concept for Development of New Study Programmes at the IT University of Copenhagen 19. ECTS model |
| <p>Transparency</p> | <p>This document and the documents listed under "References" items 1 through 4 are public documents, available through the Internet. The documents listed under "References" items 5 to 19 are available through the Intranet or F2.</p> <p>Study Programme Reports, Education Portfolio Reports, Programme Review Reports and reports from the employers' panels produced as a result of the actions described by this Quality Policy are public information and can be provided upon request.</p> |
| <p>History</p> | <p>Quality Policy 2020:</p> <p>The 2020 edition of the Quality Policy is based on the 2019 edition. The description of the process after the status meeting on the Education Portfolio Report and its action plan has been updated. Quality Standard 2.1 (student evaluations) has been changed due to the implementation of a revised evaluation system for courses and supervision. For Quality Standard 2.7 it has been specified, that only ITU faculty can supervise final projects. For the same quality standard a third reason for hiring DVIP has been added (strategic considerations). Quality Standard 2.10 (contact and feedback) has been taken out as it has become redundant: All courses are scheduled to ensure the standard of at least 56 lessons to a 7.5 ECTS-points course is always met. Teaching Format Budget and Student Activity is now called Student Activity Budget (Quality Standard 2.10). A new quality standard on employment rates has been added (QS 3.3) as employment is a new measure monitored by the Ministry. BSc study programmes are no longer measured on unemployment rates for the corresponding MSc study Programme (QS 3.2).</p> <p>Apart from these changes, only minor adjustments of e.g. wording has taken place. A draft version was discussed in Education Group in September 2019. Executive Management decided on the Quality Policy 2020 in November 2019.</p> |

| | |
|--|--|
| | <p>Quality Policy 2019: The 2019 edition of the Quality Policy is based on the 2018 edition. Development Goal 1.2 (admitted female students) has seen a change in the number of female students to be admitted in 2019. A new predicate on teaching formats and student activities has been added to Quality Standard 2.11 (constructive alignment). The new standard will be implemented on all study programmes during 2019. Apart from these changes, only minor adjustments of e.g. wording has taken place. A draft version was discussed in Education Group in September 2018. Executive Management then made the changes to Development Goal 1.2 and decided on the Quality Policy 2019 in December 2018.</p> <p>Quality Policy 2018: The 2018 edition of the Quality Policy is based on the 2017 edition. Four new development goals have been introduced. One concerns the share of female students on selected study programmes (1.2). The rest concern ITU scores on selected questions from Uddannelseszoo (2.2 and 3.3). Quality Standard 3.2 has had a third predicate added concerning the rolling weighted average for unemployment measured four to seven quarters after graduation. Quality Standard 1.3 on the relation between unemployment rates and admission on individual study programmes has been removed (the Heads of Study Programme are still asked to reflect on it in their annual report). Due to the changes, a renumbering of all standards and goals has taken place. A draft version of the 2018 edition was discussed in the Education Group, Board of Studies and Executive Management in October 2017. Negotiations with the Ministry on the strategic framework contract were then awaited. The final draft was discussed in the Education Group and Executive Management in March 2018.</p> <p>Quality Policy 2017: The 2017 edition of the Quality Policy is based on the 2016 edition. Only minor adjustments have taken place (update of references, changes to wordings etc.). A draft version of the 2017 edition was discussed in the Education Group and Board of Studies in November 2016. The agreed version was then sent to Executive Management for decision. Executive Management, having asked for minor additional changes, decided on the Quality Policy 2017 on 21 March 2017.</p> <p>Development of the Quality Policy 2016: Executive Management, the Head of Studies and the Head of Department drafted and edited this document. The document was repeatedly discussed by the Extended Group of Managers (which included the Education Group; the Heads of Section and the four Heads of MSc Study Programmes), before it was sent for hearing among faculty and student representatives in the Subject Area Teams and the Board of Studies and the Board of Directors.</p> |
|--|--|

1 Recruitment and Admission of Students

Context for the Quality Policy Area (based on ITU strategy and ITU's strategic framework contract)

ITU wants to attract a large number of well-qualified students [1].

1.1 Quality Standard

Number of Students Admitted

| | |
|------------------------|--|
| Summary | It is part of ITU's strategy to attract a large number of well-qualified students. This Quality Standard makes precise what "large number" means. |
| Predicate | The Study Programme admits at least as many students as assumed in the admission budget. |
| Responsible | Head of Study Programme |
| Place of record | Admission Memo (and Study Programme Report) |
| Alarm Handling Process | Recommendations: <ol style="list-style-type: none"> 1) Investigate whether there are changes in the competitive situation which can explain the insufficient admission; 2) Revisit red lights from previous Study Programme Report to see whether there are unresolved issues that could explain failing admission; 3) Investigate whether the number of applicants is much larger than the number of admitted students and if so, whether changes to the admission process are necessary. |

1.2 Development Goal

Share of Female Students Admitted

| | |
|------------------------|---|
| Summary | It is part of ITU's strategic framework contract to increase the share of female students on selected study programmes. |
| Predicate | <ol style="list-style-type: none"> 1. The percentage of women admitted on BSc SWU after early dropout will be at least 20 % in 2020. 2. The percentage of women admitted to BSc DS after early dropout will be at least 25 % in 2020. |
| Responsible | Head of Study Programme |
| Place of record | Admission Memo (and Study Programme Report) |
| Alarm Handling Process | Recommendations: <ol style="list-style-type: none"> 1) Investigate whether there are changes in the competitive situation which can explain the insufficient admission of female students; 2) Revisit red lights from previous Study Programme Report to see whether there are unresolved issues that could explain failing admission of female students; 3) Investigate whether the number of female applicants is much larger than the number of female applicants offered admission and if so, whether changes to the admission process are necessary. |

1.3 Quality Standard

Qualifications of Admitted Students

| | |
|---------|---|
| Summary | It is part of ITU's strategy to attract a large number of well-qualified students. This Quality Standard makes precise what "well-qualified" means. |
|---------|---|

1.3.1 Quality Standard

Well-qualified Students (MSc and Master degrees)

| | |
|------------------------|--|
| Predicate | At the time the Head of Study Programme assessed the applicants, (s)he did not recommend admission of any student whom, in the opinion of the Head of Study Programme, had weak qualifications. |
| Responsible | Head of Study Programme |
| Place of record | Admission Memo (and Study Programme Report) |
| Alarm Handling Process | <ol style="list-style-type: none"> 1) (Mandatory) Quantify the extent of the phenomenon, preferably with a description of what weaknesses are observed; 2) (Mandatory) Consider what changes to the admission process would be necessary to eliminate the problem; 3) (Mandatory) Consider whether there are aspects of the programme itself that could be changed in order to attract more well-qualified students; 4) Discuss with the Communications Department whether the marketing of the programme needs to be changed to reach more well-qualified students. |

1.3.2 Quality Standard

Well-qualified Students (Bachelor degrees)

| | |
|------------------------|--|
| Terminology | Under the Danish coordinated application system (KOT), there are two types of applicants. Quota 1 applicants are offered admission based on grades; quota 2 applicants are admitted based on other criteria as well. |
| Predicate | No Quota 1 applicant with a grade point average below 7.0 was offered admission. |
| Responsible | Head of Study Programme |
| Place of record | Admission Memo (and Study Programme Report) |
| Alarm Handling Process | (same as in 1.2.1) |

2 Teaching and Learning

Context for the Quality Policy Area (based on ITU Strategy [1] and ITU's strategic framework contract [2])

ITU wants the academic contents and the teaching to be world-class and research based [1]. To ensure that the teaching is research based, it is important that the research faculty ensure the academic standards of the teaching, and that the students work with and get feedback from research faculty (see 2.6, 2.7).

Part-time lecturers can play a role in ensuring that the students meet the ITU understanding of what good research is, namely that good research is motivated both by a quest for deep insight and by consideration of use. Some research faculty are more motivated by a quest for deep insight than consideration of use and some part-time lecturers are more motivated by consideration of use than by the quest for deep insight, so it is important for students to work with both research faculty and part-time lecturers (see 2.6, 2.7).

The extent of teaching by part-time lectures on part-time programmes should not differ from the extent of teaching by part-time lecturers on full-time programmes (see 2.6).

From ITU's strategic framework contract [2]:

1. **Research based education (VIP/DVIP-ratio)**
ITU's VIP/DVIP-ratio (overall and by study programme) meet the standard determined in the Quality Policy.
2. **Quality and benefit from a student perspective (Uddannelseszoom, student survey)**
The average score for each study programme at IT University of Copenhagen must be at least 4.0 for the questions "The quality of my programme is generally high" and "I benefit from the programme" respectively.

Legal requirements to Quality

3. **Qualification Framework**
The academic level of each programme is at least in correspondence with its Danish Qualification Framework level (see 2.5).
4. **Research-based Teaching**
The teaching is research-based (see 2.6, 2.7).
5. **Teacher Development Programme**
All assistant professors must follow a Teacher Development Programme (Danish: "Adjunkt-pædagogikum")²

From the ITU Strategy [1]

6. **Ensuring the research base** (see 2.6, 2.7 and 2.8)
7. **Ensuring pedagogic skills** of faculty (see 2.1, 2.4 and 2.11)

ITU's Additional Policy Statements

Research-Based Teaching

By an *active researcher* we understand a person who currently conducts research (at ITU or elsewhere). Post docs are included.

² Cirkulære om stillingsstruktur for videnskabeligt personale ved universiteter - Personalestyrelsen

ITU uses a numeric indicator, called the VIP/DVIP ratio³, to measure the ratio of student learning activities that had researchers as responsible over the number of student learning activities that had part-time lecturers as responsible. ITU has a quality standard for the VIP/DVIP ratio, which applies to all study programmes (see 2.5).

Concerning teaching on courses, it is the policy of ITU that

1. Curriculum development responsibility lays with active researchers employed at ITU. Part-time teachers who are course managers collaborate with active researchers employed at ITU on course design; including planning of intended learning outcomes; learning activities and exam form.
2. The employment of DVIP in teaching on courses must have one of the following three purposes:
 - a. To bring an industry perspective and/or practical expertise to courses where it is relevant;
 - b. To ensure stability of programmes. In cases where researchers become unavailable for planned teaching with short notice before a semester starts, DVIP can be stand-ins.
 - c. To serve as a strategic measure
 - i. DVIP is an active researcher at another university and provides research based teaching within an area where ITU is less/has chosen not to be as strong
 - ii. DVIP teach a course aimed at basic skills on the study programme (e.g. math)
 - iii. DVIP supplements teaching on courses that are robust (two faculty can teach it) when faculty cannot cover all teaching.

Concerning supervision of theses and other final projects, it is the policy of ITU that

3. Every final project and thesis is supervised by an active researcher from ITU.
4. The supervisor has to supervise and help the student to reach the appropriate academic level and provide necessary support for the thesis to meet academic standards.
5. At professional master and BSc levels, the supervisor should allocate at least 15 hours for supervision per project. At MSc level, the supervisor should allocate at least 30 hours for supervision per project. The number of hours is an average, including administration and examination.
6. It is possible to split the supervisor task among several active researchers, for example in case of interdisciplinary projects, but there must always be exactly one main supervisor.
7. In rare cases, the supervisor may not be an active researcher from ITU. The Head of Studies must approve such exemptions in writing and store the approval in the records of Student Affairs and Programmes.

Finally, ITU has a model for how much faculty should teach, the so-called 2017 ECTS Model [19]. For example, an associate professor with no teaching deductions has to deliver 787 ECTS points each year.

Part-time Lecturers

Part-time Lecturers should be highly regarded professionals whose professional experience can benefit the students greatly. Part-time Lecturers should not be recruited as a means of covering persistent holes in staffing by active researchers unless for strategic reasons agreed to by Executive Management (see 2.7).

³ Broadly, "VIP" ("videnskabeligt personale") stands for active researchers and DVIP ("deltids-VIP") stands for part-time lecturers (who do not have research obligations).

Constructive Alignment

All planning and implementation of teaching at the IT University of Copenhagen is based on John Biggs’ principles of Constructive Alignment. The overall and most important principle is that descriptions and implementation of intended learning outcome (ILO), teaching and learning activities and assessment forms must be aligned. Students should be made aware of this correlation so that they may achieve the best possible progression and results.

Student Participation

Students participate in the (quality) work processes in the following ways:

- By providing input to and participating actively in course evaluations and evaluation of thesis and other projects
- By providing input to Programme Reviews; and, when they have graduated, to data concerning graduates;
- As members of Subject Area Teams and Board of Studies, which approve changes to study programmes originating from student evaluations, Employers’ Panels or Quality Status Meetings; and decide the course portfolio.
- As members of the ITU Board of Directors, students participate in discussing the Education Portfolio Report and the Executive Employers’ Panels’ report and supervising Executive Management concerning follow-up; the approval of the University’s budget; and in deciding the creation of new or termination of existing study programmes.

Robustness (of staffing and of Programme Learning Outcomes under Changes)

Although every course has a single person as course manager, courses must be designed to fit the rest of the study programme. Changes to a course must not bring the entire study programme out of alignment with learning objectives of the entire study programme, as described in the Curriculum Document, nor must it restrict the number of persons who can teach any mandatory course to just one active researcher (see 2.7). At all times, at least two faculty members must be qualified to teach a mandatory course in order for it to be considered robust (in rare cases, exceptions can be made for strategic reasons, see item 2 above).

Strategy Concerning Diversity of Student Population on MSc Programmes

ITU’s MSc programmes attract students from a variety of bachelor programmes. ITU has the following policy for diversity of MSc students:

- 1) The university must maintain a mapping of the learning objectives described in the Curriculum Document to the Qualification Framework, to ensure that, for all admission tracks or specialisations, the level is MSc level (see 2.5);
- 2) Admission procedures must ensure that the admitted students have the skills required to start the programme (see 1.2);
- 3) In first semester activities with students of diverse backgrounds, the university must ensure that the teachers are aware of and have the right knowledge and didactic tools to address the diversity (see 2.4);
- 4) Systematic follow-up is performed on how the diversity of backgrounds influence Primary Quality Data (see 2.4).

2.1 Quality Standard

Student Evaluation of Courses; Projects and Final Projects

| | |
|-------------|---|
| Terminology | Students at IT University of Copenhagen participate in three different evaluations: Course evaluations; evaluations of supervised projects and evaluations of final projects. |
|-------------|---|

| | |
|------------------------|--|
| | The evaluations include a few quantitative questions centered on learning outcomes. An average score is calculated for each course, teacher/supervisor, study programme and ITU. In the predicates below, 'average' means 'average for the entire calendar year'. |
| Predicate | <ol style="list-style-type: none"> 1. The average score of the student answers to the course evaluation survey is greater than or equal to 4.75 (on a scale from 1 to 6) on all programmes and at ITU level. 2. The average score of the student answers to the final project survey is greater than or equal to 4.75 (on a scale from 1 to 6) on all programmes and at ITU level. 3. The average score of the student answers to the (other) project survey is greater than or equal to 4.75 (on a scale from 1 to 6) and at ITU level. |
| Responsible | Head of Study Programme |
| Place of record | Study Programme Report and (quality) work processes for each of the evaluations for follow up on all data collected |
| Alarm Handling Process | <p>Recommendations (if a score falls below the target)</p> <ol style="list-style-type: none"> 1. Identify where the issues are located, e.g. single course, single teacher, single cohort, or prevalent across the programme. 2. Identify whether the issue lies in structural issues, in the teaching or in supervision. 3. Develop an action plan for how to handle issues. The Course Manager or the Subject Area Team follows up on all issues not concerning personnel management. The relevant Head of Department follows up on issues concerning personnel management. |

2.2 Development Goal

Student Evaluation of educational quality and personal benefit

| | |
|------------------------|--|
| Summary | Students at IT University of Copenhagen participate in the Ministry's survey Uddannelseszoom. Data is collected biennially at the end of even years and a score is calculated for each study programme. The Ministry forwards survey results and the scores to ITU the following Spring. The score from the 2016-survey applies in 2016 and 2017. The score from the 2018-survey will apply in 2018 and 2019. |
| Predicate | <ol style="list-style-type: none"> 1. The score for the individual study programme for the question "The quality of my programme is generally high" must be at least 4.0 (on a scale from 1-5) 2. The score for the individual study programme for the question "I benefit from the programme" must be at least 4.0 (on a scale from 1-5) |
| Responsible | Head of Studies |
| Place of record | Study Programme Report |
| Alarm Handling Process | <p>Recommendations (if a score falls below the target)</p> <ol style="list-style-type: none"> 1. Develop a plan for how to handle issues. The Head of Studies and relevant Heads of Study Programme cooperate on this. |

2.3 Development Goal

Completion Times for BSc and MSc students

| | |
|-------------|---|
| Predicate | IT University of Copenhagen will reduce the average graduate delay compared to scheduled completion time for its BSc and MSc graduates to be at most 8.2 months in 2019, 2020 and 2021. |
| Responsible | 1. Head of Studies |

| | |
|-------------------------------------|--|
| | 2. Head of Study Programme |
| Place of record | 1. Education Portfolio Report 2. Study Programme Report |
| Actions in case the goal is not met | 1. Follow up on the action plans of Heads of Study Programme (see 2c below) and document findings in the Education Portfolio Report. 2. Individual programme: <ul style="list-style-type: none"> a. Identify where the issues are located, e.g. single course, single cohort, or prevalent across the program. b. Identify if the issue lies in the learning objectives or in the teaching. c. Develop an action plan for how to handle issues. The Subject Area Team follows up on issues concerning learning objectives. The relevant Head of Department follows up on issues concerning personnel management. |

2.4 Quality Standard

Diversity of Students on MSc Programmes

| | |
|------------------------|--|
| Terminology | To enable measurements and follow-up on diversity, we distinguish between the following admission categories of students: Applicants from ITU; Applicants from Danish University (Not ITU and not a Danish Professional Bachelor degree); Applicants from Foreign University; Applicants with a Danish Professional Bachelor degree; and Others (including some degrees under the Ministry of Culture and education within the police and armed forces). |
| Predicate 1 | None of the admission categories systematically fall below the average of the other categories in Primary Quality Data b) concerning progress. |
| Predicate 2 | Twice a year, a workshop is held for the teachers on each study programme. The workshop addresses coordination and pedagogics as well as diversity and background of new cohorts and, for MSc programmes, is attended by both the Head of the MSc programme and the Head of the associated BSc programme. |
| Responsible | Head of Study Programme |
| Place of record | 1. (ad Predicate 1) Study Programme Report 2. (ad Predicate 2) Minutes from semester workshops |
| Alarm Handling Process | 1. (ad Predicate 1) Problems must be analysed and a proposal must be developed to remedy either the curriculum or the admission procedure (mandatory) 2. (ad Predicate 2) The Education Group tasks the relevant Head of Department with follow-up (mandatory). |

2.5 Quality Standard

Qualification Framework and Progression

| | |
|-------------|--|
| Summary | The university must ensure that all its study programmes live up to the requirements of the Danish Qualification Framework. |
| Terminology | The (Danish) Qualification Framework has different requirements for different levels of study programmes (BSc, MSc and Master). A <i>Qualification Framework Mapping</i> shows the relationship between the paths of study activities through the study programme permitted by the Curriculum Document and the level-specific Qualification Framework requirements of the study programme. For study programmes with no specialisations and only one admission track (typically Bachelor programmes), a Qualification Framework Mapping consists of two maps, namely |

| | |
|------------------------|--|
| | <ol style="list-style-type: none"> 1. a map from the objectives for learning output (as described in the Curriculum Document) against the Qualification Framework requirements of the level of the study programme; and 2. a map from the objectives for the learning output of the programme to the non-elective study activities of the study programme, each course activity listed with the relevant part of its intended learning outcomes. <p>For MSc study programmes, with more than one admission track and more than one specialisation, the Qualification Framework Mapping considers every path of non-elective study activities from admission to a specialisation permitted by the Curriculum Document.</p> |
| Predicate | <ol style="list-style-type: none"> 1) For every study programme, there exists a Qualification Framework Mapping, which is regularly reviewed; and 2) For every study programme and for every path through the study programme which the Curriculum Document permits, the Qualification Framework Mapping shows that <ol style="list-style-type: none"> a. The objectives for learning outputs which the Curriculum Document associates with that path cover the (Danish) Qualification Framework requirements; and b. The intended learning outcomes of the study activities that constitute the path cover the objectives for learning outputs that the Curriculum Document associates with that path. |
| Responsible | Head of Study Programme |
| Place of record | Qualification Framework Mappings, which are stored in F2 |
| Alarm Handling Process | Mandatory: The Subject Area Team must change the study programme to eliminate the shortcoming. |

| | |
|---|---|
| <h3>2.6 Quality Standard</h3> <h4>Balance between VIP and DVIP in teaching</h4> | |
| Summary | ITU monitors the ratio of teaching carried out by researchers to teaching carried out by part-time lecturers making sure at least 75 % of the teaching is delivered by ITU researchers, while up to 25 % of the teaching should be delivered by part-time lecturers. |
| Terminology | <p>Let S be a set of study activities on a programme in a given period. For each study activity s in S, let s_e be the ECTS point size of the activity. Further, let s_v be the percentage of s taught by VIP and similarly, let s_d be the percentage of the activity taught by DVIP (note that s_v + s_d = 100%). Finally, let s_n be the number of student registered on the activity. We then define the VIP/DVIP ratio for the programme in that period relative to S as follows:</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> $\text{VIP/DVIP ratio}(S) = \frac{\sum_{s \in S} (s_e \times s_v \times s_n)}{\sum_{s \in S} (s_e \times s_d \times s_n)}$ </div> <p>that is, the total volume of student activities taught or supervised by active researchers divided by the total volume of student activities taught or supervised by DVIP.</p> |
| Predicate | For ITU as a whole, the VIP/DVIP ratio is at least 3.00. All study programmes must have a VIP/DVIP-ratio of at least 2.4 (80 % of the ITU standard). |
| Responsible | Heads of Department (the rolling four-semester planning of recruitments and course staffing are key to meeting the predicate) |

| | |
|------------------------|---|
| Place of record | Study Programme Report |
| Alarm Handling Process | Mandatory: 1. Alarms must be recorded in the Study Programme Report. After every semester, the Heads of Department and Head of Studies discuss the staffing of study programmes that are in breach of the VIP/DVIP quality standard and produce a plan for how to prevent the issues from arising again. |

| | |
|---|--|
| <p>2.7 Quality Standard</p> <p>Research-based Course Design and Supervision</p> | |
| Predicate | <ol style="list-style-type: none"> Every part-time lecturer who holds the role of course manager is associated with an active researcher employed at ITU (Course Academic Responsible, CAR), who can assist the part-time lecturer with course design; including planning of intended learning outcomes; learning activities and exam form (cf. item 1 listed under the Policy Statements concerning Research-Based Teaching); AND For every employment of a part-time lecturer as course manager, there exists a documented reason for this allocation of role which adheres to item 2 listed under Policy Statements concerning Research-Based Teaching; AND Every final project and thesis is supervised by an active researcher from ITU, but for certain rare cases (exemptions must be approved by the Head of Studies). This applies to Master, BSc and MSc-level. |
| Responsible | <ol style="list-style-type: none"> Heads of Department are responsible for appointing an active researcher (CAR) for each course which has a part-time lecturer as course manager; AND Heads of Department are responsible for ensuring that reasons for assigning part-time lecturers course manager responsibility adhere to the policy statement and are documented; AND Heads of Study Programme are responsible for checking that lists of supervisors whom the students can choose between contains active researchers from ITU only. Moreover, Heads of Study Programme report on the fulfilment or otherwise of all three parts of the predicate in the Study Programme Reports. |
| Place of record | <ol style="list-style-type: none"> Head of Department's updated overview Comments in the updated overview Study Programme Report. The student project registration software distinguishes between whether a person is approved to supervise at BSc, Master or MSc level. Moreover, as part of the process of project agreement approval, Student Affairs and Programmes manually check whether proposed supervisors are already approved to supervise projects at the level in question and present proposals for changing the supervision rights of teachers for the approval of the Head of Study Programme. |
| Alarm Handling Process | <p>Mandatory:</p> <p>To ensure feedback into the hiring system, and to allow follow-up on the research base of our programmes, all deviations from the predicate must be logged in the Education Portfolio Report. If it is related to the use of a part-time lecturer, it must further be logged</p> <ol style="list-style-type: none"> Whether the part-time lecturer is an active researcher at another research institution Which of the allowed purposes for the use of a part-time lecturer is involved. <p>The Heads of Department are responsible for finding better solutions for the following semesters as well as taking the feedback into the hiring system.</p> |

| 2.8 Quality Standard | |
|--|--|
| Robustness (of staffing and Programme Learning Objectives under Changes) | |
| Terminology | The Heads of Department maintain an updated overview of who among faculty can teach a given course. |
| Predicate | <ol style="list-style-type: none"> 1. Every course and part of a course (first-coming semester) which is mandatory for some students can be taught by at least two VIP. <ol style="list-style-type: none"> a. In rare cases, exceptions can be made for strategic reasons, see item 2 listed under Policy Statements concerning Research-Based Teaching. 2. Every change of a course (or introduction of a new course) is checked for consistency with the overall structure and learning objectives of the study programme, as defined in the Curriculum Document. |
| Responsible | Heads of Department and Head of Studies |
| Place of record | <p>Robustness of staffing: Using the updated overview, the Heads of Department and Heads of Study Programme check whether every course can be taught by at least two members of faculty. Alarms are recorded in the Education Portfolio Report and Study Programme Report.</p> <p>Notes:</p> <ul style="list-style-type: none"> – Before the 4-semester plan is locked for changes concerning the first-coming semester, the Heads of Department and Heads of Study Programme assess whether there are mandatory courses that less than two VIP can teach and report such cases in the Education Portfolio Report and Study Programme Report, for the subsequent follow-up of the Heads of Department. – The relevant Subject Area Team must approve changes to the course portfolio, which have any bearing on other courses or on compliance with the overall learning objectives of the programme. The Subject Area Team must document why it considers the change to be consistent with the overall structure and learning objectives of the study programme, as defined in the Curriculum Document (or else raise an alarm). – Robustness of realization of programme learning objectives: Both arguments for changes that the Subject Area Team considers sound and alarms concerning changes that the Subject Area Team finds to be in breach of the Quality Standard are recorded in Minutes from Subject Area Team meetings, flagged as a curriculum change agenda item, so that it can be identified as such. |
| Alarm Handling Process | Mandatory: Either a co-teacher from faculty must be assigned to the course to eliminate the weakness, a part-time lecturer hired (short-term solution) or the course portfolio changed. |

| 2.9 Quality Standard | |
|---|---|
| Completion Rates for BSc and MSc students | |
| Terminology | Completion of bachelor and MSc studies within scheduled time plus one year is defined in the statistical framework (“statistisk beredskab”) of Universities Denmark , indicators G1.2 and G2.2, respectively. |
| Predicate | <ol style="list-style-type: none"> 1. Completion within scheduled time plus one year is at least 70 % at ITU-level for students on full-time programmes. |

| | |
|------------------------|--|
| | 2. Completion within scheduled time plus one year is at least 70 % on every full-time programme. |
| Responsible | 1. Head of Studies 2. Head of Study Programme |
| Place of record | 1. Education Portfolio Report 2. Study Programme Report |
| Alarm Handling Process | 1. Follow up on the action plans of Heads of Study Programme (see 2c below) and document findings in the Education Portfolio Report. (Mandatory) 2. Mandatory: Individual programme: <ul style="list-style-type: none"> a. Identify where the issues are located, e.g. single course, single cohort, or prevalent across the program. b. Identify whether the issue lies in learning objectives or in the teaching. c. Develop an action plan for how to handle issues. The Subject Area Team follows up on issues concerning contents. The relevant Head of Department follows up on issues concerning personnel management. |

| | |
|-------------------------------|---|
| 2.10 Quality Standard | |
| Constructive Alignment | |
| Summary | All courses are designed according to the Constructive Alignment principles . |
| Predicate | Course descriptions have been approved by Learning Support. Learning Support have checked and approved the following: <ul style="list-style-type: none"> 1. Intendend Learning Outcome (ILO) description adhere to the SOLO taxonomy; 2. ILOs, planned Learning Activities and Exam Forms are aligned and described in sufficient detail; 3. Student Activity budget has been selected and aligned to ILOs. |
| Responsible | Learning Support |
| Place of record | Study Programme Report and Learning Support's records. <p>Before the beginning of each semester, Learning Support check all course descriptions. In cases where</p> <ul style="list-style-type: none"> – the ILOs are not consistent with the SOLO taxonomy, or – ILOs, Teaching and Learning Activities, Exam Forms and ECTS-credits are not in alignment, or – The student activity budget is not presented, or – the course description is not sufficiently detailed, <p>Learning Support correspond or meet with the Course Manager, who then modifies the course description for the approval of Learning Support. If Learning Support cannot approve a course description, they inform the relevant Head of Study Programme in writing.</p> |
| Alarm Handling Process | Mandatory: The Head of Study Programme records cases of unapproved course descriptions in the Study Programme Report, for the consideration of the Education Group. The Head of Study Programme, in cooperation with the Course Manager and Learning support, makes sure breaches of the predicates are rectified before the course is offered again. |

| 2.11 Quality Standard Teacher Competence Development Programme | |
|---|---|
| Summary | All teachers take part in the Teacher Development Programme. |
| Terminology | The Teacher Development Programme is mandatory for all assistant professors at ITU. Part of the programme – the one day Exam Seminar on qualitative aspects of exams and exam regulations – is mandatory for all new teachers (including part-time lecturers) at ITU. The Introductory Teacher Development Programme for PhDs is mandatory for all PhD students. The Introduction to Teaching day is mandatory for all new teachers. |
| Predicate | As of 31 December (of the year which the next Study Programme Reports and Education Portfolio Report cover), <ol style="list-style-type: none"> 1. All assistant professors hired during the year have started the Teacher Development Programme (Danish: “adjunktpædagogikum”) unless they can document to have already completed a similar programme; and 2. All associate professors hired during the year have completed the Teacher Development Programme (or started it with a commitment to finish within 18 months of their employment at ITU), unless they can document to have already completed a similar programme; and 3. All teachers have completed the Exam Seminar before the exams the first semester they teach, unless they are exempted by the relevant Head of Department; and 4. All PhD students have completed the Introductory Teacher Development Programme for PhDs the first semester they teach, unless they can document to have completed a similar programme elsewhere or are exempted by the relevant Head of Department; and 5. All teachers have completed the Introduction to Teaching day during their first year of employment at ITU, unless they are exempted by the relevant Head of Department. |
| Responsible | Heads of Department |
| Place of record | Competence Development Plan (F2 case maintained by Learning Support, containing work documents concerning items 1 – 5). Every semester, Learning Support identify assistant professors, associate professors, teachers and PhD students who have not completed the required Teacher Development Programme activity and informs the relevant personnel managers and the Head of Studies. Breaches must be recorded by study programme and department. |
| Alarm Handling Process | Mandatory: In case assistant professors, associate professors, ph.d. students and other kinds of teachers hired during the year are in breach of (one or more of) the above predicates, Learning Support record the breach of the quality standard in the Teacher Development Programme Plan and pass on to the relevant Head of Department the task to investigate the case and take measures to get the teacher through the required development activities. In case new teachers fail to complete the Introduction to Teaching day, Personnel record the breach of the quality standard and informs Learning Support, who records the breach in the Teacher Development Programme Plan and pass on to the relevant Head of Department the task to investigate the case and take measures to get the teacher through the required development activities. |

2.12 Quality Standard

Drop Out (Bachelor and MSc)

| | |
|------------------------|--|
| Terminology | The dropout rate is defined as the rate of the admitted students (counted after early drop-out) who dropped out within the first 12 months of their studies. Dropout rates are calculated at both ITU-level and by study programme. |
| Predicate | <ol style="list-style-type: none"> 1. The drop-out rate of BSc students is at most 20 % 2. The drop-out rate of MSc students is at most 20 % 3. The dropout rate at ITU-level is at most 20 % |
| Responsible | <ol style="list-style-type: none"> 1. Heads of Study Programme (Bachelor programmes) 2. Heads of Study Programme (MSc programmes) |
| Place of record | Study Programme Report |
| Alarm Handling Process | Mandatory: Whenever a study programme breaches the standard, Student Affairs and Programmes contacts all students who dropped out of the programme and asks them why they dropped out. Student Affairs and Programmes informs the Education Group and the Head of Study Programme of the result, upon which the Education Group decides the further follow-up actions. |

3 Relevance and Employability

Context for the Quality Policy Area (based on ITU Strategy and ITU’s Development Contract)

From ITU’s Strategy [1]:

- ITU wants its programmes to give its students competences that are in high demand in the labour market.

From the Strategic Framework Contract:

4. **Graduate unemployment rates**

For each of ITU’s MSc study programmes, it is the case that the rolling weighted average for unemployment for the past three calculated years, measured four to seven months after graduation, is lower than or equal to the rolling weighted national average for unemployment for the past three calculated years, measured four to seven months after graduation from an MSc programme.

5. **Relevance (Uddannelseszoom, graduate survey)**

The average score for IT University of Copenhagen must be at least 4.0 for the question “My education has prepared me for my current or previous job”.

6. **Relevance (Employment Ticket)**

All study programmes must have an Employment Ticket which is approved and evaluated annually by the relevant Programme-Specific Employers’ Panel.

3.1 Quality Standard

Design for Employability (Bachelor, MSc and Master)

| | |
|------------------------|---|
| Terminology | An <i>employment ticket</i> for a study programme is something difficult and in demand in the labour market that all graduates of that study programme master (in the case of part-time programmes, the students are often already employed, but the definition still makes sense). |
| Predicate | For every study programme, there exists a description, approved by the relevant Programme-Specific Employers’ Panel no more than two years ago, of at least one “employment ticket”. |
| Responsible | Head of Study Programme |
| Place of record | The Employment Ticket description is stored in the archive of the Employers’ Panel. The approval (or rejection) is recorded in the annual report from the Employers’ Panel. |
| Alarm Handling Process | Mandatory: 1) If the description does not exist, the Head of Study Programme is responsible for developing one; similarly, if the description is no longer up-to-date, the Head of Study Programme is responsible for updating it; 2) If a description exists but has not been approved by the Programme-Specific Employers’ Panel, the Head of Study Programme is responsible for negotiating any changes with the Employers’ Panel and presenting the description for the approval of the Employers’ Panel within six months. |

| 3.2 Quality Standard | |
|---|--|
| Employability – unemployment rate (MSc) | |
| Terminology | <p>ITU wants its study programmes to give their students competences that are in high demand in the labour market. Consequently, unemployment rates are followed closely and compared to the national average. Below, the term unemployment rate refers to the average unemployment rate four to seven months after graduation. The Ministry for Higher Education and Science calculate unemployment rates for every master study programme offered by some Danish university. It also calculates the average unemployment rate (four to seven months after graduation) of all who graduated with some degree from some Danish university. The latter we refer to as the national university graduate unemployment rate.</p> |
| Predicate | <ol style="list-style-type: none"> 1. ITU: The overall unemployment rate for MSc programmes does not exceed the national university graduate unemployment rate. 2. MSc: The study programme’s unemployment rate does not exceed the national university graduate unemployment rate. 3. MSc: The study programme’s rolling weighted average for unemployment measured four to seven quarters after graduation is lower than or equal to the rolling weighted national average for unemployment measured four to seven quarters after graduation from an MSc programme (see Appendix). |
| Responsible | Head of Study Programme |
| Place of record | Study Programme Report |
| Alarm Handling Process | <p>Mandatory: The procedure is to examine whether the Study Programme has become misaligned with the labour market.</p> <ol style="list-style-type: none"> 1. Put the issue on the agenda for the next Employers’ Panel meeting for this programme, in particular to ensure that the employment tickets are still valid and that the market for the graduates in question is not too small to justify the number of students admitted. <p>In addition, some of the following action can be taken (recommendations):</p> <ol style="list-style-type: none"> A. Conduct focus group interview with a handful of new alumnae; B. Draw a deeper statistic splitting the unemployment on the bachelor background of graduates; C. Study of the latest graduate survey paying attention to issues that might be related to unemployment; D. Conduct focus group interview with relevant part-time lecturers within the programme; E. Raise the issue at a student meeting to get student input to the issue. <p>This analysis, the findings, and a possible action plan are submitted to the Education Group in the next Study Programme Report. The report must address the alignment of the Study Programme to the labour market.</p> <p>In case of repeated failure, it is suggested to do some of the following:</p> <ol style="list-style-type: none"> a) Perform a graduate survey to uncover details of the issue b) In collaboration with faculty, management, the Programme-Specific Employers’ Panel and the Executive-Level Employers’ Panel, to review whether the study programme needs to be changed to increase the segment of the labour market it addresses. |

| | |
|--|--|
| | <p>c) Conduct a focus group interview with the unions mostly representing the unemployed graduates.</p> <p>An analysis, the findings and a possible action plan must be submitted to the Education Group in the next Study Programme Report. In the report, it must be addressed whether there is a need for downsizing the program, or for major changes to the Study Programme (major for example being the need for new research areas to cover new elements of the study programme).</p> |
|--|--|

| 3.3 Quality Standard | |
|---|---|
| Employability – employment rate (BSc and MSc) | |
| Terminology | ITU wants its study programmes to give their students competences that are in high demand in the labour market. Consequently, employment rates are followed closely. The Ministry for Higher Education and Science calculate employment rates for every study programme offered by some Danish university. It also sets a standard for the individual university: <i>Dimittendernes beskæftigelse (opgjort i 12.-23. måned), skal mindst være på niveau med den generelle beskæftigelse for befolkningen i den erhvervsaktive alder</i> . For 2019 the employment rate for ITU graduates must be at least 94 %. |
| Predicate | <ol style="list-style-type: none"> 1. ITU: The overall employment rate for MSc programmes does not fall below the overall national employment rate. 2. MSc: The study programme’s employment rate does not fall below the overall national employment rate. 3. BSc: The study programme’s employment rate does not fall below the overall national employment rate. |
| Responsible | Head of Study Programme |
| Place of record | Study Programme Report |
| Alarm Handling Process | Same as Quality Standard 3.2 |

| 3.4 Development Goal | |
|-------------------------------------|---|
| Employability – graduate evaluation | |
| Summary | Students at ITU participate in the Ministry’s survey Uddannelseszoom. Data is collected biennially and a score is calculated for each study programme. The Ministry forwards survey results and the score to ITU the following Spring. The score from the 2016-survey applies in 2016 and 2017. The score from the 2018-survey will apply in 2018 and 2019. |
| Predicate | The score for the individual study programme for the question “My education has prepared me for my current or previous job” must be at least 4.0 (on a scale from 1-5) |
| Responsible | Head of Studies |
| Place of record | Study Programme Report |
| Alarm Handling Process | <p>Recommendations (if the score falls below the target)</p> <ol style="list-style-type: none"> 1. Develop a plan for how to handle issues. The Head of Studies and relevant Heads of Study Programme cooperate on this. |

3.5 Quality Standard

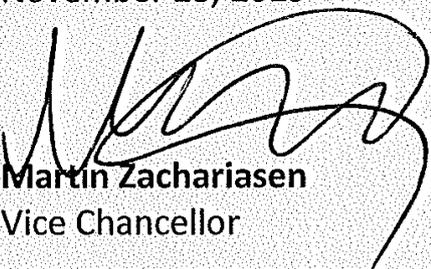
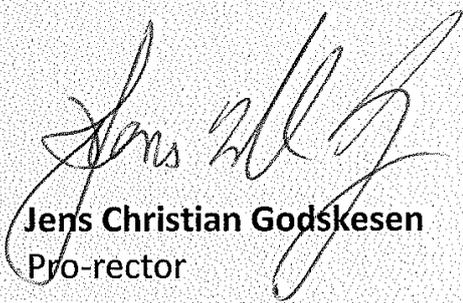
Interaction with Employers' Panels (BSc, MSc and Master)

| | |
|------------------------|--|
| Terminology | ITU has a number of Programme-Specific and one Executive-Level Employers' Panel. Together they cover all the study programmes (BSc, MSc and master programmes). |
| Predicate | 1. ITU follows up on the recommendations of the Employers' Panels; AND 2. The Employers' Panels find that ITU follows up on their recommendations |
| Responsible | 1. Head of Study Programme (for Programme-Specific Employers' Panels) and Head of Studies (for Executive-Level Employers' Panel) 2. Chairmen of the Employers' Panels |
| Place of record | 1. Study Programme Report and Education Portfolio Report, respectively 2. Programme-Specific Employers' Panel Reports from the Executive-Level Employers' Panel Reports, respectively. |
| Alarm Handling Process | Mandatory: a) If the breach is in a Programme-Specific Employers' Panel: The Head of Study Programme develops an action plan for the approval of the Head of Studies. b) If the breach is in the Executive-Level Employers' Panel: The Vice Chancellor develops an action plan for the approval of the chairman of the Board of Directors. |

3.6 Quality Standard

Global Competence Profile (MSc and BSc)

| | |
|------------------------|--|
| Predicate | The Global Competence Profile and related activities of the BSc and MSc programmes are evaluated and updated each year. Planned actions are part of the Action Plan in the Study Programme Report. |
| Responsible | Head of Study Programme |
| Place of record | Study Programme Report. The approval by the Head of Studies of the action plan is part of the Education Group's approval process for the Study Programme Report. |
| Alarm Handling Process | Recommendation: If the Head of Studies cannot approve the action plan or the follow-up on previous plans, the Head of Study Programme appears before the Education Group with a revised plan. |

| | |
|-------------------------|---|
| Approval and Signatures | <p>The Quality Policy was approved by Executive Management on</p> <p>November 25, 2019</p> <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;">  <p>Martin Zachariassen Vice Chancellor</p> </div> <div style="text-align: center;">  <p>Jens Christian Godskesen Pro-rector</p> </div> </div> <div style="text-align: center; margin-top: 20px;">  <p>Georg Dam Steffensen University Director</p> </div> |
|-------------------------|---|

Appendix: Definitions of Primary Quality Data

| Name | Definition | Notes |
|--|---|--|
| Origin of applicant | <p>A classification of the institution which granted the degree based on which the applicant seeks admission:</p> <ol style="list-style-type: none"> 1. ITU 2. Other Danish University 3. Foreign University 4. Danish Professional Bachelor's degree 5. Other 6. Unknown <p>Professional bachelor's degrees from a Danish university are counted under item 4.</p> | |
| Number of applications, year <i>N</i> | Number of applicants for start on Feb. 1 st year <i>N</i> or Sep. 1 st year <i>N</i> | Appears as Primary Quality Data in reports produced year <i>N</i> +1. Calculated by Analysis Unit. |
| Number of applicants offered admission, year <i>N</i> | Number of applicants offered admission for start on Feb. 1 st year <i>N</i> or Sep. 1 st year <i>N</i> | Appears as Primary Quality Data in reports produced year <i>N</i> +1. Calculated by Analysis Unit. |
| Number of students admitted after early dropout, year <i>N</i> | Number of students admitted after early dropout, enrolled as of Sep. 1 st year <i>N</i> | Appears as Primary Quality Data in reports produced year <i>N</i> +1. Calculated by Analysis Unit. |
| Share/Number of female students | Share/Number of female students admitted after early dropout, enrolled as | Appears as Primary Quality Data in reports produced year <i>N</i> +1. Calculated by Analysis Unit. |

| | | |
|---|--|--|
| admitted after early drop out, year N | of Sep. 1 st year N on selected study programmes | |
| Dropout after first year, year N | (Number of students who were admitted on Feb 1 st year $N-1$, were still enrolled on March 1 st year $N-1$ but were not still enrolled on March 1 st year N) + (Number of students who were admitted on Sept. 1 st year $N-1$, were still enrolled on Oct 1 st year $N-1$ but were not still enrolled on Oct 1 st year N) | Appears as Primary Quality Data in reports produced year $N+1$. Calculated by Analysis Unit. The definition is taken from Universities Denmark, who use the concept in their benchmarking of the universities (Danish: "statistisk beredskab"). |
| Average graduate delay, compared to curriculum schedule, year N | Average study time minus curriculum scheduled study time for those who graduated between Oct 1 st year $N-1$ and Sep 30 th year N | Appears as Primary Quality Data in reports produced year $N+1$. Calculated by Analysis Unit |
| Completion rate within schedule plus one year, year N (%) | <p>Bachelor Programmes</p> <p>The <i>base population</i> for year N consists of the students who were enrolled Sep 1st year $N-4$ and were still enrolled on Oct 1st year $N-4$. The completion rate within schedule plus one year, year N, is the ratio of the base population for year N that has passed a bachelor degree from ITU when measured on Oct 1st year N.</p> <p>MSc Programmes</p> <p>The <i>base population</i> for year N consists of the students who were enrolled on Feb 1st year $N-3$ or Sep 1st year $N-3$ and were still enrolled on Oct 1st year $N-3$. The completion rate within schedule plus one year, year N, is the ratio of the base population for year N that has passed some cand.it. degree from ITU when measured 3 years and one month (i.e., 1st March or 1st October, year N) after their admission.</p> | Appears as Primary Quality Data in reports produced year $N+1$. Calculated by Analysis Unit The definition is taken from Universities Denmark, who use the concept in their benchmarking of the universities (Danish: "statistisk beredskab"). |
| VIP/DVIP ratio in year N | <p>"VIP" (Danish: "videnskabeligt personale") stands for active researchers while DVIP (Danish: "deltidsansat videnskabeligt personale") stands for lecturers that do not have research obligations, including part-time lecturers.</p> <p>Let S be a set of study activities on a programme in a given period. For each study activity s in S, let s_e be the ECTS point size of the activity. Further, let s_v be the percentage of s taught by VIP and similarly, let s_d be the percentage of the activity taught by DVIP (note that $s_v + s_d = 100\%$). Finally, let s_n be the number of student registered on the activity. We then define the VIP/DVIP ratio for the programme in that period relative to S as follows:</p> | |
| | $\text{VIP/DVIP ratio}(S) = \frac{\sum_{s \text{ in } S} (s_e \times s_v \times s_n)}{\sum_{s \text{ in } S} (s_e \times s_d \times s_n)}$ | |

| | | |
|---|---|---|
| | <p>that is, the total volume of student activities taught or supervised by active researchers divided by the total volume of student activities taught or supervised by DVIP.</p> <p>The VIP/DVIP ratio in year N is calculated by the Analysis Unit and occurs in reports that are produced in year $N+1$.</p> | |
| Average score, survey questions, course evaluation, in year N | <p>IT University of Copenhagen has in its course evaluation a number of <i>quantitative questions</i> concerning learning outcome.</p> <p>The questions are scored on a scale from 1 to 6, 6 being the highest score.</p> | <p>The Analysis Unit calculates the averages for each teacher and study programme and for ITU as a whole, based on data in the evaluation system.</p> <p>The averages for evaluations conducted in year N appear as Primary Quality Data in reports produced in year $N+1$.</p> |
| Average score, survey questions, evaluation of theses/final projects and other projects in year N | <p>IT University of Copenhagen has in its evaluation of theses/final projects and other projects a number of <i>quantitative questions</i>.</p> <p>The questions are scored on a scale from 1 to 6, 6 being the highest score.</p> | <p>The Analysis Unit calculates the average score for each course, supervisor and study programme and for ITU as a whole.</p> <p>The averages for evaluations conducted in year N appear as Primary Quality Data in reports produced in year $N+1$.</p> |
| ITU-score, Uddannelseszoom, year N | <p>ITU has selected three questions (two from the student survey and one from the graduate survey).</p> <p>The scale is from 1 to 5, 5 being the highest score.</p> | <p>The Ministry of Higher Education and Science provides ITU with the score from the biennial survey, carried out in even calendar years.</p> |
| Numbers of graduates, year N | <p>Number of students who graduated between Oct. 1st year $N-1$ and Sept. 30th year N.</p> | <p>Calculated by the Analysis Unit for each study programme and ITU as a whole.</p> <p>Appears as Primary Quality Data in reports produced year $N+1$.</p> |
| Unemployment rate during the second year after graduation in year N (per cent) | <p>Unemployment rate is measured as the proportion of hours a person is unemployed in a quarter with a normal expected working period of 37 hours per week. An unemployment rate of 0.010 is equivalent to 10 per cent of the graduates have been unemployed in a quarter.</p> <p>Unemployment rate second year after graduation in year N is the average unemployment rate four to seven quarters after graduation, among students who graduated between Oct. 1st year $N-1$ and Sept. 30th year N.</p> | <p>The definition is taken from the Ministry for Higher Education and Science, who in year N compute the unemployment rate during the second year after graduation in year $N-3$.</p> |
| Rolling weighted average unemployment rate four to seven quarters | <p>For any year, i, let N_i be the number of graduates from all Danish split master's degree programmes in year i, and let L_i be the share who, measured after four to seven quarters after graduation in year i, were unemployed. L_i and N_i are</p> | |

| | |
|---------------------------------------|---|
| after graduation in year N (per cent) | <p>calculated annually by the Danish Agency for Institutions and Educational Grants who publish the figures during year $i+3$⁴.</p> <p>Then, let n_i be the number of graduates from ITU's MSc study programmes in year i and let l_i be the share who, measured after four to seven quarters after graduation in year i, were unemployed. L_i is also calculated annually by the Danish Agency for Institutions and Educational Grants and published during year $i+3$.</p> <p>For example: The standard is met in 2021 if, and only if:</p> $\frac{(l_{2016}n_{2016}+l_{2017}n_{2017}+l_{2018}n_{2018})/(n_{2016}+n_{2017}+n_{2018}) \leq (L_{2016}N_{2016}+L_{2017}N_{2017}+L_{2018}N_{2018})/(N_{2016}+N_{2017}+N_{2018})}{}$ |
| Employment rate in year N (per cent) | <p>Dage beskæftiget i procent af dage i arbejdsstyrken, opgjort for fuldførte 12-23 måneder efter fuldførelsestidspunkt. Dage i arbejdsstyrken er summen af dage, hvor personen er beskæftiget (dage_besk_sum) eller ledig (dage_ledig_sum). Dvs $dage_beskGrad = \frac{dage_besk_sum}{(dage_besk_sum+dage_ledig_sum)} * 100$ (enheden er dage i primær tilstand).</p> <p>Dimittender, der er i gang med en uddannelse, regnes ikke som beskæftigede, men som uden for arbejdsstyrken - og dimittender uden for arbejdsstyrken indgår ikke i udregningen af beskæftigelsesgraden.</p> <p>Published 4 years after the graduation year.</p> |

⁴ For eksempel lagdes dimittendledighed for delte kandidatuddannelser for dimittendår op til og med 2014 på nettet i 2017, se [ledighed, organiseret efter uddannelser \(excel\)](#)