



GUIDE TO PERIODIC EVALUATION OF PROGRAMMES OF STUDY

NTNU 2017

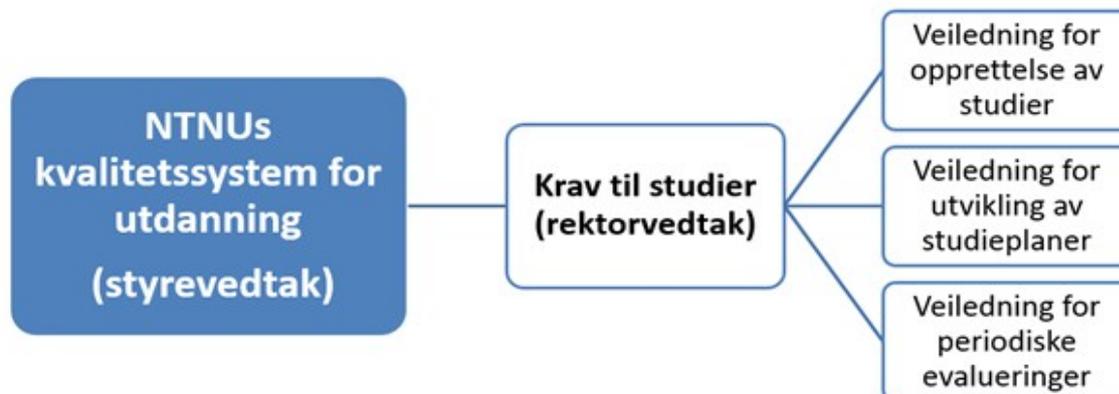
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1 Introduction

“Guide to periodic evaluation of programmes of study” is an appendix to the document “Requirements for programmes of study at NTNU”¹. The guide provides information and guidelines to everyone involved in periodic evaluations at NTNU in any way.



[Text for diagram]

NTNU's quality system for education (Board resolution) Requirements for programmes of study (Rector's decision) Guide to establishing programmes of study
Guide to developing programme descriptions
Guide to periodic evaluations

The guide is intended for two groups: *Participants* in an evaluation and *users* of an evaluation. Participants include everyone involved in conducting an evaluation, such as evaluation panel members, interviewees and data analysts. Users include those who will use the evaluation results in their efforts to develop the quality of the programme – deans, heads of departments, study programme coordinators, programme councils, course coordinators and student representatives. The same person may have the roles of both participant and user.

The guide is intended to help to standardize, streamline and improve work on periodic evaluations at NTNU.

Periodic evaluation of programmes is one of several measures in “NTNU’s Quality System for Education”². These evaluations are intended to assess the quality of programmes from a more strategic and external perspective than that of the annual evaluations. Periodic evaluation should provide a basis for NTNU’s education management to assess whether the programme of study should be continued as it is, changed, or discontinued.

2 About programmes of study

NTNU’s Academic Regulations³ define a programme of study as follows:

An academic entity consisting of a collection of courses with an overall learning outcome, to which students can apply and be admitted. A characteristic of a programme of study is that it is not necessary to reapply for admission in order to take new courses within the programme of study.

¹ Requirements for programmes of study at NTNU

² [NTNU’s Quality System for Education](#)

³ [Forskrift om studier ved Norges teknisk-naturvitenskapelige universitet \(NTNU\) \[Academic Regulations for the Norwegian University of Science and Technology \(NTNU\)\]](#)

All programmes of study that meet this definition must undergo a periodic evaluation at least every five years. The Dean is responsible for ensuring that the faculty has a rolling five-year plan for periodic evaluations.

Periodic evaluation includes:

- Programmes of study at bachelor's, master's and PhD level⁴
- Both full-time and part-time programmes
- One-year programmes that meet the above definition of a programme of study
- Continuing and further education programmes that meet the above definition of a programme of study
- Joint programmes /dual degree programmes

This list is not exhaustive, and studies with other names that meet the definition of the programme of study are subject to the same requirements.

Programmes of study are owned by the faculty, with the Dean as the responsible manager. This ownership responsibility involves ensuring that periodic evaluations are prepared and that the recommendations made in the evaluations are followed up, among other tasks.

The Dean can delegate associated tasks to the Head of Department or study programme coordinator where this is natural, but the Dean retains the formal ownership responsibility.

⁴ This guide is mainly designed for programmes of study at bachelor's and master's level. For periodic evaluation of PhD programmes, the guide can be used in the areas in which it is regarded as relevant. The content and methods can be adjusted to ensure that the evaluation helps to achieve the goals in Chapter 3.

PART I: General information about periodic evaluation

This part of the guide describes the objectives (Chapter 3) and framework (Chapter 4) for work with periodic evaluations.

3 Objectives

Periodic evaluation of programmes of study is a key instrument in NTNU's efforts to achieve two of its strategic objectives:

All the programmes of study are characterized by academic and teaching quality at a high international level.

All academic environments will develop first-class educational management and a culture of quality improvement using systematic evaluation and effective

Periodic evaluation involves investigating the quality of the programme of study and assessing whether it is adapted to current and future needs for expertise in civic and working life. The purpose is to identify challenges and design measures to develop the quality of the individual programme. Periodic evaluations are also a tool for managing the portfolio of programmes of study and they are intended to ensure that NTNU's programmes of study comply with the regulations in effect.

4 Framework

4.1 National and international guiding principles

The national regulations on the quality of programmes of study⁶ require institutions to have a quality assurance system and require periodic evaluation of programmes of study:

Section 1-2. Requirements for systematic quality assurance

- (2) Institutions must conduct periodic evaluations of the programmes of study that they offer. Representatives from the job market or society, students and external experts who are relevant to the programme of study should contribute to the evaluations. The evaluation results must be public.

This requirement is in line with the ESG 2015 document⁷, which requires educational institutions to have ongoing oversight of their programmes of study and to evaluate them periodically.

4.2 NTNU's guiding principles

1.9 Ongoing monitoring and periodic review of programmes

Institutions should monitor and periodically review their programmes to ensure that they achieve the objectives set for them and respond to the needs of students and society. These reviews should lead to continuous improvement of the programme. Any action planned or taken as a result should be communicated to all those concerned.

NTNU's guiding principles for annual and periodic evaluation of programmes of study are described in "NTNU's Quality System for Education"⁸:

⁵ From "[Strategy 2011-2020 for NTNU](#)"

⁶ [Forskrift om kvalitetssikring og kvalitetsutvikling i høyere utdanning og fagskoleutdanning](#) [Regulations on quality assurance and quality enhancement in higher education and vocational education]

⁷ "[Standards and Guidelines for Quality Assurance in the European Higher Education Area](#)"

⁸ See footnote 2

Evaluation of study programmes

Every year:

Requirements

S

Every year, the study programme coordinator must perform an evaluation of the programme of study focused on the inner quality of the programme. The study programme coordinator must prepare a report on the programme of study (see link 6 for template) with proposals for a plan of action and assessment of whether the programme should undergo evaluation in greater depth.

Topics

Is the learning outcome description academically up to date and relevant? Do all courses and the relationship between them help to ensure that students achieve the learning outcomes for the programme? Does the programme of study provide a learning environment of high quality? Are there challenges indicating that the programme of study should undergo a periodic evaluation earlier than planned?

Basis

Course reports, programme reports and underlying data such as numbers of applicants, completion and dropout statistics, Studiebarometeret (information from the national student survey on the quality of education) and other surveys.

At least every 5 years:

Requirements

At least every five years, the Dean must ensure that a periodic evaluation of the programmes of study is conducted with input from students, the working world and external stakeholders, nationally or internationally. The report is stored and available in the document management tool Doq, and must be available to the public. The Dean reports to the Rector in the quality report.

Topics

As well as the topics in the annual evaluations of the programmes of study, the periodic programme evaluation is to focus on the programme's relevance to society and the working world, as well as the relationship to NTNU's profile and strategy. Do the annual programme evaluations identify specific challenges that call for particular attention? Should the programme of study be continued in its present form, modified, or discontinued?

Basis

The same basis is relevant as for the annual evaluations of programmes of study, combined with strategic plans as well as relevant national and international surveys and analyses. In addition, it may be necessary to gather targeted data as a basis for any area of focus that has been selected for the evaluation.

See the guide to periodic evaluation of programmes of study.

Periodic and annual evaluations are linked in several ways:

- A periodic evaluation deals with the same topics as the annual evaluation, but has a strategic and more external perspective
- A periodic evaluation is based on the findings made in the preceding annual evaluations of the programme

4.3 Use of resources and funding

All the processes included in NTNU's Quality System for Education⁹ must be conducted as part of the faculties' regular activities. This also applies to periodic evaluations.

Faculties may give priority to using more resources for periodic evaluation of some programmes than for others based on considerations such as the size of the programme of study, interdisciplinary complexity, or challenges that have been identified in the annual evaluations. It may be appropriate to combine the evaluation of two more programmes that are academically related and where evaluation requires the same academic competence and work experience. For example, a bachelor's and a master's programme in the same subject area may be evaluated together. Similarly, a one-year programme consisting of courses that constitute the first year of study in a bachelor's degree may be evaluated together with the bachelor's programme. There may also be specific reasons to evaluate some programmes more frequently than every five years.

⁹ See footnote 2

Part II: Guidelines

This part of the guide provides guidelines for work on periodic evaluations with regard to the process, composition of evaluation panels, evaluation topics (Chapter 8) and the form of the evaluation (Chapter 9).

5 Process

It is recommended that the work on periodic evaluations at NTNU should be divided into three stages:

1. Preparation
2. Evaluation
3. Action plan

The Dean is responsible for stages 1 and 3, while stage 2 is performed by the evaluation panel(s) designated by the Dean.

5.1 Preparation

Within a reasonable period before the faculty's rolling five-year plan for periodic evaluations indicates that a periodic evaluation must be conducted for a programme, the Dean must ensure that the last years' annual programme reports are reviewed. Based on this review and assessment of other factors, the Dean must ensure that a mandate is drawn up specifying:

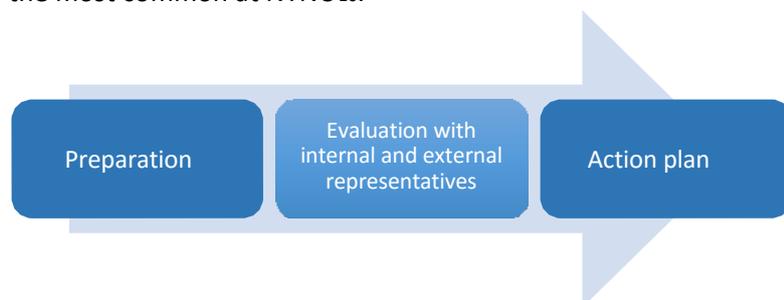
- The quality areas to be included
- The evaluation method
- Composition of the evaluation panel
- Chair of the panel

5.2 Evaluation

The evaluation is based on the mandate. The evaluation panel may choose to include quality areas they find relevant in addition to those that are specified in the mandate.

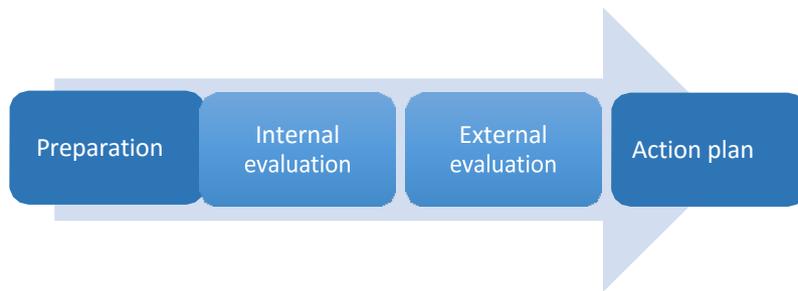
Two methods for periodic evaluation of equal value are outlined below. Both include three stages – preparation, evaluation and action plan. The difference is in the way that the second stage – the evaluation – is organized. If the evaluation panel has a substantiated request for an alternative methodology, this can be arranged with the Dean.

In the *3-step method*, an evaluation panel is assembled with both internal and external representation. In this model, a single overall evaluation report is prepared. This model has been the most common at NTNU¹⁰.



¹⁰ *Peer evaluation* can be regarded as a variant of the 3-step model. In the peer evaluation method, academic environments at two institutions (from the same country or different countries) assist each other in evaluating each other's programmes of study, which are assumed to be comparable. The academic environment at the other institution then constitutes the external representation in the evaluation panel. Note that such representation does not meet the requirement for representatives of the job market as specified in the regulations on the quality of programmes of study. It must therefore be ensured that such an evaluation also includes assessment from external representatives with a focus on the needs of civic and working life.

In the *4-step method*, two evaluation panels are appointed – one internal and one external – each of which is to prepare its own report. The internal evaluation must be conducted before the external one, and the external evaluation must use the internal report as the basis for its evaluation.



In accordance with NTNU's strategic goal of education characterized by quality at a high international level, the panel should normally have an international composition. This applies to both methods.

The evaluation report(s) must include discussions of various quality areas for the programme of study, specify findings and propose actions. The basic information for the evaluation may be obtained in different ways, such as:

- Reference to databases and archives
- Questionnaires (new or already conducted) aimed at students, former students, employers or associated members of the teaching staff
- Interviews with students, former students, employers, student advisers, the study programme coordinator or associated members of the teaching staff
- Workshops

5.3 Action plan

Based on the evaluation report(s), the Dean – in cooperation with the study programme coordinator and the Heads of Departments concerned – must prepare a binding action plan with concrete measures. For each measure, the responsible parties and a deadline must specify. The action plan must stake out a development path for the programme of study with a time horizon of five years. The subsequent annual evaluations must follow up and report on the implementation of the measures in the action plan.

A periodic evaluation may also form the basis for a decision to discontinue the programme. In this case, the action plan will describe how the programme should be phased out. Reasons to recommend discontinuation might, for example, be that the programme of study:

- is not considered sufficiently relevant to society and working life
- is not an adequate match with the faculty's and NTNU's strategies
- has weak recruitment
- does not meet the general requirements for programmes of study at NTNU¹¹

¹¹ See footnote 1

6 Composition of the evaluation panel

As part of the preparations for a periodic evaluation, the Dean must appoint one or more evaluation panels. Recommendations for the composition of the panels appear below.

For the 3-step method:

Course teachers from the programme**	1–3 *
Academic staff from an educational institution abroad or possibly from a university or university college in Norway	1–2 *
Academic staff with subject didactic or university teaching competence from NTNU or other institution (in or outside Norway)	0–1
Representatives of the job market (may be alumni)	1–2 *
Students	2
Study programme coordinator from another programme at NTNU, or other person with competence that is relevant to the chosen areas of focus	0–1
Student adviser for the programme	0–1
Secretary of the panel	1
<i>Total:</i>	<i>6–13</i>

* One of these is designated as the head of the panel.

**These include the study programme coordinator if he or she has been appointed to participate in the evaluation panel.

For the 4-step method:

	Internal panel	External panel
Course teachers from the programme**	1–3 *	
Academic staff from an educational institution abroad or possibly from a university or university college in Norway		1–2 *
Academic staff with subject didactic or university teaching competence from NTNU or other institution (in or outside Norway)		0–1
Representatives of the job market (may be alumni)		1–2 *
Students	2	
Study programme coordinator from another programme at NTNU, or other person with competence that is relevant to the chosen areas	0–1	
Student adviser for the programme	0–1	
Secretary of the panel	1	1
<i>Total:</i>	<i>4–8</i>	<i>3–6</i>

* One of these is designated as the head of the panel.

**These include the study programme coordinator if he or she has been appointed to participate in the evaluation panel.

7 Allocation of responsibility

The table below summarizes the responsibilities and tasks for the various roles:

Role	Responsibilities and tasks
Dean	<ul style="list-style-type: none">• To ensure that the faculty has a rolling five-year plan for periodic evaluations• To ensure that periodic evaluation of all programmes of study is performed at least every five years in accordance with this guide• To ensure that a mandate is drawn up for the evaluation panel(s) specify the composition and panel chair, the method and selected quality areas• To make resources available for the evaluation• To ensure that a five-year action plan for the programme is made after the periodic evaluation and that the plan is followed up• To make resources available for follow-up of measures after the evaluation• To report the most important findings and recommendations from the periodic evaluation to the Rector via the faculty's
Study programme coordinator	<ul style="list-style-type: none">• To contribute to the work involved in preparing a periodic evaluation• To take part as an internal representative in the evaluation panel if this is specified in the mandate• To follow up the five-year action plan for the programme of study in close dialogue and cooperation with faculty and department
Head of department	<ul style="list-style-type: none">• To perform tasks delegated from the Dean that are related to periodic evaluations• To make resources available for the evaluation and follow-up of measures after the evaluation
Programme council	<ul style="list-style-type: none">• To contribute to the evaluation work if this is specified in the mandate• To ensure that the development in the programme of study
Students	<ul style="list-style-type: none">• To participate in the evaluation panel and programme council• To participate in surveys and interviews

8 Evaluation topics

8.1 Quality areas

A list of different quality areas for a programme of study appears below. The list is based on NTNU's requirements for programmes of study¹². These provide some common categories as a starting point and are intended as an aid to structuring the evaluation.

- About the programme of study
- Organization and management
- Academic environment and link to research
- Programme design
- Relevance to society and working life

¹² See footnote 1

- Internationalization
- Recruitment
- Throughput
- Learning environment

A periodic evaluation will typically cover several of these quality areas. Before the evaluation, the Dean selects areas of special interest.

Note that this categorization is different from the one used in the annual quality assurance report at faculty and university level, where the categories used are quality of the framework, effort and commitment, quality of processes, and quality of results.

8.2 Topics for periodic evaluation

NTNU's Quality System for Education¹³ states the following about the topics that must be included in a periodic programme evaluation:

Topic (for periodic evaluation of programmes of study)

As well as the topics in the annual evaluations of the programmes of study, the periodic programme evaluation is to focus on the programme's relevance to society and the working world, as well as the relationship to NTNU's profile and strategy. Do the annual programme evaluations identify specific challenges that call for particular attention?

Topics for annual evaluations include:

Topic (for annual evaluation of programmes of study)

Is the learning outcome description academically up to date and relevant? Do all courses and the relationship between them help to ensure that students achieve the learning outcomes for the programme? Does the programme of study provide a learning environment of high quality?

8.3 More about the various quality areas

For each quality area, examples of relevant questions are listed below, and some information resources are indicated. These resources include both qualitative and quantitative data.

8.3.1 About the programme of study

Relevant questions:

- How is the programme of study anchored in the strategies of NTNU and of the faculty?
- Does the name of the programme of study cover the academic content? Does it communicate a clear message to the outside world?
- Is information about the programme of study in websites, brochures and diploma supplements comprehensive and up-to-date?
- How does the profile for the programme of study appear in relation to similar programmes at NTNU or other institutions in Norway? Could it be relevant to consider collaboration or distribution of tasks?

¹³ See footnote 2

- Is the description of the programme of study in line with any national curriculum regulations applicable to the studies?
- Have significant changes in the programme's structure been made since the previous periodic evaluation?

Information resources:

- NTNU's list of study programmes
- Annual evaluation reports for the programme

8.3.2 Organization and management

Relevant questions:

- Have adequate time resources been allocated to the study programme coordinator?
- Is the composition of the study programme council appropriate? Is it functioning satisfactorily?
- How is cooperation functioning between the study programme coordinator, Dean, Head of Department and course coordinators with regard to developing the quality of the programme of study?
- How is cooperation functioning between the parties involved (internal and external) and the students' co-determination in the programme of study?

Information resources:

- Mandate for the study programme coordinator

8.3.3 Academic environment and link to research

Relevant questions:

- How are the students included in the subject area and the academic environment?
- How do the students encounter research?
- How do students encounter artistic development work in programmes of study where this is central?
- In which ways is the programme of study research-based?
- Does the academic environment have adequate research competence and teaching competence to meet the programme's needs (proportion of doctoral positions, international network, documented results at a high level in research/pedagogical development)? See the requirements for the academic environment stated in Chapter 4.0 in "Requirements for programmes of study"¹⁴
- How much "industry experience" (that is, experience from relevant working life) does the academic environment have?
- How is the teaching competence in the academic environment developed?

Information resources:

- "Requirements for programmes of study"¹⁵
- Programme description for the programme

8.3.4 Programme design

Relevant questions

- Are the learning outcome descriptions for the programme of study academically up to date?
- Are the learning outcome descriptions in accordance with the Norwegian Qualifications

¹⁴ See footnote 1

¹⁵ See footnote 1

Framework?¹⁶

- Do all courses contribute to the programme's expected learning outcomes?
- How do the teaching methods and forms of assessment help students to achieve the expected learning outcome ("constructive alignment")?
- Is there appropriate variation and balance in the programme's teaching and assessment methods?
- Are learning resources (for example, books, arrangements for exercises/laboratory work) academically up to date?
- Does the composition of courses enable good progress of study in the subject area?
- Is the programme's learning outcome description in accordance with any national curriculum regulations that apply to the education?
- If applicable, how do practical training components function, and are they in line with any national curriculum regulations for the programme?
- How do the common courses function as part of the programme of study?

Information resources:

- Programme description
- Course descriptions
- Course reports
- Annual programme reports
- Reading lists

8.3.5 Relevance to society and working life

Relevant questions:

- How relevant is the programme of study to working life and to society's needs for competence?
- To what extent does the teaching in the programme of study relate to relevant issues from working life?
- How well does any practical training help to prepare students for working life?
- How are society's needs for competence expected to change, and how can the programme be adapted to these changes?
- How well are students prepared for an international career?
- Does the programme help to train students' ability to identify ethical dilemmas and make ethical judgements?

Information resources:

- The Studiebarometeret student survey (national)
- NTNU's graduate surveys

8.3.6 Internationalization

Relevant questions:

- Have schemes for exchange visits abroad been established?
- Are the schemes for student exchange adapted to the level, scope and distinctive nature of the programme?
- How is adequate quality ensured for international courses that are recognized in the programme?
- Are the exchange schemes described in the programme description?

¹⁶ [Norwegian Qualifications Framework for Lifelong Learning](#)

- How are students introduced to international perspectives in the subject area?
- Do student exchange schemes and educational collaboration with universities abroad provide added value for the programme of study?

Information resources:

- Programme description

Relevant questions:

- What are the trends in recruitment (number of primary applicants, number of candidates attending the programme and level of grades)?
- Is there reason to make changes in any admission requirements or in descriptions of recommended previous knowledge?
- If relevant, how is the development in recruitment with regard to socio-demographic factors (gender, place of residence, ethnicity and similar)?
- Is the information about the programme of study in NTNU websites and recruitment materials up to date?
- Have recruitment initiatives been implemented for the programme of study? If so, which initiatives and with what effect?

Information resources:

- Database for Statistics on Higher Education (DBH)¹⁷
- Common Student System (Felles studentsystem - FS)¹⁸
- BEVISST/Cognos¹⁹

8.3.7 Student flow patterns

Relevant questions:

- What is the completion rate for the programme, and is the trend satisfactory?
- What percentage of students complete their studies within the nominal period?
- At what stage of study does dropout take place?
- What are the reasons for dropout?
- Have measures been taken to reduce dropout? Which measures – and how have they worked?
- What is the trend in students' grades? And in the failure rate?
- What is the trend in the ratio of the grades in the programme to the grades from upper secondary school?

Information resources:

- Database for Statistics on Higher Education (DBH)
- Common Student System (Felles studentsystem - FS)
- BEVISST/Cognos
- Course reports
- Programme reports

8.3.8 Learning environment

Relevant questions:

- How do students evaluate the quality of teaching, feedback and assessment in the programme?

¹⁷ [Database for Statistics on Higher Education](#)

¹⁸ [National Student Database \(Felles studentsystem, FS\)](#)

¹⁹ [NTNU's system for enterprise management](#)

- Does the scope of organized learning activities require student effort and time equivalent to the norm of 1600 – 1800 hours per year for full-time studies²⁰?
- What is the learning environment of the programme like? (physical, organizational, psychosocial, digital and teaching)?
- How well does the student advisory service work?
- To what extent is students' academic engagement, independence and creativity encouraged?
- In which ways do students contribute to developing the quality of learning activities and forms of assessment the programme?

Information resources:

- Studiebarometeret national student survey
- Course reports
- Programme reports

9 Format of the evaluation

It is recommended that the evaluation report(s) include the following chapters:

1	Front page with the programme name and evaluation date
2	Summarized list of the report's recommendations
3	Key information about the programme of study (for example, level, number of places on the programme, host faculty)
4	Selected quality areas (preferably with justification explaining why these have been chosen by the Dean or evaluation panel)
5	Composition of the evaluation panel
6	Choice of methodology for the evaluation
7	Analyses of the programme's quality <i>The analyses must cover the main topics for periodic evaluation as specified in NTNU's quality system and listed in Chapter 8 of this guide. The following structure is recommended for the analyses:</i> <ol style="list-style-type: none"> i. Describe the current situation by discussing relevant questions (examples of questions are shown in Chapter 8) ii. Describe the programme's strengths – what is working well? iii. Describe the programme's challenges or problems – what could be improved?
8	Recommendations on how the quality of the programme(s) could be strengthened <i>Preferably sort the recommendations into two categories:</i> <ol style="list-style-type: none"> i. Proposals for short-term remedial measures: What could be done within one to two years? ii. Proposals for long-term development initiatives: What can be done in the longer term, that is, within three to five years?
9	Conclusion with recommendation on whether the programme of study should be continued, modified or discontinued

As for annual programme reports, periodic evaluation reports must be filed and made available in DOQ²¹.

²⁰ Guide to developing programme descriptions and course descriptions at NTNU

²¹ [The document management tool in NTNU's quality system for education](#)