Guidelines on writing learning outcomes

Updated October 2026

Purpose:
Provide course leaders at UNIS a better understanding of how to write good learning outcome descriptors.

What are learning outcomes?
Learning outcomes descriptors describes what students are expected to know and to be able to do by the end of a course and are regulated through the Norwegian Qualification Framework for Lifelong Learning (NQR) and Studietilsynsforskriften. NQR separates learning outcomes into "Knowledge", "Skills" and "General competences":

Learning outcome categories	Definition
Knowledge	Knowledge is understanding of theories, facts, concepts, principles and procedures in a discipline, subject area and/or profession.
Skills	Skills is the ability to apply knowledge *to* complete tasks and solve problems. There are different types of skills: cognitive, practical, creative and communicative.
General competence	General competence is the ability *to* use knowledge and skills in an independent manner in different situations in study and work contexts, by demonstrating the ability to cooperate, the ability to act responsible, and a capacity for reflection and critical thinking.

Learning outcomes – and agreement between you – the students and the institution
Learning outcome descriptors are part of the agreement between the institution, the teachers and the students. It will serve as an explanation of expectations for all partners as well as information to employees and society in general about what to expect from the candidate after passing the subject.

Learning outcome descriptors will also be used:

- in cases where the candidate wishes explanation of grades
- as the basis for a new exam commission in the case of complaints against a grade.
- as information to other institutions on e.g. approval of external education

Communicating learning outcomes and choosing the right learning activities
As well as being a part of the course description the learning outcomes descriptors should be repeatedly communicated to the students, i.e. when the course starts up, along the course period and when ending the teaching part of the course. This will help students as well as teachers to keep a focus on what is important in the course.

Learning outcomes should be based on what you want the students to **being able to do** after a course. Therefore, the applied learning activities and the chosen form of assessment should be well connected to the defined learning outcomes. In other words, it is important that there is a consistency between what you want the students to learn from the course (learning outcomes), how you want them to learn (learning activities) and how you want to measure the achievements (assessments).

The descriptors should therefore be evaluated after each course period to see if and how they are:

- suitable for the outcome of the course
- met when it comes to learning activities
- met when it comes to assessment[1]

Blooms taxonomy – the theoretical framework for this work
Bloom's Taxonomy is a framework that classifies learning outcomes by increasing cognitive complexity, from basic recall to producing new or original work. It comprises three domains—cognitive (thinking), affective (feelings/values), and psychomotor (skills) and each describes a hierarchy of increasingly complex learning goals (see tables below). Blooms taxonomy is used when writing measurable learning outcomes that describe the knowledge, skills and competences you would like the students to be able to do. The eight steps below for improving your learning outcomes descriptors are based on Blooms framework and should be used when working with your learning outcomes descriptors.

8 steps for improving your learning outcomes descriptors

1. You should work with the action verbs that describe what the students should be able to do after the course (see tables below). It is better to write verbs in present than in future.
   For example: "Upon completing the course, the students will: *(and then chose the verb, in present, which describes the task the student should do and what can be observed*) e.g. "Describe the diversity, function, and ecology of Arctic ……"

[1] This is especially important for skills and general competences connected to field work at UNIS. An internal mapping of 14 bachelor courses at UNIS in 2018 revealed that 25% of skills and general competences were not assessed.

2. Use a single, clear action verb for each learning outcome. This allows course leaders to determine whether or not an objective has been met without having to distinguish between partial completion or success.

3. Choose a verb that allows you to measure their learning process level. If you want to measure their understanding (learning level 2 in Blooms Taxonomy of the cognitive domain) they should be able to describe a phenomenon, explain a process, identify key elements, etc.

4. Show a progression in learning through your learning outcomes by using action verbs drawn from the various stages of Blooms Taxonomy – see tables below. If you are unsure whether the level of learning outcomes descriptors is too high or too low compared to what is expected at the bachelor, master or Ph.D. programme level, you can look into the summarized table on page 6-7 where each level is described[2].

5. At UNIS master and PhD courses are run together. The learning outcomes should be different in the course descriptions (see examples on page 7) and visualized in how you are running your course as well, showing that you expect a more complex level of learning among the PhD students than for master students. This should also be reflected in different assessment forms and / or the grading criteria between master- and PhD courses.

6. Write your learning outcomes in short sentences to maintain clarity.

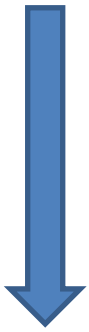
7. Do not use more than 3-5 learning outcomes within each competence description.

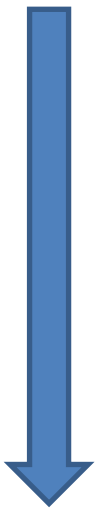
8. The learning outcomes descriptors should be observable and measurable and there should be a clear alignment between learning outcomes, learning activities and assessment. A learning outcome should not be included if it is not possible to assess it.

[2] From the Norwegian Qualifications Framework (NQR)

Blooms taxonomies

The following tables are adapted from resources provided by Vanderbilt University Center for Teaching and Red Deer Polytechnic, which offer overviews of Bloom's cognitive, affective, and psychomotor learning taxonomies – see external links below.

Blooms Taxonomy Cognitive Domain – knowledge and intellectual skills			
Learning process	**Category**	**Description of level**	**Action Verbs**
Complex  Less complex	Create	Produce new or original work	design, assemble, construct, conjecture, develop, formulate, author, investigate
	Evaluate	Justify a stand or decision	appraise, argue, defend, judge, select, support, value, critique, weigh
	Analyze	Draw connections among ideas	differentiate, organize, attribute, relate, compare, contrast, distinguish, examine, experiment, question, test
	Apply	Use information in new situations	execute, implement, solve, use, demonstrate, interpret, operate, schedule, sketch,
	Understand	Explain ideas or concepts	classify, describe, discuss, explain, identify, locate, recognize, report, select, translate
	Remember	Recall facts and basic concepts	define, duplicate, list, memorize, repeat, state

Blooms Taxonomy Affective Domain – attitudes, values and motivation			
Learning process	**Category**	**Description of level**	**Action Verbs**
Complex  Less complex	Characterize	Act consistently according to internalized values and beliefs.	act, advocate, authenticate, defend, display, embody, exemplify, influence, justify, behavior, maintain, produce, represent, serve, support, validate, verify
	Organize	Integrate and prioritize values into a coherent value system	adapt, adjust, alter, arrange, balance, change, classify, conceptualize, customize, develop, formulate, group, improve, manipulate, modify, practice, rank, revise, theorize
	Value	Express commitment to and appreciation of values, ideas, or behaviors	accept, adapt, adopt, balance, choose, differentiate, defend, demonstrate, express, influence, initiate, justify, prefer, recognize, seek
	Respond	Participate actively in and react to experiences or stimuli	answer freely, assist/aid, behave, care for, communicate, comply, contribute, cooperate, discuss, examine, follow, model, present, tell
	Receive	Attend to and become aware of ideas, values, or stimuli	accept, acknowledge, ask, attend to, describe, explain, identify, locate, names, observe, realize, recognize.

Blooms Taxonomy Psychomotor domain – motor skills and practical abilities			
Learning process	**Category**	**Description of level**	**Action Verbs**
Complex	Coaching	Instruct or train others to perform skills	Demonstrate, exhibit, instruct, teach, train
	Applying	Apply skills in a real life situation	Build, combine, compose, construct, create, design, originate
	Correcting	Use standards to evaluate and correct their own performances	Adapt, adjust, alter, change, customize, develop, improve, manipulate, modify, practice, reorganize, revise
	Recognizing standards	Recognize criteria that are important to the correct performance of a task or skill	Act habitually, check, control, detect, discriminate, differentiate, distinguish, notice, perceive, perform automatically, select
	Modeling	Imitate a skill or task	Attempt, copy, follow, imitate, mimic, re-enact, repeat, reproduce, show, try
Less complex	Observing	Use of sensory info to guide motor activity	Hear, identify, see, smell, taste, touch, watch

Resources:

UNIS Documents:

- Quality Assurance System for Educational Activities at UNIS

Book references:

- Biggs, J. & Tang, C. (2011). Teaching for Quality Learning at University, 4th ed, Berkshire, England: The Society for Research into Higher Education & Open University Press
- Raaheim, A. (2013). Råd og tips til deg som underviser, Oslo: Gyldendal Akademisk
- Raaheim, A. (2016). Eksamensrevolusjonen. Råd og tips om eksamen og alternative vurderingsformer, Oslo: Gyldendal Akademisk

External links:

- The Norwegian qualifications framework for lifelong learning: https://www.nokut.no/en/norwegian-education/the-norwegian-qualifications-framework-for-lifelong-learning/

- Use of rubrics to make the teaching more transparent for the students: http://www.cmu.edu/teaching/designteach/teach/rubrics.html
- NOKUTS evalueringer: Kartlegging av læringsutbyttebeskrivelser. Evaluering av læringsutbyttebeskrivelser innen biologi. November 2015: https://www.nokut.no/contentassets/40568ec86aab411ba43c5a880ae339b5/kartlegging_av_laringsutbyttebeskrivelser_biologi_2015-2.pdf
- Vanderbilt University Center for Teaching: https://cft.vanderbilt.edu/guides-sub-pages/blooms-taxonomy/
- Red Deer Polytechnic, Teaching Common: Teaching Common | Red Deer Polytechnic

The NQF programme level descriptors for Bachelor, master and Ph.D. degree			
	Bachelor's qualifications	Master's qualifications	Ph.D. qualifications
	The candidate…	*The candidate…*	*The candidate…*
Knowledge	has broad knowledge of important topics, theories, issues, processes, tools and methods within the field	has advanced knowledge within the academic field and specialized insight in a limited area	is in the forefront of knowledge within his/her academic field and masters the field´s philosophy of science and/or artistic issues and methods
	is familiar with research and development work in the field	has thorough knowledge of the scholarly or artistic theories and methods in the field	can evaluate the expediency and application of different methods and processes in research and scholarly and/or artistic development projects
	can update his/her knowledge in the field	can apply knowledge to new areas within the academic field	can contribute to the development of new knowledge, new theories, methods, interpretations and forms of documentation in the field
	has knowledge of the history, traditions, distinctive character and place in society of the field	can analyze academic problems on the basis of the history, traditions, distinctive character and place in society of the field	
Skills	can apply academic knowledge and relevant results of research and development work to practical and theoretical problems and make well-founded choices	can analyze existing theories, methods and interpretations in the field and work independently on practical and theoretical problems	can formulate problems, plan and carry out research and scholarly and/or artistic development work
	can reflect upon his/her own academic practice and adjust it under supervision	can use relevant methods for research and scholarly and /or artistic development work in an independent manner	can carry out research and scholarly and/or artistic research work of a high international standard
	can find, evaluate and refer to information and scholarly subject matter and present it in a manner that sheds light on the problem	can analyze and deal critically with various sources of information and use them to structure and formulate scholarly arguments	can handle complex academic issues and challenge established knowledge and practice in the field
	masters relevant scholarly tools, techniques and forms of communication	can carry out an independent, limited research or development project under supervision and in accordance with applicable norms for research ethics	

General competence	has insight into relevant academic and professional ethical issues	can analyze relevant academic, professional and research ethical problems	can identify new relevant ethical issues and carry out his/her research with scholarly integrity
	can plan and carry out varied assignments and projects over time, alone or as part of a group, and in accordance with ethical requirements and principles	can apply his/her knowledge and skills in new areas in order to carry out advanced assignments and projects	can manage complex interdisciplinary assignments and projects
	can communicate important academic subject matters such as theories, problems and solutions, both in writing and orally, as well as through other relevant forms of communication	can communicate extensive independent work and masters language and terminology of the academic field	can communicate research and development work through recognized Norwegian and international channels
	can exchange opinions and experiences with others with a background in the field, thereby contributing to the development of good practice	can communicate about academic issues, analyses and conclusions in the field, both with specialists and the general public	can participate in debates in the field in international forums
	is familiar with new thinking and innovation processes	can contribute to new thinking and innovation processes	can assess the need for, initiate and practice innovation

Examples on learning outcome descriptors for master and Ph.D. students		
	Master course	Ph.D. course
	Upon completing the course, the students can	*Upon completing the course students can*
Knowledge	• describe different…… theories based upon published material and first-hand experience from field situations	• argue for different…… theories based upon published material and first-hand experience from field situations
Skills	• operate both basic and advanced ……. equipment in field • demonstrate teamwork in research projects • develop a limited research project on…..	• Investigate new ways to monitor …….. using existing equipment in field • demonstrate leadership in research projects • design a research grant proposal that meets the standard for international research applications
General competence	• recognize /examine different ethical issues connected to sampling of……	• argue for different ethical issues connected to sampling of……