



eCOTOOL High-Level Competence Model Explanation



<http://www.ecompetence.eu>

Dissemination Level: Public

The eCOTOOL High-Level Competence Model

The eCOTOOL high-level competence model introduces both how to use our web-based tool, and how to create a structure of skill and competence definitions for your particular area of expertise. Before using the web-based tool, please read the following box carefully. Before answering the questionnaire, please also read the rest of the document, which explains how to fill in more information and create structures. You may find that this makes it clearer and easier to fill in Section 3 of the Europass Certificate Supplement (ECS).

Essential terms for understanding the eCOTOOL competence model

Ability means that a person can do something. Abilities are described by **ability items**. Abilities cover skills, competences, and the demonstration of knowledge.

An **ability item** is a short description that helps define the ability. For the ECS (Certificate Supplement), this is one sentence, starting with an *action verb*, within the “profile of skills and competences”. The sentence fits after the phrase “This person is able to ...”. The web tool asks you to list ability items in Section 3 when you create a new ECS.

The web tool does not ask you to categorise ability items, but understanding the following terms should help you formulate the ability items with appropriate action verbs.

Knowledge can be demonstrated through questioning or by examination, as well as in practice. *Action verbs* for knowledge include e.g. “state”, “explain” and “choose”.

Skills can be practically demonstrated with the help of appropriate tools or equipment. *Action verbs* for skills will usually be obvious from the description of the skill.

Competence involves selecting and combining knowledge and skills for the performance of tasks in practical situations or contexts. *Action verbs* for competences often imply more responsibility, authority or autonomy than action verbs for skills, e.g. “manage”, “oversee”, “construct”, “organise”, “lead”, “diagnose”.

Detailing ability items – Form A

Form A (please see below) allows you to record more useful information defining abilities, firstly by separating the **action verbs** from the rest of the ability item, and then by classifying the ability as knowledge, skill or competence (**KSC**). All this extra information goes beyond the immediate needs of the ECS and the web tool.

The **author or authority** is the person or body who is responsible for the definition.

Optionally, you can **assign levels** to your ability definitions. There are many frameworks or schemes that pre-define levels that may be relevant to you. Using one row for each level scheme, enter the scheme’s name and the level in that scheme. Courses are often given levels in UNESCO’s International Standard Classification of Education (ISCED), as well as being mapped to a national framework, and so to the EQF (European Qualifications Framework). There are also many vocational, occupational or professional frameworks or standards with their own levels. If you have no other scheme, you can use the following **eCOTOOL levels**.



- **Level 1:** Abilities at level 1 recognise basic general knowledge and skills as well as the capacity to undertake simple and general tasks under supervision. [EQF 1, 2]
- **Level 2:** Abilities at level 2 recognise field-specific practical and theoretical knowledge and skills as well as the capacity to carry out tasks under direction. [EQF 3, 4]
- **Level 3:** Abilities at level 3 recognise broader theoretical and practical knowledge and skills as well as the capacity to apply knowledge and skills in developing strategic solutions to well-defined abstract and concrete problems. [EQF 5]
- **Level 4:** Abilities at level 4 recognise detailed theoretical and practical knowledge, skills and competences, some of which is at the forefront of the field. [EQF 6]
- **Level 5:** Abilities at level 5 recognise highly specialised self-directed, theoretical and practical knowledge and skills as well as the capacity for critical analysis, evaluation and synthesis of new and complex ideas including substantial research. [EQF 7, 8]

Using pre-defined levels will often be sufficient, but if you need or wish to define your own levels, or give your own criteria for levels, you may use Form C, in the Annex below.

Also optionally, you may **categorise** your ability items in ways other than KSC, e.g. with standard industry or occupation codes; subject classifications; professional body classifications. You can specify any number of classification schemes, and the term from each scheme. You may know of useful classification schemes, but do not worry if you see some unfamiliar ones in examples.

Finally, it is very useful to write a **full description** of what the ability means in practice.

Structure information – Form B

Form B (below) defines how a broader ability is broken down into narrower ability items. To link items in Form A and Form B, you create your own **id codes** that are **unique** across your definitions. These unique id codes are particularly useful when used by computer systems.

Each Form B breaks down one broader ability, defined by its short description and unique id code, into its narrower component part abilities (short description and id code). If the part is necessary (or mandatory), as in the example, put “N” in the last column. If it is optional, or one of a set of possibilities, put “O”. You may keep on breaking down broader abilities into narrower ones, while narrower ones could realistically be claimed, evidenced, required, assessed or trained separately. Use Form A to define each separate ability item.

Top tips

As you draft ability definitions, check that your definition could be used: in a personal claim, and the person claiming could give reasonable evidence for it; in a job description or as a job requirement, and could be assessed to determine whether or not a person has that ability; or to help structure learning, education or training.

Listing steps to do something, as in task analysis, is only useful here if each step is associated with a substantially different set of abilities. If two steps require the same abilities, do not list them separately. You are trying to document the abilities required to perform properly, not to write procedures for how to do particular jobs. The two are related, but need distinguishing.

Form A: example of part of a vocational competence

Form A: eCOTOOL high-level model ability definition table		
ability item short description	action verb(s)	rest of item
	service and maintain	domestic natural gas systems and components
KSC classification	<i>knowledge</i> ○, or <i>skill</i> ○, or <i>competence</i> ①	
unique id code	GC08	
author/authority	UK City & Guilds	
level assignments (optional)	level scheme	level
	UK NQF	2
	EQF	3
	eCOTOOL	2
categorisation (optional)	classification scheme	term
	UK SOC2010 (see the web page for further info)	5314
	NACE (see the web page for further info)	F43.2.2 S95.2.2
full description	Ensure that there is sufficient information available to determine the maintenance requirements; service and maintain the stated range of appliances and systems; record the maintenance activities in the appropriate media; diagnose and rectify faults in the stated range of meters and systems; take precautionary actions to prevent use of unsafe installations.	

Form B: example of a qualification structure with options

In this example the narrower concept items are already present in the full description of the broader ability. In an more complex example this would not be the case.

Form B: eCOTOOL high-level model structure information			
ability item short description	service and maintain domestic natural gas systems and components		
unique id code	GC08		
author/authority	UK City & Guilds		
narrower concepts	the narrower concept	unique id	Necessary / Optional
	ensure that there is sufficient information available to determine the maintenance requirements	GC08-S01	N
	service and maintain the stated range of appliances and systems	GC08-S02	N
	record the maintenance activities in the appropriate media	GC08-S03	N
	diagnose and rectify faults in the stated range of meters and systems	GC08-S04	N
	take precautionary actions to prevent use of unsafe installations	GC08-S05	N

Annex (optional): A longer and more complex example including the definition of levels

This annex is designed specifically for people who have an interest in defining their own levels. If existing pre-defined level frameworks or schemes are sufficient for your purposes, then you will not need to read or use this annex.

Form C is to be used for definitions of levels of a person’s ability or competence within a particular framework – your framework if you are defining it – rather than generally.

To define your own levels, start with an unlevelled ability that you want to define levels for. (This ability should be documented as above, using Form A.) On Form C, fill in a row for each of the levels you wish to define. Each level needs a plain number, where a higher number represents more ability or competence. Each level may have a label to give it a name. The most important part of the level definition is the definition of, or criteria for, the ability at that level.

Form C : example of level definitions from a subject benchmark statement

Form C: eCOTOOL high-level model level definition			
ability item short description (unlevelled)	recognise the moral, ethical and social issues related to the subject		
unique id code	Agri-gen-smpd-eth		
author/authority	<i>(based on)</i> UK Quality Assurance Agency for Higher Education		
levels	definition of, or criteria for, each level	level label (optional)	level number
	recognise the existence of moral and ethical issues associated with the subject	Threshold	30
	recognise and be able to comment on the moral and ethical issues associated with the subject	Typical	50
	recognise, explain and evaluate the moral and ethical issues associated with the subject	Excellent	70

This example is slightly adapted from the UK QAA’s 2009 “[subject benchmark statement](#)” for “Agriculture, horticulture, forestry, food and consumer sciences”.



To put this in perspective, and to give another example if this is helpful, below are given one Form A and one Form B that could help fill in this part of the structure.

Form A: example from a subject benchmark statement

The level definitions in the example above are taken from a part of the subject benchmark that could be represented in Form A as follows. Ideally there would also be a full description, and there could be some kind of classification of the appropriate subject matter, such as the Library of Congress.

Form A: eCOTOOL high-level model ability definition table		
ability item short description	action verb(s)	rest of item
	recognise	the moral, ethical and social issues related to the subject
KSC classification	<i>knowledge</i> ①, or <i>skill</i> ○, or <i>competence</i> ○	
unique id code	Agri-gen-smpd-eth	
author/authority	<i>(based on)</i> UK Quality Assurance Agency for Higher Education	
level assignments (optional)	level scheme	level
	UK NQF	5
	EQF	5
	eCOTOOL	3
categorisation (optional)	classification scheme	term
	<i>(could be e.g. a bibliographic classification)</i>	
full description	<i>(unfortunately a full description is not given in the documentation)</i>	

Form B: example from a subject benchmark statement

This subject benchmark groups the ability to “recognise the moral, ethical and social issues related to the subject” together with other “self-management and professional development” skills, and this could be represented as in the Form B following. All the narrower concepts are marked as “necessary”, but it would be easy to imagine a course, assessment or qualification structure where similar items were optional. Many other such forms A, B and C would be needed to represent the complete subject benchmark.

Form B: eCOTOOL high-level model structure information			
ability item short description	Self-management and professional development skills		
unique id code	Agri-gen-smpd		
author/authority	<i>(based on)</i> UK Quality Assurance Agency for Higher Education		
narrower concepts	the narrower concept	unique id	Necessary / Optional
	appreciate the need for professional codes of conduct where applicable	Agri-gen-smpd-cond	N
	recognise the moral, ethical and social issues related to the subject	Agri-gen-smpd-eth	N
	assume responsibility for one's actions	Agri-gen-smpd-resp	N
	identify and working towards targets for personal, academic and career development	Agri-gen-smpd-targ	N
	develop an adaptable and flexible approach to study and work	Agri-gen-smpd-adap	N
	develop the skills necessary for self-managed and lifelong learning (that is, working independently, time-management and organisation skills)	Agri-gen-smpd-mol	N
	demonstrate the competence, behaviour and attitude required in a professional working life, including initiative, leadership and team skills	Agri-gen-smpd-att	N

About the European project

eCOTOOL:



eCOTOOL focuses on:

- (1) the improvement of the development, exchange, and maintenance of vocational education and training (VET) certificates and their accessibility and transparency and
- (2) the increasing of the European mobility and transparency in general.

To achieve these objectives eCOTOOL develops the adaptable Europass CS eco-tools based on the European policies Europass Certificate Supplement (CS), EQF, ECVET, and PAS 1093. The Europass CS eco-tools will be tested and evaluated in the agricultural sector.

Finally the eCOTOOL results are submitted to the European Standardization Committees (CEN/TC 353) to achieve a European consensus and standard for VET competences.

More information about eCOTOOL online:

<http://www.ecompetence.eu>

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