EUROPASS CERTIFICATE SUPPLEMENT(*)

Republic of Estonia

1. TITLE OF THE CERTIFICATE - ET (1)

Ehitusinsener, EKR tase 6

(1) In the original language

2. TRANSLATED TITLE OF THE CERTIFICATE (1)

Civil Engineer in Buildings and Structures, EstQF level 6

(1) If applicable. This translation has no legal status.

3. PROFILE OF SKILLS AND COMPETENCIES

Civil engineers act as specialists in designing, establishing, expanding and renovating buildings and facilities, as well as in demolishing and restoring buildings and facilities. In performing their professional duties, civil engineers give consideration to social, economic, environmental, occupational safety, occupational health and ethical aspects, and work with specialists in related fields.

Civil engineers specialise in one of three sub-specialities:
a) Building[1] construction
b) Harbour construction
c) Geotechnical engineering[2]

In specialisation, at least one of the following occupations must be chosen.

a) In building construction:
- Preparing building design documentation
- Preparing design documentation for a building's glass façade
- Preparing design documentation for a building's lightweight façade
- Preparing roof design documentation
- Preparing building design documentation for a log building
- Construction activity management
- Management of construction activities in glass façade construction
- Management of construction activities in lightweight façade construction
- Management of construction activities in roof construction
- Management of construction activities in log building construction
- Construction management
- Owner supervision
- Expert analysis of building design documentation
- Design management[3]
- Construction cost estimation

b) In harbour construction:
- Construction activity management
- Construction management
- Owner supervision

(*) **Explanatory note**

This document is designed to provide additional information about the specified certificate and does not have any legal status in itself.
The format of the description is based on the following texts: Council Resolution 93/C 49/01 of 3 December 1992 on the transparency of qualifications, Council Resolution 96/C 224/04 of 15 July 1996 on the transparency of vocational training certificates, and Recommendation 2001/613/EC of the European Parliament and of the Council of 10 July 2001 on mobility within the Community for students, persons undergoing training, volunteers, teachers and trainers.

More information available at: http://europass.cedefop.europa.eu/et/home

- Expert analysis of building design documentation
- Design management[3]
- Construction cost estimation

c) In geotechnical works:
- Geotechnical design
- Engineering geodetic surveys
- Construction activity management
- Construction management
- Owner supervision
- Expert analysis of building design documentation
- Design management[3]
- Construction cost estimation

Civil engineer, Level 6 is a specialist who is responsible for their own performance and that of others in the work group they manage.
Civil engineer, Level 6 professional qualification certificate entitles its holder, on a statutory basis, to act as a competent person independently and at his or her own risk within the limits described as follows.

I CONSTRUCTION OF BUILDING OR PORT FACILITY SUBJECT TO BUILDING PERMIT REQUIREMENT, GEOTECHNICAL WORKS, CONSTRUCTION MANAGEMENT

1. Construction of a building subject to building permit requirement
1.1 Constructing buildings with maximum height of 45 m above ground and maximum depth of 8 m and their constructions with spans up to:
- monolithic concrete constructions up to 18 m
- prefabricated constructions up to 25 m
- steel constructions up to 36 m
- wooden constructions up to 18 m
- composite constructions up to 18 m
Constructing log houses and envelope structures of buildings with the limitations above.
1.2 Construction of structures of geotechnical category# up to 2.
1.3 Constructing in-property roads, lots and transport facilities not for public use in noncomplex geotechnical conditions.
1.4 Factory production of construction elements.

2. Construction of port facilities
2.1 Recreational craft berths, seawalls, shoreline/bank protections and breakwaters with water depth up to 4.5 m.

3. Geotechnical works
3.1 Leading geotechnical fieldwork
3.2.1 Data processing for geotechnical surveys of structures of geotechnical category
3.3 Construction of structures of up to geotechnical category 2#.
3.4 Constructing in-property roads and transport facilities in noncomplex geotechnical conditions

II PREPARATION OF BUILDING DESIGN DOCUMENTATION FOR BUILDING SUBJECT TO BUILDING PERMIT REQUIREMENT, GEOTECHNICAL DESIGN

1. Preparing the building design documentation for a building subject to building permit requirement
Private houses and other buildings in consequence class CC1 according to the standard EVS-EN 1990:2002+NA:2002.
Constructions (spans included):
- monolithic concrete constructions up to 6 m
- prefabricated constructions up to 9 m
- steel constructions up to 6 m
- wooden constructions up to 6 m
- composite constructions up to 6 m
Designing log buildings and peripheral structures of buildings with the limitations above.

2. Geotechnical design
2.1 Structures of geotechnical category# up to 2
2.2 In-property roads, lots and transport facilities in noncomplex geotechnical conditions

III OWNER SUPERVISION
Private houses and other buildings in consequence class CC1 according to the standard EVS-EN 1990:2002+NA:2002.

IV EXPERT ANALYSIS OF BUILDING DESIGN DOCUMENTATION
Limitations are analogous to those applicable to the preparation of the building design documentation for a building subject to building permit requirement and geotechnical design.

V CONSTRUCTION COST ESTIMATION
No technical limitations.

[1] - In the framework of civil engineers' standards, the word "building" refers to all land structures except bridges, tunnels, culverts, etc., which are part of the road construction industry
[2] - A qualification granted in geotechnical engineering, a sub-speciality of general construction, also provides the right to act as a level 6 competent person in road engineering and in geotechnical works in the speciality of utility systems of buildings in environmental engineering.
[3] - design management refers to project management of the full design project, not a specific field.
- EVS-NE 1997-1:2006 classification
A.2 Parts of work and tasks

MANDATORY COMPETENCE

1 Mandatory competencies in the occupation of civil engineer
- Following the requirements for professional ethics
- Professional self-education
- Participation in teamwork, team management
- Applying the principles of environmental protection and energy efficiency
- Applying specialized knowledge to work
- Digital competence and language skills

SPECIALISED COMPETENCIES

2 Building construction
- Conducting and organizing works within the scope of a given level of professional competence
- Quality control of completed works and their parts
- Determining the complex compliance/suitability of completed works
- Arranging the transfer of completed works to the client

3 Port construction
- Conducting and organizing works within the scope of a given level of professional competence
- Quality control of completed works and their parts
- Determining the complex compliance/suitability of completed works
- Arranging the transfer of completed works to the client

4 Geotechnical works
- Conducting and organizing works within the scope of a given level of professional competence
- Quality control of completed works and their parts
- Determining the complex compliance/suitability of completed works
- Arranging the transfer of completed works to the client

OPTIONAL COMPETENCIES

5 Preparing building design documentation
- Compiling the design project within the competence of the professional qualification level
- Collecting and analysing source data
- Selecting, calculating and dimensioning the scheme and type of load-bearing solutions
- Determining building enclosure solutions
- Compiling the explanatory letter
- Collaboration with the design team
- Preparing and formulating the design documentation for the structural part
- Preparing a demolition project for structures
- Preparing user manual and service manual for the building
- Conducting designer supervision

6 Preparing design documentation for a building’s glass façade
- Designing a glass façade within the competence of the professional qualification level
- Collecting and analysing source data
- Selecting, calculating and dimensioning the scheme and type of load-bearing solutions
- Determining building enclosure solutions
- Compiling the explanatory letter
- Collaboration with the design team
- Preparing and formulating the design documentation for the structural part
- Preparing a demolition project for structures
- Preparing structure maintenance and operation instructions
- Conducting designer supervision

7 Preparing design documentation for a building’s lightweight façade
- Designing a lightweight façade within the competence of the professional qualification level
- Collecting and analysing source data
- Selecting, calculating and dimensioning the scheme and type of load-bearing solutions
- Determining building enclosure solutions
- Compiling the explanatory letter

- Collaboration with the design team
- Preparing and formulating the design documentation for the structural part
- Preparing a demolition project for structures
- Preparing structure maintenance and operation instructions
- Conducting designer supervision

8 Preparing roof design documentation
- Designing a roof within the competence of the professional qualification level
- Collecting and analysing source data
- Selecting, calculating and dimensioning the scheme and type of load-bearing solutions
- Determining building enclosure solutions
- Compiling the explanatory letter
- Collaboration with the design team
- Preparing and formulating the design documentation for the structural part
- Preparing a demolition project for structures
- Preparing structure maintenance and operation instructions
- Conducting designer supervision

9 Preparing building design documentation for a log building
- Preparing the design documentation for a log building within the competence of the professional qualification level
- Collecting and analysing source data
- Selecting, calculating and dimensioning the scheme and type of load-bearing solutions
- Determining building enclosure solutions
- Compiling the explanatory letter
- Collaboration with the design team
- Preparing and formulating the design documentation for the structural part
- Preparing a demolition project for structures
- Preparing user manual and service manual for the building
- Conducting designer supervision

10 Geotechnical design
- Geotechnical design within the competence of the professional qualification level
- Conducting soil surveys
- Calculating the overall stability and bearing capacity of excavation pits, slopes, earth embankments and cuttings/trenches
- Planning retaining and pile walls
- Planning soil compaction, improvement and reinforcement
- Determining the load bearing capacity of piles
- Geotechnical impact assessment of construction activities

11 Management of construction activities
- Management of construction activity within the competence of the professional qualification level
- Compiling tenders
- Planning construction activities
- Planning construction resources
- Management of subcontractor procurements and conclusion of contracts
- Procurement of construction supplies
- Management of construction activities during the construction
- Organizing quality control and surveying
- Preparing the construction site handover documentation
- Arranging the handover of the construction site

12 Management of construction activities in glass façade construction
- Management of construction activities in glass façade construction within the competence of the professional qualification level
- Compiling tenders
- Planning construction activities
- Planning construction resources
- Management of subcontractor procurements and conclusion of contracts
- Procurement of construction supplies
- Management of construction activities during the construction
- Organizing quality control and surveying
- Preparing the construction site handover documentation
- Arranging the handover of the construction site

13 Management of construction activities in lightweight façade construction
- Management of construction activities in lightweight façade construction within the competence of the professional qualification level
- Compiling tenders
- Planning construction activities
- Planning construction resources
- Management of subcontractor procurements and conclusion of contracts
- Procurement of construction supplies

- Management of construction activities during the construction
- Organizing quality control and surveying
- Preparing the construction site handover documentation
- Arranging the handover of the construction site

14 Management of construction activities in roof construction
- Management of construction activities in roof construction within the competence of the professional qualification level
- Compiling tenders
- Planning construction activities
- Planning construction resources
- Management of subcontractor procurements and conclusion of contracts
- Procurement of construction supplies
- Management of construction activities during the construction
- Organizing quality control and surveying
- Preparing the construction site handover documentation
- Arranging the handover of the construction site

15 Management of construction activities in log building construction
- Management of construction activities in log building construction within the competence of the professional qualification level
- Compiling tenders
- Planning construction activities
- Planning construction resources
- Management of subcontractor procurements and conclusion of contracts
- Procurement of construction supplies
- Management of construction activities during the construction
- Organizing quality control and surveying
- Preparing the construction site handover documentation
- Arranging the handover of the construction site

16 Construction management
- Construction management within the competence of the professional qualification level
- Conducting needs assessment surveys
- Preparing procurements and compiling procurement documentation
- Planning the building life cycle
- Construction cost calculation
- Design work preparation and organisation
- Selecting designers and preparing contracts
- Construction work preparation
- Tender documentation preparation
- Subcontractor selection
- Co-ordinating the construction process as the client's representative
- Handover and implementation of the construction site
- Warranty period procedures

17 Owner supervision
- Performing owner supervision within the limits of competence provided by the profession standard
- Developing a monitoring programme
- Verifying requirement compliance of the design project
- Verifying contract compliance of the construction work
- Quality control and assessment
- Verifying compliance with safety requirements
- Verifying required documentation
- Receiving the building
- Information distribution
- Making proposals

18 Expert analysis of building design documentation
- Conducting expert analysis of the design project within the competence of the professional qualification level
- Familiarization with the project, collecting and analysing the source data
- Determining the volumetric accuracy of the design project
- Determining the compliance of project solutions with their purpose and requirements
- Compiling the expert analysis report

19 Geotechnical site investigations
- Conducting geotechnical site investigations within the competence of the professional qualification level
- Conducting field studies
- Preparing study reports

20 Design management
- Conducting design management activities within the competence of the professional qualification level
- Preparing the design contract
- Assembling the design team

- Organizing the exchange of information
- Design coordination and quality management
- Arranging designer supervision

21 Construction cost estimation
- Conducting cost and cost-benefit studies
- Preparing the client's budget, cost planning
- Preparing the cost sections in tenders

4. RANGE OF OCCUPATIONS ACCESSIBLE TO THE HOLDER OF THE CERTIFICATE [1]

designer, person executing owner supervision, construction manager, site manager and consultant.

[1] If applicable

5. OFFICIAL BASIS OF THE CERTIFICATE

Name and status of the body awarding the certificate	**Name and status of the national/regional authority providing accreditation/recognition of the certificate**
The occupational certificate that has been issued by the professional council that operates under the activity license issued by a Awarding Body	Sector Skills Council approved by a Regulation of the Government of the Republic
Level of the certificate (national or international)	**Grading scale / Pass requirements**
Estonian Qualification Framework level 6 European Qualification Framework level 6	passed/fail
Access to next level of education/training	**International agreements**
Diploma Civil Engineer in Buildings and Structures, EstQF level 7	

Legal basis

Occupational Qualifications Act (RT I 2008, 24, 156; 01.09.2008)

6. OFFICIALLY RECOGNISED WAYS OF ACQUIRING THE CERTIFICATE

In order to obtain a occupational certificate, the applicant has to prove all his/her competencies required by the occupational standard and by the procedure for awarding of occupational qualification established by the body awarding the occupational qualification

More information (including a description of the national qualifications system) available at:
www.kutsekoda.ee