

OCCUPATIONAL QUALIFICATION STANDARD

Forensic Medical Doctor, EstQF Level 8

An occupational qualification standard is a document which describes the set of skills, knowledge and attitudes, i.e. competence requirements, needed to successfully accomplish duties. Occupational qualification standards are used for compiling curricula and awarding qualifications.

| Occupational title | Level of Estonian Qualifications Framework (EstQF) |
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| Forensic Medical Doctor, EstQF Level 8 | 8 |

| Possible specialisation and titles on occupational certificate | |
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| Specialisation | Title on occupational qualification certificate |
| Forensic medical examinations | Forensic Medical Expert, EstQF Level 8 |
| Forensic medical toxicology examinations | Forensic Medical Toxicology Expert, EstQF Level 8 |
| Forensic histological examinations | Forensic Histology Expert, EstQF Level 8 |
| Forensic anthropology examinations | Forensic Anthropology Expert, EstQF Level 8 |

Part A DESCRIPTION OF WORK

| A.1 Description of work |
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| <p>Forensic Medical Doctor, Level 8 carries out forensic medical examinations on individuals and deceased persons, conducts examinations and autopsies and provides a comprehensive, impartial and scientifically sound expert judgement. Additionally, they are involved in furthering the field, developing guidelines and laws related to the field, as well as training and guidance. Forensic Medical Doctor, Level 8 works independently, is responsible for their expert opinion and is willing to defend it in court. A Forensic Medical Doctor is a team member who instructs support staff and interacts with colleagues and clients.</p> <p>There are the following specialisations in the forensic medical profession:</p> <p>A Forensic Medical Expert has completed a residency in forensic medicine and conducts forensic medical examinations, investigations and autopsies on individuals and deceased persons.</p> <p>A Forensic Medical Toxicology Expert has completed a residency in forensic medicine, laboratory medicine, pharmacology or another medical speciality and has been trained in toxicology. They conduct medical forensic toxicology examinations and investigations.</p> <p>A Forensic Histology Expert has completed a residency in forensic medicine or pathology and has been trained in histology. They conduct forensic histological examinations.</p> <p>A Forensic Anthropology Expert has completed a residency in forensic medicine and has been trained in forensic anthropology. They conduct forensic anthropological examinations and investigations.</p> <p>There is also an occupational qualification standard for Forensic Medical Doctor, Level 7, who carries out forensic medical examinations and investigations on individuals and deceased persons and provides a comprehensive, impartial and scientifically sound expert judgement.</p> |
| A.2 Tasks |
| <p>A.2.1 Examinations and investigations</p> <p>1. Inspecting documents related to examinations or investigations, ordering additional material.</p> |

2. Adding the information necessary for an examination or investigation to the record thereof.
3. Conducting examinations and/or investigations.
4. Ordering or conducting additional investigations, interpreting results.
5. Drawing up justifications for their expert opinion.
6. Compiling expert opinions in response to questions from the body conducting proceedings.
7. Conducting of studies for a charge.

A.2.2 Collecting biological samples for examinations or investigations

1. Assessing the need to collect biological samples.
2. Collecting and packaging biological samples.
3. Completing documentation for transporting biological samples.
4. Interpreting results.

A.2.3 Participating in rescue operations

1. Conducting forensic medical examinations on individuals.
2. Examining a deceased person at the location of their discovery or another location.
3. Providing a preliminary opinion to the body conducting proceedings.

A.2.4 Participating in complex and/or committee examinations

1. Assessing the need for complex and/or committee examinations.
2. Informing the body conducting proceedings and proposing the formation of a committee.
3. Coordinating the work of committee members.
4. Conducting complex and/or committee examinations.
5. Preparing a joint expert opinion.
6. Providing justifications for disagreement.

A.2.5 Attending court hearings

1. Preparing for a hearing.
2. Speaking at a hearing.
3. Providing written responses to the questions asked at a hearing that require more time or preparation.

A.2.6 Self-development and developing the field

1. Self-improvement through professional training and specialised literature.
2. Developing the field of forensic medicine.
3. Proposing the development and revision of regulations.
4. Taking part in national and/or international projects.
5. Giving presentations at national and international conferences.
6. Publishing scientific articles and/or books.

A.2.7 Training and guidance

1. Supervising trainee physicians and experts.
2. Conducting professional training for various target groups.
3. Speaking as a lecturer.
4. Supervising Bachelor's, Master's or doctoral theses.

Specialised areas of work

Forensic medical examinations

A.2.8 Conducting forensic medical examinations and investigations of individuals

1. Conducting forensic medical examinations of individuals, including gynaecological/andrological (including paediatric) examinations.
2. Processing of medical records.
3. Assessing injury conformity to physical evidence.
4. Assessing health damage, including the mechanism and time of injury.
5. Assessing health status.
6. Evaluating the actions of medical professionals.
7. Developing the field of forensic medicine.

A.2.9 Conducting forensic examinations and autopsies of deceased persons

1. Conducting forensic medical autopsies.
2. Instructing support staff.
3. Assessing injury conformity to physical evidence.
4. Excising autopsy material and interpreting histological samples.
5. Forming a forensic diagnosis.
6. Determining the cause, time and manner of death.
7. Preparing a medical death report.
8. Developing the field of forensic medicine.

Forensic medical toxicology examinations

A.2.10 Conducting an expert assessment of the effects of a toxic substance

1. Evaluating the effects of a toxic substance during the examination of the deceased person.
2. Describing the evidence.
3. Assessing the health damage caused by the toxic substance.
4. Consulting a forensic medical doctor.
5. Developing the field of forensic toxicology.

A.2.11 Evaluating large and small quantities of narcotic substances

1. Working through forensic chemistry expert reports.
2. Determining the dose of narcotic drugs/psychotropic substances that produce intoxication.

A.2.12 Detecting intoxication

1. Identifying intoxication through clinical findings and/or documentation.
2. Calculating the concentration of an alcohol or narcotic substance in the blood during the moment of the event.

Forensic histological examinations

A.2.13 Interpreting histological samples

1. Forming a histological diagnosis and drawing up the results of a histological examination.
2. Selecting additional stains.
3. Supervising histology laboratory technicians, quality assurance of histological samples.
4. Consulting a forensic medical doctor.
5. Developing the field of forensic histology.

Forensic anthropology examinations

A.2.14 Conducting forensic anthropology examinations and investigations

1. Determining the gender of a deceased person, the age of a skeleton, the time of death, and the mechanisms of injuries based on the skeletal bones.
2. Determining the age of the person.
3. Reconstructing and experimentally creating the injuries to determine the mechanism of trauma.
4. Consulting a forensic medical doctor.
5. Developing the field of forensic anthropology.

A.3 Work environment and specific nature of work

A Forensic Medical Doctor has fixed working hours but participates in examinations of deceased persons out of hours if needed. Their work is intense and requires mental effort. They are exposed to biological and chemical hazards when carrying out their duties. A Forensic Medical Doctor usually works indoors, but occasionally also where a person is being examined is (e.g. detention facility, medical centre or outdoors).

A.4 Tools

A Forensic Medical Doctor uses special medical equipment, personal protective equipment, info-technology tools and software according to their specialisation.

A.5 Personal qualities required for work: abilities and characteristics

The work of a Forensic Medical Doctor requires honesty, objectivity, correctness, stress tolerance, cooperation, accountability, independence and good analytical and decision-making skills.

A.6 Professional preparation

Forensic Medical Doctor, Level 8 has a medical degree and has completed a residency specialising in:
 Forensic Medical Expert – forensic medicine;
 Forensic Medical Toxicology Expert – forensic medicine, laboratory medicine, pharmacology or another medical field, plus additional training in toxicology;
 Forensic Histology Expert – forensic medicine or pathology, plus additional training in histology;
 Forensic Anthropology Expert – forensic medicine, plus additional training in forensic anthropology.

A.7 Most common occupational titles

Forensic medical doctor, forensic medical expert, forensic toxicologist, histologist, pathologist, forensic anthropologist.

Part B COMPETENCY REQUIREMENTS

B.1 Structure of occupation

The following competences must be certified when applying for the qualification of Forensic Medical Doctor, Level 8: everyone is required to certify mandatory competences B.2.1-B.2.7 and recurring competence B.2.15, and at least one of the following must be selected from the area of specialisation:
 Forensic Medical Expert, competences B.2.8 and B.2.9;
 Forensic Medical Toxicology Expert, competences B.2.10-B.2.12;
 Forensic Histology Expert, competence B.2.13;
 Forensic Anthropology Expert, competence B.2.14.

B.2 Competences

MANDATORY COMPETENCES

| B.2.1 Examinations and investigations | EstQF Level 8 |
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| Performance indicators: 1. reviews the referral letter and other materials submitted for the examination/investigation; visually inspects the object of examination/investigation; verifies the conformity between the examination/investigation materials and the accompanying documents; in the event of inconsistencies or shortcomings, requests the completion/correction of the materials; orders additional material as needed or communicates with the body conducting proceedings to obtain additional information/materials; 2. adds the information necessary for the examination or investigation to the report in accordance with legal acts and guidelines; 3. conducts complex forensic medical examinations and/or investigations in accordance with guidelines and legislation, using the means provided; 4. conducts or orders additional investigations based on the guidelines, interprets the results of the investigations; 5. provides a justification for their expert opinion based on the source information, description of the investigations, materials submitted, legislation and/or international practice; 6. produces an impartial expert opinion based on expertise, providing answers to questions from the body conducting proceedings; 7. conducts investigations in accordance with legislations and guidelines using the appropriate means; provides an impartial report for the investigation results based on the expertise. | |
| B.2.2 Collecting biological samples for examinations or investigations | EstQF Level 8 |
| Performance indicators: 1. evaluates the need/possibility to take biological samples for an examination, taking into account the purpose and using an approved methodology; develops new methods to collect biological samples; 2. collects the necessary biological samples for the examination or investigation according to the guidelines; ensures the sample is packed in accordance with the instructions so that it is preserved during the chosen mode of transport; | |

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| <p>collects and packs the samples using appropriate means; teaches/supervises forensic medical doctors on the use of biological sampling techniques;</p> <p>3. fills in the documentation required for shipping the biological samples as directed;</p> <p>4. interprets the results based on the results of the investigation; consults literature, if needed; uses the results to conduct an examination.</p> | |
| B.2.3 Participating in rescue operations | EstQF Level 7 |
| <p>Performance indicators:</p> <p>1. conducts a forensic medical examination of a person in accordance with the law, taking into account the event that occurred and using the means provided for this purpose; collects biological samples for analysis, if necessary; records the results according to the agreed procedure;</p> <p>2. examines a deceased person using the appropriate means at the place of their finding or in another location of the deceased person according to the guidelines; collects biological samples for analysis, if needed;</p> <p>3. provides a preliminary opinion to the body conducting proceedings based on the results of objective findings and observation; consults the body conducting proceedings based on events.</p> | |
| B.2.4 Participating in complex and/or committee examinations | EstQF Level 8 |
| <p>Performance indicators:</p> <p>1. assesses the need for complex and/or committee examinations when reviewing the expert judgement and the materials submitted, basing the decision on source information and existing examinations;</p> <p>2. informs the body conducting proceedings of the need for complex and/or committee examinations; proposes the formation of a committee, considering the expertise and competence needed for the examination;</p> <p>3. coordinates the work of the members of the committee: convenes the committee, if necessary, summarises the available examinations, informs the body conducting proceedings of the need for additional materials, etc.; follows the schedule;</p> <p>4. conducts complex and/or committee examinations according to the guidelines and legislation, using the appropriate means and taking into account international practice;</p> <p>5. produces a joint expert opinion and coordinates it with the other members of the committee;</p> <p>6. in the event of disagreements, provides justifications for their decision to other experts and, if agreement is not achieved, draws up a separate expert opinion explaining the disagreement.</p> | |
| B.2.5 Attending court hearings | EstQF Level 8 |
| <p>Performance indicators:</p> <p>1. works through materials from examinations/investigations; prepares for a hearing, studies specialised literature; by agreement, presents the committee's expert opinion if a committee examination was used;</p> <p>2. appears at a hearing if summoned by the court; answers questions asked by the parties to the proceeding and the court clarifying the content of the examination report; provides scientifically sound responses to questions; expresses themselves clearly and knows to emphasise the important;</p> <p>3. provides written responses to questions; justifies any extra time needed; requests additional examinations, if necessary.</p> | |
| B.2.6 Self-development and developing the field | EstQF Level 8 |
| <p>Performance indicators:</p> <p>1. attends professional training and is up to date with international specialised literature; presents training materials and shares new professional information with colleagues; speaks at professional training events using knowledge acquired at other training events and from specialised literature;</p> <p>2. verifies the quality of work in the field of forensic medicine through quality control assignments as a member or the head of a relevant commission; introduces and explains the work of a forensic medical doctor in the media; participates in the work of developing the field through professional committees at the national and/or international level; compiles practice guidelines in accordance with developments in the field; assesses the need to update guidelines and proposes improvements;</p> <p>3. analyses weaknesses in the guidelines and legislation governing the field and proposes improvements or new regulations;</p> <p>4. if possible, participates in national or international projects and/or manages projects or participates in the steering group of a project;</p> <p>5. gives presentations at national and international conferences related to the field;</p> <p>6. publishes specialised scientific articles and/or book chapters or monographs.</p> | |

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| B.2.7 Training and guidance | EstQF Level 8 |
| <p>Performance indicators:</p> <ol style="list-style-type: none"> 1. supervises trainee forensic medical doctors in specialised training and experts in retraining; compiles a plan for retraining; 2. participates in the assessment of training needs in the field; develops training materials, taking into account the content and purpose of the training and the needs of the target group; conducts training courses for various target groups in order to introduce the field; analyses the feedback received during the training and takes it into account for future reference; 3. gives presentations on topics related to the field to doctors, the body conducting proceedings and others; conducts practical training, information days and seminars for partners; 4. supervises Bachelor's, Master's or doctoral students. | |

COMPETENCES RELATED TO SPECIALISATION

In order to obtain the qualification at least one of the following must be selected from the area of specialisation:

Forensic Medical Expert, competences B.2.8 and B.2.9;

Forensic Medical Toxicology Expert, competences B.2.10-B.2.12;

Forensic Histology Expert, competence B.2.13;

Forensic Anthropology Expert, competence B.2.14.

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| Forensic medical examinations | |
| B.2.8 Conducting forensic medical examinations and investigations of individuals | EstQF Level 8 |
| <p>Performance indicators:</p> <ol style="list-style-type: none"> 1. conducts forensic medical examinations of persons, including gynaecological/andrological examinations, in accordance with the guidelines and using the appropriate means; records the data in accordance with the guidelines; 2. reviews the results of the forensic medical examination of the person and the medical documentation submitted for the examination; consults with other medical practitioners as necessary; 3. assesses the morphological characteristics of an injury against the characteristics of the physical evidence; ensures that the physical evidence is packaged and submitted for examination in accordance with the guidelines; 4. assesses the existence of health damage, the manner in which it occurred, its relationship to health status, whether it is life-threatening, its duration, etc., determines the time of injury based on professional and medical knowledge, the results of the examination and/or available medical records; 5. assesses the person's health status based on the examination results and/or available medical records; assesses the person's state of health, including his or her ability to serve a sentence; conducts complex examinations, involving professionals from other medical fields if needed; 6. evaluates the actions of medical professionals on the basis of medical records and/or examination results, Estonian and international medical guidelines and general good medical practice; 7. develops/applies new investigation methods; proposes updating and modernising tools and provides input for drawing up the specifications; organises training in the field of forensic medicine. | |
| B.2.9 Conducting forensic examinations and autopsies of deceased persons | EstQF Level 8 |
| <p>Performance indicators:</p> <ol style="list-style-type: none"> 1. conducts forensic medical examinations according to the guidelines; documents information according to the guidelines; 2. instructs support staff and checks their work; arranges the collection of biological samples for examinations or autopsies in accordance with the guidelines; 3. assesses the morphological characteristics of an injury against the characteristics of the physical evidence; ensures that the physical evidence is packaged and submitted for examination in accordance with the guidelines; 4. collects samples for histological analysis; describes the histological changes and interprets the results; 5. forms a forensic medical diagnosis in accordance with the guidelines, drawing on specialised and medical knowledge; uses the International Classification of Diseases; 6. determines the cause of death, assesses damage to health if needed, based on the source information, guidelines and results of autopsies, investigations and examinations; 7. draws up an appropriate medical notice on cause of death. | |

8. develops/applies new investigation methods; proposes updating and modernising tools and provides input for drawing up the specifications; organises training in the field of forensic medicine.

| Forensic medical toxicology examinations | |
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| B.2.10 Conducting an expert assessment of the effects of a toxic substance | EstQF Level 8 |
| Performance indicators: 1. assesses the causal relationship of toxic substance to death based on laboratory and autopsy findings; calculates the dose of the toxic agent that led to death if possible, taking into account the concentration of the toxic substance in the biological samples and the characteristics of the deceased person; in the case of a suspected poisoning, participates in conducting an autopsy with a forensic medical doctor, if possible; in special circumstances, looks for ways of determining the amount of a toxic substance in the biological sample outside their own laboratory; 2. describes the physical evidence that accompanies the individual or deceased person that could produce a toxic effect and, if necessary, sends the substance to the laboratory for examination in accordance with the guidelines; assesses the likelihood of health damage based on the risk analysis of toxic substances; 3. assesses the health damage caused by the toxic substance in accordance with the guidelines, basing the decision on the person's medical history, examination and medical records; describes the effects of the substance and their duration in terms of their mode of action and the mode of administration of the toxic agent; participates in the work of the committee that evaluates the actions of medical professionals based on medical records and/or examination of the person, Estonian and international medical guidelines and general good medical practice; 4. consults a forensic medical doctor regarding the toxicity of the substance, the mode of action, the routes of administration and the toxic dose, referring to specialist literature if needed; advises on sampling for toxic substance testing. 5. develops/applies new investigation methods; proposes updating and modernising tools and provides input for drawing up the specifications; organises training in the field of forensic toxicology for forensic medical doctors. | |
| B.2.11 Evaluating large and small quantities of narcotic substances | EstQF Level 8 |
| Performance indicators: 1. reviews forensic drug examination reports; asks a forensic chemistry expert for additional event-specific information in order to conduct an examination, if necessary; 2. identifies intoxicating single doses of narcotic drugs or psychotropic substances based on data in specialist literature; calculates the intoxicating doses of narcotic drugs or psychotropic substances for 10 people based on a single dose; describes the effects of new narcotic drugs and the routes of administration; analyses the distribution/occurrence of new narcotic drugs and their effect on the human body; summarises/reviews the effects of narcotic substances and of large and small quantities. | |
| B.2.12 Detecting intoxication | EstQF Level 8 |
| Performance indicators: 1. detects the intoxication/health disturbances of a person due to the use of a narcotic or psychotropic substance according to the guidelines; conducts documented forensic examinations to detect intoxication by narcotic drugs or psychotropic substances; interprets the results of analysis of alcohol metabolites; 2. calculates the concentrations of alcohol, narcotic or psychotropic substances in the blood at the time of the event using data recorded during proceedings. | |

| Forensic histological examinations | |
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| B.2.13 Interpreting histological samples | EstQF Level 8 |
| Performance indicators: 1. describes the histological findings and forms a proper histological diagnosis; 2. assesses the need for additional staining, considering the cause of death, the presence and timing of injuries and histological findings; selects an additional stain to clarify the diagnosis, consulting the forensic medical doctor who conducted the autopsy; 3. supervises and checks on histology laboratory personnel in preparing histological samples; 4. consults the forensic medical doctor in diagnosing the histological finding, if needed. | |

5. develops/applies new investigation methods; proposes updating and modernising tools and provides input for drawing up the specifications; organises training in the field of forensic histology for forensic medical doctors.

Forensic anthropology examinations

B.2.14 Conducting forensic anthropology examinations and investigations

EstQF Level 8

Performance indicators:

1. observes, describes and photographs bones/objects; identifies the type of bones and whether they belonged to a human being; as far as possible, determines the gender and age of the deceased or the bones using visual observation, anthropological measurements and other investigation methods; describes special features of the deceased person/bones, collects reference material to identify the deceased person; compares the morphological features of the bones with photographs of the individual, if possible;
2. conducts an examination of a person with the involvement of other medical professionals; assesses the results of radiological findings and other medical investigations, if necessary, and decides on the presumed age of the person;
3. determines the mechanism of trauma, compares injuries on the human body and clothing; if necessary, causes self-inflicted damage to clothing or other materials, comparable to what may have been done by the suspected object; identifies, if possible, the object that caused the injury;
4. reviews the forensic autopsy/examination report and consults the forensic medical doctor regarding the object that may have caused the injury and/or the mechanism of injury, basing the decision on specialist and general medical knowledge;
5. develops/applies new investigation methods; proposes updating and modernising tools and provides input for drawing up the specifications; organises training in the field of forensic anthropology for forensic medical doctors.

RECURRING COMPETENCES

B.2.15 Recurring competences of Forensic Medical Doctor, Level 8

EstQF Level 8

Performance indicators:

1. uses Estonian to the extent necessary for their work and English at the B2 level (see Annex 1 for language skills level descriptions);
2. uses the following domains of digital skills: information management, online communication (excl. 2.3), content creation and safety (see Annex 2 for digital skills); is able to use professional software;
3. keeps up to date with legislation related to the field, follows the law when conducting examinations; adheres to confidentiality requirements as required by law;
4. follows the ethical principles of the Estonian Forensic Science Institute (EFSI) and doctors' ethics.

Assessment method(s):

Recurring competences are evaluated as part of the assessment of the other competences listed in the occupational qualification standard.

Part C GENERAL INFORMATION AND ANNEXES

C.1 Information concerning compilation and certification of occupational qualification standard and reference to classification of occupations

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| 1. ID of occupational qualification standard in register of occupational qualifications | 26-06112018-1.2/6k |
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| 2. Occupational qualification standard compiled by: | Heldi Kase, Eesti Kohtuekspertiisi Instituudi Lääne-Eesti kohtuarstlik ekspertiisiosakond, Eesti Kohtuarstide Selts Krista Reinek, Eesti Kohtuekspertiisi Instituudi arendus- ja personalitalitus Merike Rump, Eesti Kohtuekspertiisi Instituudi kvaliteeditalitus Mailis Tõnisson, Eesti Kohtuekspertiisi Instituudi Lõuna-Eesti kohtuarstlik ekspertiisiosakond Marika Väli, Tartu Ülikooli bio- ja siirdemeditsiini instituut, patoloogilise anatoomia ja kohtuarstiteaduse osakond |
| 3. Occupational qualification standard approved by: | Property and Personal Protection |
| 4. No. of decision of Sectoral Council | 11 |
| 5. Date of decision of Sectoral Council | 06.11.2018 |
| 6. Occupational qualification standard valid until | 30.10.2023 |
| 7. Occupational qualification standard version no. | 6 |
| 8. Reference to International Standard Classification of Occupations (ISCO 08) | 2212 Specialist Medical Practitioners |
| 9. Reference to European Qualifications Framework (EQF) | 8 |
| C.2 Occupational title in foreign language | |
| English: | Forensic Medical Doctor, EstQF Level 8 |
| C.3 Annexes | |
| Lisa 1 Language skills level descriptions | |
| Lisa 2 Digital Skills | |