Plan for the advanced ambulance assistant course

This course plan has been prepared by the provider of the course, Danish Regions. The material has been translated for the Transport Division of the United Federation of Danish Workers (3F) and the Development Secretariat of Ambulance Assistants.
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1. **Aim and legislative basis**
The aim of the course is that the participants are to acquire theoretical knowledge and practical skills which will enable them to take on the function of advanced ambulance assistants, cf. Executive Order no 977 of 26 September 2006 on the planning of health services and prehospital emergency services and the education/training of ambulance staff, etc. (in the following referred to as Executive Order no 977).

In addition, the plan is also based on Executive Order no 1016 of 24 August 2010 on tests and examination in commercial and industrial courses.

2. **Admission criteria**
Applicants for the advanced ambulance assistant course must be qualified ambulance assistants, cf. Executive Order no 977 and Executive Order no 22 of 09/01/2007 or have similar qualifications, together with practical experience from working as an ambulance assistant for at least 1.5 years.

Furthermore, the applicant must through course certificate document completion of theoretical education corresponding to PHTLS course within 612 months before starting the advanced ambulance assistant course.

3. **Course content**
Compared with the ambulance assistant course, the course includes additional theoretical and practical teaching in anatomy, physiology, hygiene, symptom knowledge, disease knowledge, including infectious diseases, observation techniques, pharmacology and handling of medicine, patient handling, EKG 12 lead transmission to hospital, monitoring and defibrillation, and information technology in telemedicine and other technological initiatives, communication, documentation, quality assurance, patient safety, ethical considerations in relation to patients and relatives. For further details within the individual areas, please refer to Appendix 1.

In addition, the course includes both ambulance training and hospital training.

4. **Course targets**
The course is to enable the student to carry out ambulance treatment, etc., cf. Executive Order no 977.

In addition it is important that the advanced ambulance assistants obtain an understanding of their own role and competences in the prehospital area, including also the cooperation with the rest of the health sector.
The advanced ambulance assistant student shall acquire/further develop his/her competences within the following main areas:

- The professional work as an advanced ambulance assistant on the basis of theoretical knowledge and practical skills
- Assessment, prioritising and handling of the injury situation
- Treatment competences within defined diseases/symptoms
- Quality assurance, patient safety and patient rights
- Competences within cooperation and communication

When the team includes ambulance assistant and advanced ambulance assistant, the advanced ambulance assistant is responsible for the treatment and in charge of the ambulance team.

The content of the main areas is described in the following:

**The professional work as an advanced ambulance assistant on the basis of theoretical knowledge and practical skills**

Basic assessment of the patient’s condition.
Careful lifting of injured people by means of special equipment.
Establishment and maintenance of free airways.
Resuscitation through artificial maintenance of breathing with supply of oxygen and external cardiac massage.
EKG, monitoring and resuscitation by means of defibrillator.
Stopping bleeding and antishock treatment.
Treatment of fractures so that the entire body or parts of the body, including the cervical vertebrae, can be supported.
Acute treatment of torn off body parts.

Acute treatment of burn lesions, corrosion injuries, frost injuries, etc.
Obstetric aid and care of newborn babies.
Placing and flushing of intravenous access.
Assessment of need for and initiation of intravenous fluid treatment of people with serious injuries and patients with serious circulatory failure because of hypovolemia.
Monitoring and treatment during transportation of patients according to medical delegation and prescription, including the use of telemedicine.
Confidence in the use of metering equipment, including critical assessment of the obtained values.
Principles of dissemination and prevention of dissemination.
Relevant actions towards a patient with an acute psychosis.
Commands and observes his/her professional responsibility and competence area.
**Assessment, prioritising and handling of the injury situation**
Handling of a total injury situation as the person in charge of the ambulance team.
Independent assessment of various types of accident to report correctly and ensure sufficient assistance.

Team cooperation with doctor, hospital, police and the local and state emergency services, etc.

**Treatment competence in relation to defined diseases/symptoms**
Assessment of indication, contraindication, dose, effect and side effects regarding the use of medicines.

Medical pain relief, cf. Appendix 2.
Relieving pain from cardiospasms, cf. Appendix 2.
Relieving asthma attacks and chronic obstructive lung disease by inhalation of bronchial dilation substances.
Alleviating cramps by administration of cramp relieving medicine, cf. Appendix 2.
Relieving the consequences of ingestion of an overdose of morphineequivalent substances, cf. Appendix 2.

**Quality development, patient safety and patient rights**
Relevant legislation on patient safety and patient rights
Accreditation

Documentation of observations and actions at the place of injury/during the course of events
Communication of information/data in relation to patients, relatives and collaborators

**Competences within cooperation and communication**
Crossdisciplinary team management and cooperation

Communicative skills, including oral and written communication

Ethical considerations in relation to patient and relatives
5. Course structure

Timeframe for the course
The duration of the course is 26 days and includes:

- 15 days’ theoretical and practical training at an institution of education.
- Five days’ hospital training with three days at a somatic hospital and two days’ skills and simulation training under the auspices of the institution of education.
- Five days’ training during ambulance transport.
- Examination day

The course is based on modules and covers a total of 14 weeks.

Introduction to the course
Eight weeks before course start, the student gets access to an electronic learning platform and receives a reading list.

During the eight weeks before course start, the school offers to prepare the student for the future course period by upgrading the theoretical knowledge of the individual student by means of assignments on the electronic learning platform. The assignments will be within the subjects: anatomy/physiology, ABCDE principles, basic resuscitation and basic handling of airways.

In addition, there will be access to practical information related to future teaching or practical training.

The eight weeks are not part of the actual course, and attendance is optional for the individual students.

The course is organised on the basis of the following template, including:

<table>
<thead>
<tr>
<th>Week 1</th>
<th>1st theory module: Five days’ teaching including a combination of theory, skills and simulation training</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 2 and 3</td>
<td>Intermediate module period with two reflection assignments.</td>
</tr>
<tr>
<td>Week 4</td>
<td>2nd theory module: Five days’ theoretical teaching including a combination of theory, skills and simulation training</td>
</tr>
<tr>
<td>Week 5 and 6</td>
<td>Intermediate module period with two reflection assignments.</td>
</tr>
<tr>
<td></td>
<td>Three consecutive weekdays' hospital training may be held during this period.</td>
</tr>
</tbody>
</table>
### Week 7
3rd theory module: Five days' theoretical teaching including a combination of theory, skills and simulation training.

### Week 8-14
Intermediate module period with 4-6 reflection assignments.

- Three consecutive weekdays' hospital training may be held during the six weeks.
- In addition a total of five days' training during ambulance transport.

### Week 14
The hospital training is completed by two days' skills and simulation training at the school.

Immediately thereafter one day's examination.

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**Number of students**

It is the aim to have 16 students per course

**Course location**

The theoretical education is held at a social and health care college, a school of nursing, etc.

The school must use contemporary teaching methods, including skills and simulation training.

The school is encouraged to establish a course council which can advise the school and monitor the organisation and completion of the courses according to the legislative basis and the course plan.

The course council is to include a person with medical background, the head of the course, a qualified advanced ambulance assistant, and a qualified paramedic.

Both the hospital training and the training during ambulance transport will normally take place in the region in which the student has his/her place of work.

**Lecturer qualifications**

The theoretical teaching will mainly be carried out by doctors with prehospital experience, nurses and ambulance supervisors/ambulance instructors at a professional level which is relevant in relation to the course targets.

A specialist with prehospital experience must be attached with medical responsibility for the medical part of the course at the individual school. It is recommended that the person with medical responsibility should have a documented pedagogical education and teaching experience.
Introduction and study competence
During the first theory module, the student is introduced to the course, including:

- The aim of the course.
- The structure, content, teaching and guidance methods of the course
- Learning methods, including development of own learning strategies and the ability to seek relevant new knowledge/literature
- Reflection assignments during the course and the final examination

Practical learning
The student will learn during the practical part of the course by being part of a professional community and working with others who carry out concrete tasks at advanced ambulance assistant level.

During the practical training, the student will have a supervisor. The supervisor is to support the student's learning processes. Guidance takes place on an ongoing basis in connection with practical tasks and during guidance talks.

The employer is responsible for planning the supervisor's time so that he/she has the necessary time to carry out the tasks of a trainee supervisor.

The school and the trainee employer cooperate to create good learning conditions in order to meet the aims of the practical training. The school will take the initiative to establish and develop the cooperation between the school and the trainee employer. Including the provision of courses for trainee supervisors.

Healthcare trainee employers must be approved at regional level. The region's prehospital manager is be responsible.

During the practical training, the student is coreponsible for his/her own learning and must be proactive and inquiring during the practical training.

Final examination
In order to test the student's ability to integrate his/her knowledge and skills, the final examination will be arranged as an "Objective Structured Clinical Examination" (OSCE). The examination will include a number of "stations" or stands where the student must at each station either orally, in writing and/or in practice solve a task which proves that the student has achieved the targets of the training and acquired the competences necessary to complete the advanced ambulance assistant course satisfactorily.
At the OSCE examination, the student must prove that he/she has obtained the competences, communicative skills, patient examination, problemsolving abilities, knowledge and confidence to carry out procedures and handle ethical and attituderelated problems stated in the description of targets.

The tasks must be based on action competences on the basis of a description of a scenario, demonstration of a procedure in a clinical context, simulationbased tasks with phantoms/dummies or standardised “patients” instructed to present a medical history or clinical condition.

The student can be sent up for examination a maximum of three times.

**The examination process**
The examination is held during one day at the school. Each station/stand will have an examiner who may be a lecturer at the school, an ambulance instructor, or an external physician at specialist level with prehospital experience.

Furthermore, 12 censors will circulate among the stations. The censor(s) is/are physicians at specialist level with prehospital experience.

At each station, the student’s competence is assessed in relation to the actual task, stating a number of points weighted according to the difficulty of the task and the total number of tasks. A checklist has been made for each task, stating the part elements which the student is expected to handle for each task. No aids of any kind must be brought to and used during the examination except for possible materials handed out.

For the final examination, only tasks prepared by the examination group under the Steering Committee for Prehospital Courses (SPU) must be used.

In practice, the number of stations will be 14 with a duration of 13 minutes each and 2 minutes for changing stations, i.e. a total of 15 minutes per station. (See also Appendix 6 for information about the examination procedure).

**Passing the examination**
At the end of the OSCE examination, the individual points obtained by each student are collected from each station, and the examination is assessed as “passed” or “failed”.

The examination is not passed if 0 points has been obtained at just one station. The examination is passed if the total sum of points is more than 75% of the maximum number of points.

The student informs his/her employer of the result of the student’s examination passed/failed.
If the examination has been failed, a brief talk must be held with the student on the day of the examination. This is in order to reach a recommendation in relation to a possible plan for a further training process.

If there is a need for further elaboration, this will be done directly between the student, the person responsible for training at the place of training, and a representative from the school.

**Reexamination**
Reexamination is arranged just like the OSCE examination and at the training institution no earlier than four weeks and no later than 16 weeks after the ordinary examination. As a main rule, the course must be completed within one year.

If the examination is not passed after reexamination, the student can be offered one additional reexamination.

Written arguments for the mark of “failed” after reexamination must be forwarded to the student no later than seven weekdays after the examination. The school prepares a brief, written argumentation for the result.

**Access to complain and appeal**
The student may complain about the examination result. A complaint is to be forwarded to the school no later than 14 days after receipt of the decision.

The complaint is processed by the course council of the school.

**Evaluation**
The school must ensure that the student makes an evaluation of the three parts of the course and the connection between them. The evaluations are to be used as a common tool between school, hospital and contractor in order to ensure the best possible course and training process.

The Steering Committee for Prehospital Courses must be informed of the evaluations.

**Course certificate**
Course certificate is issued by the school after completion of the course. The course certificate is forwarded to the student.
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Appendix 7.
Examination process
Appendix 1. Targets and content of the theoretical part of the advanced ambulance assistant course

Competence levels in the advanced ambulance assistant course
The competence levels in the course are defined as stated below. The division into levels is a graduation in the specific competence and knowledge area for advanced ambulance assistants.

Knowledge is the conceptual understanding of a theoretical problem, which can be demonstrated at the following levels:

A  Command of/ability to  the student must have factual knowledge in new and complex contexts
B  Use  of the student can use and understand factual knowledge in simple, new contexts.
C  Knowledge of  the student is able to recognise, describe and identify.

Skills are the practical skills, which can be demonstrated at the following levels:

A  Command/be able to  the student is able to combine, change, repair and master a practical challenge independently.
B  Use  the student is able to adjust, carry out, correct and combine.
C  Assist  the student is able to register, observe and participate.

Pharmacology
Target:

- That the student is able to describe and identify the basal cell function.
- That the student is able to describe pharmacokinetics, pharmacodynamics.
- That the student is able to understand factual knowledge about fluid treatment.
- That the student commands factual knowledge about effect, side effects, contraindications and dosing of medicine, cf. Executive Order no 977
- That the student commands administration methods, including the placing of peripheral intravenous catheter, administration of intramuscular medicine and rectal administration of medicine.
- That the student commands indication, contraindications, effect, side effects and dose in connection with intravenous administration of 0.9% NaCl.
Cardiac diseases
Target:
- That the student understands and is able to use factual knowledge of basic anatomy and physiology regarding the heart and the circulatory system.
- That the student is on the basis of the patient's symptoms able to suspect that the patient may suffer from acute coronary syndrome.
- That on the basis of the patient's symptoms, the student commands a correct medical treatment and knows indication, contraindications, effect, side effects and dose for the drugs used.
- That the student is able to take EKG 12.
- That on the basis of EKG 12, the student recognises ST elevation and ST depression
- That the student is able to use telemedicine
- That the student understands the symptoms of cardiac failure and is able to relieve such symptoms
- That the student is in command of resuscitation procedures and recognises shockable and non-shockable rhythms and reacts correctly on the basis of the rhythm.
- That on the basis of a 4 point EKG the student recognises bradycardia, tachycardia, including ventricular tachycardia, 3° AV block and simple extra systoles.

Respiratory diseases/handling of the upper airways
Target:
- That the student understands and is able to use factual knowledge of basic anatomy and physiology regarding airways and respiration.
- That the student knows about the acid/base balance.
- That the student knows of instruments which can be used to create, maintain and control free airways and respiration.
- That the student is able to assist in the use of the instruments above.
- That the student is in command of manual methods for basic airway handling, including the use of tongue depressor, mask ventilation and oxygen treatment.
- That the student understands and is able to use factual knowledge of lung diseases and airway problems, including asthma, chronic obstructive lung disease (COL), bronchitis, foreign objects, epistaxis, larynx oedema, pneumothorax, epiglotitis…
- That the student is in command of indication, contraindications, effect and side effects and dose when using bronchial dilation medicine for the above diseases.

Allergy
Target:
- That the student is able to understand and use factual knowledge of allergy, allergic reactions and the reasons for allergic reactions.
- That the student is in command of treatment, indication, contraindications, effect, side effects and dose in connection with the treatment of serious allergic reactions with medicine.
Diabetes
Target:
• That the student is able to understand and use factual knowledge of reasons for diabetes.
• That the student commands symptoms and measuring of blood glucose.
• That the student commands treatment and knows indication, contraindications, effect, side effects and dose in connection with medical treatment of patients with low blood glucose.

Central nervous system
Target:
• That the student understands and is able to use factual knowledge of basic anatomy and physiology regarding the central and peripheral nervous system.
• That the student understands and is able to use factual knowledge of cramps, apoplexia cerebri, subarachnoidal bleeding, meningitis and encephalitis, changes on Glasgow Coma Scale (GCS) and reasons for the above.
• That the student commands factual knowledge of and the use of Glasgow Coma Scale (GCS).
• That the student commands the assessment and description of pupillary reactions.
• That the student can carry out adequate treatment of cramps on the basis of symptoms and commands rectal treatment with relevant medicine, knows indication, contraindications, effect, side effects and dose.
• That the student shows understanding of reasons for the above diseases and commands observations and treatment of the above conditions.

Gynaecology and obstetrics
Target:
• That the student has knowledge of basic anatomy and physiology regarding organs in the genitalia.
• That the student knows about and is able to describe and identify symptoms of preeclampsia.
• That the student understands and can use factual knowledge in relation to bleeding, extrauterine pregnancy, placenta prævia, incomplete abortion and prehospital delivery, including reasons and complications.
• That the student commands prehospital handling of extrauterine pregnancy, placenta prævia and incomplete abortion.
A child with acute disease

**Target:**
- That the student is able to understand and use factual knowledge of children’s anatomy and physiology.
- That the student is able to describe and identify symptoms of sepsis in children.
- That the student is able to understand factual knowledge of respiratory problems with children because of asthma, foreign objects, pseudocroup and epiglottis.
- That the student commands the treatment of asthma, foreign objects, pseudocroup and epiglottis.
- That the student has knowledge of treatment by adrenaline inhalation for pseudocroup.
- That the student understands and can use factual knowledge of shock in children as a consequence of bleeding, anaphylactic shock, fever cramps, epilepsy, and unconsciousness.
- That the student commands the criteria for fluid therapy.
- That the student commands the treatment of cramps, including fever cramps and allergy, with relevant drugs, knows indication, contraindications, effect, side effects and dose.

Surgical diseases

**Target:**
- That the student has knowledge of basic anatomy and physiology regarding abdominal organs.
- That the student understands and is able to use factual knowledge in relation to internal bleeding and acute abdomen.
- That the student commands factual knowledge of treatment of pain.
- That according to medical prescription, the student commands treatment of pain in relation to abdominal pain with relevant drugs, knows indication, contraindications, effect, side effects, and relevant dose.

Intoxication

**Target:**
- That the student is able to recognise and describe intoxication with benzodiazepines, designer drugs, amphetamine and cocaine.
- That the student is able to understand and use factual knowledge of alcohol, paracetamol and salicylic acid.
- That the student commands factual knowledge of opiates and related antidotes.
- That the student commands the treatment of acute opiate intoxications with relevant intramuscular antidote, knows indication, contraindications, effect, side effects and dose.
Acute psychiatry
Target:
- That the student is able to understand and use factual knowledge of acute psychoses.
- That the student understands and is able to use factual knowledge of the psychiatry legislation, including the use of force and admission on the basis of yellow or red documents.
- That the student is able to use his/her factual knowledge for relevant actions towards the acute, psychotic patient.

Head of the ambulance team
Target:
- That the advanced ambulance assistant becomes independently able to combine theoretical and practical skills and be in charge of acute treatment of injured persons, including handling of airways, placing of intravenous access and infusion of fluid, assessment and treatment of changes to level of consciousness, and immobilisation and fracture stabilisation principles.
- That the advanced ambulance assistant is able to be in charge of the function as head of the ambulance team.
- That the advanced ambulance assistant can complete a place of injury as head of the ambulance team.

Patient rights and patient safety
Target:
- That the student has theoretical knowledge of the National Agency for Patients’ Rights and Complaints, patient rights and complaint procedure and the health act, including secrecy, disclosure of health information and informed consent.
- That the student has knowledge of the legislation regarding adverse events.
- That the student is able to report adverse events, cf. Executive Order no 925 on the reporting of adverse events in the health sector.

Accreditation
Target:
- That the student has theoretical knowledge of the Danish Quality Model.
- That the student is able to account for standards within his/her own work area.
  organisational accreditation standards
  general patient process standards
  specific clinical conditions
Documentation
Target:
• That the student commands written skills with a view to extensive documentation.
• That the student has knowledge of the objective and necessity of documentation (medical, legal, insurancerelated).
• That the student commands known, written standards for the wording of clinical terms and observations.

Communication and cooperation
Target:
• That the student commands oral and written communication which will further the cooperation with internal and external collaborators, including oral communication with patients and relatives.
• That the student is in command of crossdisciplinary team management and team cooperation.
• That the student understands and uses factual knowledge of secrecy and commands the disclosure of relevant information/data in relation to patients, relatives and collaborators.
• Commands and observes his/her professional responsibility and competence area.

Ethical considerations and measures in relation to patient and relatives
Target:
• That the student has knowledge of ethics, can identify ethical dilemmas and act professionally in treatment practice.
• That the student commands his/her treatment of both patients and relatives professionally in relation to age, sex and ethnic background.
Appendix 2. List of medicine used in relation to defined diseases/symptoms

<table>
<thead>
<tr>
<th>Disease/Condition</th>
<th>Medicine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pain relief</td>
<td>Opiate intravenously</td>
</tr>
<tr>
<td>Cardiac cramps (acute coronary syndrome)</td>
<td>Nitroglycerin spray</td>
</tr>
<tr>
<td></td>
<td>Salicylic acid, tablets</td>
</tr>
<tr>
<td>Asthma /chronic obstructive lung disorder</td>
<td>Betastimulating medicine (inhalation)</td>
</tr>
<tr>
<td>Cramps</td>
<td>Rectal benzodiazepine</td>
</tr>
<tr>
<td>ST elevations myocardial infarction</td>
<td>Salicylic acid, tablets</td>
</tr>
<tr>
<td>Nitroglycerine spray</td>
<td></td>
</tr>
<tr>
<td>Insulin shock</td>
<td>Glucose 100 g/l max. 500 ml.</td>
</tr>
<tr>
<td>Allergic reactions</td>
<td>Adrenaline as intramuscular injection</td>
</tr>
<tr>
<td>Overdose of opiates</td>
<td>Intramuscular Naloxon</td>
</tr>
<tr>
<td></td>
<td>Infusion isotonic liquid therapy and oxygen</td>
</tr>
</tbody>
</table>
Appendix 3. Target description for hospital training and skills and simulation training advanced ambulance assistant

The learning targets include elements based on introduction to the competences which are relevant in order to handle critically ill patients in emergency hospital wards, expansion of the knowledge of the use of “ABC assessment” of the clinical condition of patients in emergency hospital wards, guidelines for observation and treatment and documentation thereof in relation to handing over patients received after ambulance transport.

It is a natural consequence that the hospital wards relevant for trainee periods at this part of the ambulance assistant course will primarily be emergency wards with a considerable number of patients with acute/critical medical and surgical conditions. To a certain extent, selected anaesthesiological intensive care wards will also be used, whereas permanent wards with only occasional acute patients are not considered suitable and should not be used in this connection.

The aim of hospital trainee periods is to give the student an impression of a number of practical circumstances when patients are received by the hospital as a consequence of trauma, medically acute conditions or other acute/critical conditions. The students use the competences with which they already have experience from their work as ambulance assistants and the recently learned competences from the theoretical modules of the advanced ambulance assistant course. In addition to the professional competences, the trainee period at the hospital also aims at giving the students an opportunity to acquire professional cooperation relations with and knowledge of the professional groups at the hospital involved in receiving and treating patients with acute/critical conditions.

The primary tasks are to observe and discuss the individual patient cases:

- What happens before, during and immediately after a patient transport arrives at the hospital?
- Which observations and additional information from the ambulance staff is useful in relation to receiving patients who arrive as a consequence of acute ambulance transport?
- Which observations and additional information is necessary when receiving and assessing patients who arrive on their own at the hospital with acute conditions?
- Which danger signs and observations are found important after arrival at the hospital?
- Which conditions necessitate acute medication and according to which considerations regarding drugs, doses and subsequent observation?

It is not least important that the student acquires knowledge of and insight into the competences and emergency actions of the hospital staff through the establishment of a good dialogue as part of professional cooperation relations.

The requirement for approving the trainee period is that the student attended and has been offered and participated in demonstration and exercises in relation to the target of the trainee period.

Whether the individual targets have been achieved satisfactorily will be decided after the final simulation and skills training at the school.
Appendix 4. Training log for hospital training advanced ambulance assistant

Training log for advanced ambulance assistant student
Hospital trainee period

<table>
<thead>
<tr>
<th>Name:</th>
<th>Service number:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Place of employment, including station:</td>
<td>Employer during trainee period:</td>
</tr>
<tr>
<td>School:</td>
<td>Course number:</td>
</tr>
</tbody>
</table>
Each instructor/person responsible for the trainee period will by means of date and signature document the student’s attendance and that the student was offered and has taken an active part in the demonstration of execution of the skills described below in the logbook.

If possible, the trainee instructor must give the student a chance to carry out the actions or tasks in practice under supervision and guidance.

The school decides whether the individual targets have been reached in a satisfactory way.

The logbook must be approved by the school before the advanced ambulance assistant student can be sent up for examination. The student is responsible for handing over the logbook to the school.

<table>
<thead>
<tr>
<th>General targets for the hospital trainee period</th>
<th>Trainee instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 The student is active and takes co-responsibility for his/her own learning process and shows a will to cooperate</td>
<td>(date and signature)</td>
</tr>
<tr>
<td>2 Shows empathy towards the patients</td>
<td>(date and signature)</td>
</tr>
</tbody>
</table>

The target is that the student must have taken an active part in instruction and demonstration and, under supervision and guidance, have carried out the action or tasks described in the following.

<p>| 3 Principles of observation method on the basis of the ABCDE concept with focus on the treatment competences achieved after completion of the course. | (date and signature) |
| 4 Principles of and changes to the patients’ critical condition, including alarming / critical symptoms. | (date and signature) |
| 5 Basic hygienic principles during the execution of all tasks. Sterile technique / aseptic technique | (date and signature) |
| 6 Principles regarding the acute patient process depending on the specialty of the ward. Please tick: | (date and signature) |
| ☐ Medical reception | |
| ☐ Surgical reception | |
| ☐ Emergency room | |
| ☐ Anaesthesia | |
| ☐ Cardiology ward | |
| ☐ Other | |</p>
<table>
<thead>
<tr>
<th>7</th>
<th>Principles regarding examination and tools for making diagnoses in the acute patient process.</th>
<th>(date and signature)</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>Principles of the uncomplicated, free airway, of suction of upper respiratory tract and placing of tongue depressor.</td>
<td>(date and signature)</td>
</tr>
<tr>
<td>9</td>
<td>Principles of support ventilation / manual ventilation.</td>
<td>(date and signature)</td>
</tr>
<tr>
<td>10</td>
<td>Principles of placing of intravenous access, including flushing of the cannula, preparation and connection of infusion liquid.</td>
<td>(date and signature)</td>
</tr>
<tr>
<td>11</td>
<td>Principles of acute coronary syndrome. Including taking and analysing/interpreting EKG 4/12.</td>
<td>(date and signature)</td>
</tr>
<tr>
<td>12</td>
<td>Principles of cardiac failure, including cardiogenic shock, including acute heart failure (pulmonary oedema), including cause.</td>
<td>(date and signature)</td>
</tr>
</tbody>
</table>

Particular areas of the hospital trainee period have shown that the student should in cooperation with the school strengthen:

seen by the student:

(separate line)

(date and signature)

After the hospital trainee period, the student is responsible for ensuring that the training log has been completed, signed and subsequently forwarded to the school.

School address:
Appendix 5. Target description for training during ambulance transport advanced ambulance assistant

Training during ambulance transport must be held in areas with a large number of A and B transports.

The aim of the trainee period during ambulance transport
The student must through instruction and guidance obtain command of factual knowledge and independently be in command of competences within prehospital treatment.

The target is that the student must

- independently be able to use the ambulance equipment according to packing list, procedure instructions and checklists
- independently be in command of contact with and assessment of patients.
- have independent command of knowledge of and be able to handle the function of head of the ambulance team
- have independent command of knowledge of and be able to use the drugs determined in the Executive Order in relation to own responsibility and area of competence. Including indication, contraindications, effect/side effects and method of administration, including dose.

Training during ambulance transport
The training during ambulance transport has a duration of five days. The trainee period should preferably be during daytime.

The student is not included in the standard staff during the training during ambulance transport.

Training and instruction will be in the hands of supervisor / instructor who is part of the standard staff in the ambulance in question.

Each student has a person responsible for trainee periods (supervisor / instructor) who is responsible for the course process.

The person responsible for the trainee periods will decide whether the trainee period is approved / not approved. If the training period is not approved, the person responsible for the trainee period will contact the school with a view to a general assessment of the student’s chances of completing an approved trainee period, including considerations regarding a possible extension of the trainee period during ambulance transport.

The student and the person responsible for the trainee period have joint responsibility for ensuring evaluation of the trainee period.
The student is responsible for ensuring that the logbook (Appendix 6) is completed and signed by the person responsible for the trainee period and that the logbook is forwarded to the school.

To the extent that it is not possible to go through the individual procedures in practice, the person responsible for the trainee period is expected to teach the student the theory. Preferably using additional objects, such as a dummy, simulator, etc.

Both the student and the person responsible for the trainee period are expected to have familiarised themselves with the use of the logbook in advance of the trainee period.

Station profiles
The trainee period includes stations with sufficient level of activity to ensure that the relevant competences are learned. The general responsibility for approving all trainee employers lies with the prehospital manager in cooperation with the school.
Appendix 6. Training logbook for training during ambulance transport advanced ambulance assistant

<table>
<thead>
<tr>
<th>LOGBOOK FOR TRAINING DURING AMBULANCE TRANSPORT</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADVANCED AMBULANCE ASSISTANT</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name:</th>
<th>Service number:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Place of employment, including station:</td>
<td>Employer during trainee period:</td>
</tr>
<tr>
<td>School:</td>
<td>Course number:</td>
</tr>
<tr>
<td>The student must independently be in command of and be able to use the ambulance equipment according to packing list, procedure instructions and check-lists</td>
<td>Target achieved</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
</tbody>
</table>

Comments on targets not achieved:

<table>
<thead>
<tr>
<th>The student must independently be in command of contact with and assessment of patients.</th>
<th>Target achieved</th>
<th>Target not achieved</th>
</tr>
</thead>
<tbody>
<tr>
<td>The student must have knowledge of and be able to use pulse-oximetry, including assessment of sources of error</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The student must independently have knowledge of and be able to use correct defibrillation protocol</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The student must independently have knowledge of and be able to use EKG 12, including principles of tele-medicine, including sources of error</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The student must independently have knowledge of and be able to use oxygen treatment according to the patient's condition</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The student must independently have knowledge of and be able to use intravenous access, including correct sterile technique</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The student must independently have knowledge of and be able to use intra-muscular injection, including correct sterile technique</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The student must independently have knowledge of and be able to use assessment of need for fluid therapy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The student must independently have knowledge of and be able to measure blood glucose, including assessment of sources of error</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The student must independently have knowledge of and be able to use principles of correct airways handling, cf. the ABC principles

| The student must independently have knowledge of and be able to use the ABCDE principles correctly for the assessment of patients |
| The student must independently be able to treat both patients and relatives professionally in relation to age, sex and ethnic background |
| The student must independently have knowledge of and be able to carry out handing over of patient data, medical history and other relevant parameters, including handing over a patient after transport |

### Comments on targets not achieved:

| The student must have independent command of knowledge of and be able to handle the function of head of the ambulance team: | Target achieved | Target not achieved |
| The student must independently have knowledge of and be in charge of the function as head of the ambulance team. The student must be able to use the current prioritising principles for patients at a place of injury with a large number (> 3) of injured people, including ability to assess the need for backup. |

### Comments on targets not achieved:
The student must have independent knowledge of and be able to use the drugs determined in the Executive Order in relation to own responsibility and area of competence. Including indication, contraindications, effect/side effects and method of administration, including dose.

<table>
<thead>
<tr>
<th>Target achieved</th>
<th>Target not achieved</th>
</tr>
</thead>
</table>

Comments on targets not achieved:

Date: / - 20

Signature / person responsible for the trainee period

Signature / student:
Appendix 7. Examination

The course is completed by a test held as a so-called OSCE ("Objective Structured Clinical Examination") including a number of "stations" or stands where the student is to solve an assignment which integrates the student's knowledge and skills.

At the OSCE test, the students must prove that they have obtained the competences regarding knowledge, communicative skills, patient examination, problem-solving ability, knowledge of and confidence to carry out procedures and handle ethical and attitude-related problems stated in the description of targets. Each station will take up between 10 13 minutes and 2 minutes are allowed for rotation. The combination of a total of 14 stations will form the test. The students rotate between stations at intervals of about 13 minutes. The individual tasks have been planned according to the time frame, and the student is assessed at each station by an examiner who will register the student's performance on the basis of structured checklists. The tasks can be based on action competences on the basis of a description of a scenario, demonstration of a procedure in a clinical context, simulation-based tasks with phantoms/dummies or standardised "patients" instructed to present a medical history or clinical condition. A few stations may be purely theoretical "paper assignments", preferably related to one of the practical stations. At such stations, time can be spent examining the student's knowledge, for example through questions regarding medication of the patient at the previous station.

The OSCE test has a number of advantages:
- Tests the use of knowledge and skills so that as many learning targets as possible from the course are assessed
- All students are tested within the same professional content
- All parts of the test are assessed on the basis of well-defined, structured criteria
- Direct observation of the student's competence at each station is used
- The precision and validity of the test has been documented

Test process
The test is held during one day at the institution of education. Each station/stand will have a qualified examiner who may be a lecturer at the school, an ambulance instructor, or an external physician at specialist level with prehospital experience. Furthermore, 12 censors will circulate among the stations. The censor(s) will be physicians at specialist level.

At each station, the student's competence is assessed in relation to the actual task, stating a number of points weighted according to the difficulty of the task and the total number of tasks. A checklist has been made for each task, stating the part elements which the student is expected to handle for each task. No aids of any kind must be brought to and used during the test except for possible materials handed out.
There may be seven stations at a time, then a short break to change the content of the stations, followed by seven new stations. This gives a total effective examination period of four hours. Seven examiners are needed, (12 censors), possibly a number of “standardised patients” and possibly 23 logistics workers for timekeeping depending of the nature of the assignments.

Some stations will be skills stations or written stations where the students can be assessed individually, whereas the simulations, which also include assessment of nontechnical skills, require examination in pairs so that only the person who has the treating role is assessed.

**Examination assignments/tasks**

The final examination must only be based on assignments and checklists developed and tested by the Examination group under the Control Group for Prehospital Courses. It is the responsibility of the examination group to prepare assignments which will ensure that the examination covers the entire curriculum within skills, knowledge, attitudes and team qualities included in the course.

Before the examination, the examiners and censors must have been introduced thoroughly to the individual assignments for this kind of examination in order to ensure consistent and qualified assessment.

In case of doubt at a stand/station regarding the assessment of a student, the censor will make the final decision on the assessment of a student’s performance.