



# Emergency Medical Care: Simulation learning environment



**PELASTUSOPISTO**  
EMERGENCY SERVICES COLLEGE

*Training exercises are carried out according to the needs of each student group or for each group of further training. The learning targets of exercises are planned based on competence, e.g. according to Bloom's learning objective taxonomy. Exercises are carefully planned, and the structure of the exercise as well as the staging, the situation description, the patient's status, and the related materials serve to set up the objectives for each exercise.*

## Simulation learning environment facilities

### The simulation room

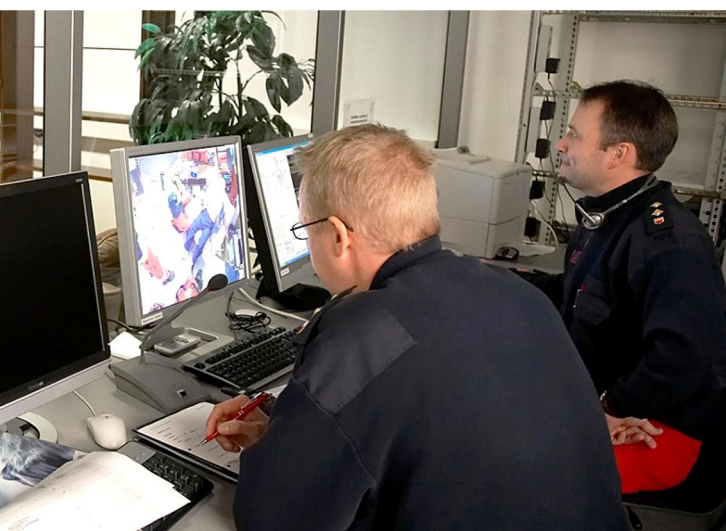
In the simulation room students work in an environment that is as reality-based as possible. In the simulation room there is a home-like environment and a so called trauma environment where different injury scenarios can be built. In order to clarify the situation video, audio and image materials as well as props (bike helmets, bicycles, ladders, building materials, etc.) can be used. The simulation room can be staged into a hospital's treatment room or a patient room in which case it is possible to carry out simulations for hospital personnel. Audio-visual material can be saved in the simulation room.

Normally, only the people carrying out the simulation are present in the simulation room to guarantee that the situation feels as authentic as possible. The roles of patients can be played by students, teachers, actors, and various patient simulators.

With the help of patient simulators it is possible to create a situation picture that is nearly identical to one with a real patient. The simulator's breathing and circulation status can be nearly fully evaluated, problems in the respiratory tract can be simulated to a considerable extent, the patient speaks and answers question or makes sounds in a way that is appropriate for the situation etc. All the symptoms and findings that can be directly measured and determined from the simulator, without external input from the teacher, make the situation picture seem more authentic.







### The monitoring room

During a simulation, at least two teachers are working in the monitoring room. One of the teachers controls the functions of the patient simulator or guides the patient actor, for example, by using Virve (the Finnish authority communications network). The other teacher controls the actual simulation by providing necessary information to the simulation room via the loud speaker, telephone or Virve.

### The observation room

The students who are not in turn to take part in the simulation, follow the simulation in the observation room (studio audience). In this way, they can comment on what is happening among themselves without disrupting the simulation event. When possible, there is a third teacher present in the observation room during the first stage of the simulation, who can join the exercise at a later time in the role of a emergency medical care situation leader or emergency medical care supervisor (L4 and L5).

The students in the observation room can see and hear everything that takes place in the simulation room in real-time. The data from the patient simulator can be viewed in the observation room and patient documents as well as e.g. EKGs are available.

After the simulation exercise, simulation participants, the studio audience and the teachers that directed the simulation gather in the observation room for a learning discussion. The learning discussion is carried out according to a pre-planned structured way emphasising positive feedback and the student's self-evaluation.



# Not only emergency medical care and not always in the simulator



The first emergency medical care simulation learning environment was built on the Emergency Services College campus in 2005. Despite its name, the simulation environment can also be used for simulation of other exercises than emergency medical care, such as hospital emergency room simulations, home care simulations etc.

Simulation exercises can be carried out where ever on the campus area with a wireless patient simulator, or e.g. an actor playing the role of a patient. Simulation-assisted instruction can also be provided on the college's 38 hectare training ground, which enables many more possibilities for the simulation of emergency medical care situations and joint authority operations with real ambulances and equipment.