

## Appendix 4

### Detailed course description

Field of study: **MEDICAL RESCUE**/level: **first degree**

No.	ECTS	Course name	Short description	Course delivery
1.	2	<b>Psychology</b>	Psychology is a subject that introduces emergency medical services students to the basic mechanisms of the human psyche. It focuses on emotional reactions, behaviour in stressful situations, and communication with patients and the emergency team. It also discusses the psychological aspects of providing assistance to people in life-threatening situations and their families. The aim of the subject is to develop stress management skills, empathy and a professional attitude in the work of a paramedic.	According to the study plan: <b>winter</b> semester/students may complete the course individually
2.	2	<b>Public health</b>	Public health is a subject that focuses on protecting and improving the health of the population through preventive, educational and organisational measures. The course discusses health determinants, the healthcare system and the role of medical services in preventing disease and injury. Emergency medical services students learn about the importance of epidemiological surveillance, health promotion and emergency preparedness. The subject develops the ability to understand individual health in the context of the health of the entire community.	According to the study plan: <b>winter semester</b> / students may complete the course individually
3.	2	<b>Pharmacology with toxicology</b>	The subject <i>Pharmacology with Toxicology</i> in the field of emergency medical services aims to familiarise students with the basics of how drugs work and their use in emergency situations. It covers issues related to pharmacokinetics, pharmacodynamics and the principles of safe drug administration in emergency practice. The toxicology part discusses the mechanisms of action of poisons, symptoms of poisoning and pre-hospital management in life-threatening situations. The course prepares future paramedics for the conscious and responsible use of pharmacotherapy in their professional work.	According to the study plan: <b>winter</b> semester/students may complete the course individually

4.	1	<b>Information Technology and Biostatistics</b>	The subject of <i>Information Technology and Biostatistics</i> in the field of emergency medical services aims to familiarise students with the basics of medical data analysis and the use of IT tools in healthcare. Students learn how to collect, process and interpret statistical data relevant to emergency medical services. The course also covers the basics of using computer programs to support medical documentation and analysis of test results. The knowledge gained allows for the conscious use of scientific data and supports decision-making in emergency medical services.	According to the study plan: <b>winter</b> semester/students have the option of completing the course individually
5.	2	<b>Forensic medicine</b>	Forensic medicine in emergency medical services deals with the assessment of bodily injuries and the mechanisms of their occurrence in the context of sudden and traumatic events. This subject combines medical knowledge with elements of law, enabling rescuers to correctly diagnose injuries and document them. Students learn the principles of dealing with victims of violence, accidents and deaths at the scene. Particular emphasis is placed on securing evidence and material without violating the principles of emergency medical services. This knowledge prepares paramedics to cooperate with law enforcement and the judiciary.	According to the study plan: <b>winter semester</b> / students may complete the course individually
6.	1	<b>Reducing stress in the work of a paramedic</b>	The course "Reducing stress in the work of a paramedic" focuses on identifying sources of occupational stress in the work of a paramedic. It discusses the psychological and physiological mechanisms of stress response in emergency and crisis situations. Students learn practical techniques for coping with stress, such as breathing and relaxation strategies and methods of psychological support. The course programme also takes into account the importance of teamwork, communication and burnout prevention. The aim of the course is to improve the mental well-being of paramedics and increase their efficiency and safety at work.	According to the study plan: <b>winter</b> semester/students may complete the course individually.

7.	5	<b>Internal medicine with elements of oncology</b>	<p>The subject 'Internal Medicine with Elements of Oncology' in emergency medical services aims to prepare students to recognise life-threatening conditions resulting from internal medicine and cancer. The aim of the course is to provide knowledge about the pathophysiology, symptoms, preliminary diagnosis and pre-hospital management of patients with cardiovascular, respiratory, digestive, endocrine and oncological diseases. Students also learn how to assess a patient's condition, interpret basic test results and implement appropriate emergency procedures in accordance with current guidelines. Teaching methods include clinical exercises, medical simulations and case studies, which allow theory to be combined with practice. The course content focuses on acute internal medicine conditions, complications of oncological treatment, and the specifics of caring for chronically ill patients in situations of sudden deterioration of health. <b>Bedside classes, practical classes.</b></p>	<p>According to the study plan: <b>winter</b> semester/students may complete the course individually.</p>
8.	5	<b>Cardiology</b>	<p>Cardiology in emergency medical services focuses on the diagnosis and initial treatment of life-threatening conditions related to the cardiovascular system. The course covers the principles of assessing cardiac patients, interpreting ECGs and managing situations such as heart attacks, arrhythmias, circulatory failure and sudden cardiac arrest. Students learn to make quick therapeutic decisions, use pre-hospital pharmacotherapy and perform life-saving procedures. An important element is also cooperation with the team and the proper transfer of the patient for further treatment in hospital conditions. The aim of the course is to prepare paramedics to act effectively and safely in emergency cardiac situations. <b>Classes at the patient's bedside, practical classes.</b></p>	<p>According to the study plan: <b>winter</b> semester/students may complete the course individually.</p>
9.	1	<b>Epidemiological threats and protective vaccinations</b>	<p>The subject 'Epidemiological threats and protective vaccinations' in emergency medical services covers knowledge related to the recognition, prevention and limitation of the spread of infectious diseases. Students learn about the transmission routes of pathogens, the principles of patient isolation and the use of personal protective equipment in pre-hospital care. An important element of the course is the characterisation of current epidemic threats, including emerging and re-emerging diseases. The programme also covers immunoprophylaxis, the vaccination calendar and the importance of protective vaccinations in the work of medical personnel. The aim of the course is to prepare future paramedics to work safely in conditions of biological risk and to protect their own health and that of their patients. <b>Bedside classes, practical classes.</b></p>	<p>According to the study plan: <b>winter</b> semester/students may complete the course individually.</p>

10.	4	<b>Paediatrics</b>	<p>Paediatrics in emergency medical services is an area of knowledge and skills related to providing medical assistance to infants, children and adolescents. The subject covers the anatomical and physiological differences of the child's body and their significance in assessing the condition of a paediatric patient. Students learn to recognise life-threatening conditions characteristic of the developmental age, such as respiratory failure, convulsions and dehydration. An important element is also proper communication with the child and caregivers, as well as the psychological aspects of providing assistance. The classes prepare students to take quick and appropriate emergency measures in accordance with current medical guidelines. <b>Classes at the patient's bedside, practical classes.</b></p>	<p>According to the study plan: <b>winter</b> semester/students may complete the course individually.</p>
11.	3	<b>Surgery</b>	<p>Surgery is a field of medicine dealing with the surgical treatment of diseases, injuries and congenital defects. In the context of emergency medical services, it covers basic knowledge of injuries, emergency conditions requiring surgical intervention and pre-hospital procedures. The course prepares students to recognise life-threatening conditions such as haemorrhages, multiple organ injuries and acute abdominal conditions. Students also learn the principles of asepsis, wound care, fracture immobilisation and cooperation with the surgical team. The aim of the course is to develop the ability to quickly assess the patient's condition and take appropriate emergency measures in emergency situations. <b>Bedside classes, practical classes.</b></p>	<p>According to the study plan: <b>winter</b> semester/students may complete the course individually.</p>
12.	5	<b>Neurology</b>	<p>Neurology in emergency medical services is a subject focusing on the diagnosis and initial management of life-threatening conditions related to the nervous system. Students acquire knowledge of the anatomy and physiology of the central and peripheral nervous systems, which is necessary for understanding the mechanisms of neurological diseases. The most common emergencies, such as stroke, seizures, craniocerebral injuries, consciousness disorders and acute headache syndromes, are discussed. The course develops skills in assessing the neurological condition of patients in pre-hospital settings, including the use of scales and rapid differential diagnosis. Emphasis is also placed on making the right therapeutic decisions and working with the medical team to ensure continuity of care. <b>Bedside classes, practical classes.</b></p>	<p>According to the study plan: <b>winter</b> semester/students may complete the course individually.</p>

13.	2	<b>Clinical toxicology</b>	<p>Clinical toxicology is a subject dealing with the diagnosis and treatment of acute and chronic poisoning in humans. In emergency medical services, it focuses on rapid assessment, evaluation of the patient's condition and identification of the toxic substance. Students learn the principles of pre-hospital and hospital management of poisoning with drugs, alcohol, narcotics and chemicals. The subject also covers the use of antidotes and the basics of monitoring patients after exposure to toxins. Knowledge of clinical toxicology is essential for ensuring safety and effective assistance in life-threatening situations.</p>	<p>According to the study plan: <b>summer</b> semester/students may complete the course individually</p>
14.	1	<b>The importance of communication psychology in patient contact</b>	<p>Communication psychology plays a key role in the work of a paramedic, as it affects the quality of contact with patients in stressful and life-threatening situations. Skillful communication allows the paramedic to build trust, reduce patient anxiety, and obtain the information necessary to properly assess the patient's condition. The appropriate choice of words, tone of voice, and body language help to calm the patient and increase their cooperation during the provision of assistance. The psychology of communication also supports dealing with the emotions of patients, their families and the paramedic themselves. Thanks to it, it is possible to provide medical assistance more effectively and with greater empathy.</p>	<p>According to the study plan: <b>summer</b> semester/students may complete the course individually</p>

Collegium