

Odessa National Medical University
Faculty medical
Department Anaesthesiology, Intensive Care and Emergency Medicine

Syllabus of the course
«Emergency and Urgent Medicine»

Content	90 hours (3 credits)
Semester, year of study	IX-X semesters, 5th year of study
Days, time, venue	Providing of the academic discipline is according to the approved schedule of classes Clinical bases of the Department - ORCH, OCH №11, ORCDH, Center of Reconstructive and Restorative Medicine (University Clinic)
Teacher (-s)	PhD, assistant professor Basenko Igor Leontiiovich PhD, assistant professor Kirpichnikova Kateryna Petrivna PhD, assistant professor Salekh Olena Mylolaivna PhD, assistant professor Yuzvak Mykola Petrovich PhD, assistant Grichushenko Inna Sergiivna PhD, assistant Tverdovskiy Ivan Valeriiovich Assistant Didenko Yevhen Borisovich Assistant Hrushevska Hanna Oleksandrivna Assistant Sukhonos Roman Yevhenovich Assistant Potapchuk Yurii Oleksandrovich Assistant Danylova Hanna Oleksandrivna Assistant Suslov Oleksandr Serhiiovich Assistant Volodychev Denys Serhiiovich Assistant Buhaienko Yevhen Petrovich Assistant Biehliarov Oleksandr Oleksandrovich
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Workplace	ORCH Base OCH № 11 Base ORCDH Base Center of Reconstructive and Restorative Medicine (University Clinic) Base
Consultancy	Sheduled consultancy is posted on the website of the department On-line consultancy is provided via Ms Teams and Zoom platform

COMMUNICATION

Communication with students depends on the form of study (distant or face-to-face) and is provided via E-mail, social networks, phone, face-to-face meetings.

COURSE ABSTRACT

Description of the discipline

The subject of the discipline "Emergency and urgent medicine" comprises: the organization of emergency and urgent medicine in Ukraine; the procedure of providing emergency medical care of injured and patients at the hospital stage; initial actions of medical staff in case of emergency events; cardiac and respiratory arrest; management of emergency events on site; emergency medical care in case of mechanical injuries and mass injuries.

Interdisciplinary links

The discipline "Emergency and urgent medicine":

a) is based on students' learning of biology, anatomy and physiology, pharmacology, hygiene, pathological anatomy, pathological physiology, emergency medicine, general therapy, surgery, and other clinical disciplines as well as integrated into the disciplines;

б) establishes theory and practical skills for the management of the emergency

medical care of patients in case of emergency events during the preadmission and early admission to the hospital, including emergencies in the peacetime.

The goal and tasks of the discipline

The goal of teaching of the discipline “Emergency and urgent medicine” is a diagnostic of the emergencies, management of the treatment and evacuation, an evaluation of the tactic for the providing of emergency care as well as provide emergency medical care.

The main tasks of studying of the discipline “Emergency and urgent medicine” are:

- to assess of the basic principles of organization and providing of the emergency care in Ukraine;
- to grasp the skills how to diagnose of emergency conditions on site as a part of the rescue team (leader, participant) and an emergency department of the multidepartment hospital;
- to learn how to recognize emergency conditions in the practice of general practitioners - family medicine, polyclinics, hospital departments (any specialty);
- to study how to determine the most appropriate emergency guideline according to symptoms of the patient (injured);
- to provide the emergency care according to the specific emergency guideline with the implementation of adequate manipulations;
- to master the organizational principles of the emergency care and emergencies in the peacetime;
- to study the sequence of actions of rescue teams in case of mass injuries;
- to learn how to provide medical sorting out of injured people.

The discipline provides gaining ***competency of students:***

- *integral: the ability to solve complex issues and problems in a particular field of the professional activity or in the learning process, what implies to conduct research and / or implement innovations as well characterized by complexity and uncertainty of conditions and requirements;*
- *general:*
 1. the ability to know and understand the subject area and professional activity;
 2. the ability to communicate in the state language;
 3. the ability to adapt and make reasonable decisions for a new situation;
 4. the ability to evaluate and provide the quality of implemented works;
 5. the ability to act on the basis of ethical considerations, socially responsible and consciously;
- *special (professional, presentive):*
 1. communicative skills with the patient as well as clinical examination skills;
 2. the ability to define the list of necessary clinical, laboratory and instrumental investigations and evaluate results;
 3. the ability to diagnose emergency conditions;
 4. the ability to identify tactics and provide emergency care;
 5. the ability to accomplish medical manipulations;
 6. the ability to cope with medical records.

Detailing of the competency within the NFC descriptors as a form of the " Matrix Competency".

Learning outcomes:

The academic discipline contributes to the formation of integrative final program learning outcomes such as:

- To manage the communicative skills and clinical examination of the patient. Collect data of patient's complaints, medical history, life history.
- To evaluate data of the diagnosis according to the standard protocol, based on laboratory tests and instrumental investigations. Determine the list of necessary clinical, laboratory and instrumental tests and define their results.
- To diagnose emergency conditions.
- To identify tactics and provide emergency care.
- To accomplish medical manipulations.
- To cope with medical records.
- To plan, to conduct and to analyze organisational measures and integrate the providing of medical care to the population.
- To follow requirements of ethics, bioethics and deontology in the professional activity.

Results of the discipline learning:

To know:

Assessment, management and treatment of the emergency event is according to the actual guidelines of the emergency medicine:

1. Asphyxia.
2. Arterial hypertension event.
3. Acute respiratory failure (Respiratory Distress Syndrome)
4. Acute cardio-vascular failure.
5. Acute arrhythmias.
6. Acute poisonings, including chemical warfare agents.
7. Acute coronary syndrome.
8. Electrotrauma.
9. Acute cerebral insufficiency.
10. Epileptic status.
11. Acute bleeding.
12. Cardiac and respiratory arrest.
13. Collapse.
14. Comas.
15. Blackouts.
16. Drowning.
17. Shocks.
18. Acute anaphylactic reactions.
19. Seizure syndrome.
20. Hypo-, hyperthermia, including in the field.

The program embraces emergencies requiring of the implementation of the relevant guideline of the emergency medicine:

Be able to:

1. Airway management.
2. Insertion of supraglottic airway devices.
3. Artificial ventilation (Ambu sack, S-shaped tube).
4. Tracheal intubation (endotracheal tube).
5. Medication of the trachea intubation.
6. Alternative methods of airway management (esophageal-tracheal tube combination (combitube), laryngeal masks (LMA), cricothyrotomy).
7. Revision of the upper airways (manual and electric aspirator).
8. Oxygen supplementation.
9. Cardio-pulmonary and cerebral resuscitation.
10. Usage of the automatic defibrillator.
11. Usage of the manual defibrillator.
12. Assessment of the capillary refill.
13. Recording the 12-lead ECG.
14. Cubital vein catheterization.
15. External jugular vein catheterization.
16. Intraosseous access.
17. Usage of a tourniquet.
18. Usage of cervical collar.
19. Usage of tyres (Cramer, vacuum, Sam-Splint).
20. Usage of immobilization vest.
21. Immobilization of spine (fixing injured on a long board).
22. Blood pressure measurement and interpretation.
23. Occlusive bandage application in case of the open valve and tense pneumothorax.
24. Pulse-oxymetry.
25. Glucose blood tests.
26. Nasogastric and orogastric zond insertion.

CURRICULUM

Format and methods of learning

The course is represented so as lectures (4hours) and practical class (26 hours), organization of students' self studying (60 hours).

Types of educational activities of students according to the curriculum: lectures, practical classes, students' self studying (SSS) with active consultancy of the teacher.

Content, capacity and structure of the discipline "Emergency and urgent medicine":

THEMATIC PLAN of lectures

1. Organization of emergency and urgent medical care in Ukraine. Initial steps of medical staff in case of the emergency condition of the patient.
2. Cardiac and respiratory arrest. The technology of emergency care of adults.

THEMATIC PLAN of practical classes

1. Initial steps of medical staff in case of the emergency condition of the patient.
2. Modern methods of airway management and mechanical ventilation.
3. The procedure of the emergency treatment of the injured and patients at the prehospital stage. Initial examination.
4. The procedure of the emergency treatment of the injured and patients at the prehospital stage. Secondary examination.
5. Cardiac and respiratory arrest. The technology of emergency care of adults.
6. Diagnosis and treatment of emergency conditions on site of the accident.
7. Emergency care in case of mechanical injuries.
8. Emergency care in case of mass injuries.
9. Differential offset: the control of theoretical level of knowledge, SSP, practical preparation.

Recommended literature:

Basic literature

1. Morgan JE, Mikhail MS Clinical anesthesiology. McGraw-Hill Education| Medical ; 6 th Edition, 2018
2. Paul G.Barash, Bruce F. Cullen Clinical anesthesia. LWW; 8 th Edition, 2017
3. Advanced Trauma Life Support Student Course Manual. Copyrightc 2018 American College of Surgeons 633 N. Saint Clair Street Chicago, IL 60611-3211

Additional literature

1. Jean- Louis Vincen, Edward Abraham Textbook of critical care. Elsevier; 7 th Edition, 2017
2. Edward Scarth Drugs in anesthesia and intensive care. 5 th Revised Edition, 2016
3. Joseph Parrillo R. Phillip Dellinger. Critical Care Medicine: 5th Edition, 2019

ASSESSMENT

Assessment methods. Tests of the initial and final level of knowledge according to the topic of practical class. Oral answer to standardized questions of the current topic, previous topics and lecture materials. Managing of typical and nonstandart clinical cases. Assessment of practical skills. Assesment of students' activity during the practice in small groups. Final mark is mean grade for all types of students' activity throughout the practical class

Forms of assessment.

The mark for the discipline is determined on the basis of the sum of grades of current academic activity (the mean of current progress) and exam mark (traditional mark), which is set to assess theoretical knowledge and practical skills according to the lists determined by the program of the discipline.

Thereby, parts of the results of the assessment of current educational progress and differential offset are 50 to 50 percents respectively.

Current control is conducted according to specific purposes throughout each of the practical class and an independent practice at the hospital.

The following diagnostic tools of students' level of progress are recommended for assessment: control of accomplished assignments, theoretical preparation, managing cases.

The current marking of relevant topics is conducted according to the traditional 4-point system (excellent, good, satisfactory, unsatisfactory).

Marking of educational activity of all students is not obligatory for every practical class. However, at least 50% of students must be interviewed during practical class.

The current progress is calculated as a mean of all grades received by a student according to the traditional scale rounded to 2 (two) decimal places at the end of study.

Progress of assimilation of the topics for students' self preparation according to the program is checked throughout the differential offset.

Upon completion of the study of the discipline, the differential offset is arranged. Students completed the program "Emergency and urgent medicine" as well as do not have academic debts (received at least 3.00 for their current progress and passed a set of practical skills according to the list of the discipline) are allowed to take the differential test. The mark consists of the student's answer to 2 theoretical questions from the list of questions according to the program. The differential scoring is graded on the 4-point (traditional) scale.

Every student *has the* right to retake current unsatisfactory grades only in order to achieve minimum average score of the discipline.

The mark of the discipline consists of two components:

- 50%- current progress (mean of all students' grades)
- 50%- a score of the differential offset.

STUDENTS' SELF STUDYING (SSS)

Types of students' self studying (SSS) and its control.

1. Organization of emergency and urgent medicine in Ukraine. Initial steps of medical staff in case of the emergency condition of the patient.
2. Modern methods of the airway management and mechanical ventilation of adults.
3. The procedure for emergency treatment of the injured and patients at the prehospital phase. Initial examination and secondary examination.
4. Cardiac and respiratory arrest. The technology of emergency care of adults.
5. Diagnostics and treatment of emergency events on site of the accident
6. Emergency care in case of mechanical injuries.
7. Emergency care in case of mass injuries.

Assignments for self studying:

- ***Preparation for practical class***
 - Theoretical preparation
 - Mock tests
 - Dealing with practical cases

- Practical skills training

COURSE POLICY

Deadline and retake policy, academic integrity policy, attendance and lateness policy, mobile devices, demeanor according to "Regulations on the organization of the educational process by students of higher education in ONMU", 2019 p.

Deadline and retake policy:

A retake of modules occurs in order of valid reasons (for instance, sick leave).

Academic integrity policy:

The cheat during tests and solving situational assignments are prohibited (including usage of mobile devices).

Attendance and lateness policy:

Attendance of lectures and practical classes are obligatory, latenesses are unwelcome. A valid reason for the absence in class is a disease to confirmed by doctor's note (sick leave).

Mobile devices:

Mobile devices are allowed during online class tests and practical training.

Demeanor:

The course implies working as a team. The communication environment is friendly, creative, open to constructive criticism.