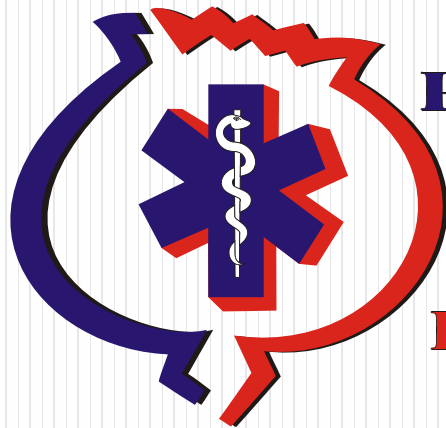


**JULIUSZ JAKUBASZKO**

# **Emergency Medicine in Medical Students Education**



**Polskie Towarzystwo  
Medycyny Ratunkowej**

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**Polish Society for  
Emergency Medicine**

# **COI Disclosure**

**I have no relevant relationship or financial/  
material support to disclose.**

**PRESENTER: JULIUSZ JAKUBASZKO**



# **EMERGENCY MEDICINE BASIC COMPONENTS**

**Independent Medical Specialty**

**Postgraduate education and training programs**

**Dedicated scientific society**

**Academic Education Curriculum**

**Hospital Emergency Departments**

**Integrated EMS Infrastructures**







# ACADEMIC CURRICULUM for EMERGENCY MEDICINE

Polish  
Society for  
Emergency  
Medicine  
series



Juliusz Jakubaszko

Wrocław 2009



## **IMPORTANT MEASURES FOR UNDERGRADUATE EM EDUCATION**

- **Organization of emergency medicine units needs to be urgently improved in particular medical universities in order to create single-name departments and clinics of emergency medicine, operating parallel and individually with the same rights as other units of clinical disciplines.**
- **These units should exclusively realize the teaching of first aid and emergency medicine.**

## **IMPORTANT MEASURES FOR UNDERGRADUATE EM EDUCATION**

- **Creation of academic clinical facilities should be developed and accelerated by means of dedicated clinics and clinical units. Financial resources should be granted to particular academies or universities by giving subsidies.**



## **IMPORTANT MEASURES FOR UNDERGRADUATE EM EDUCATION**

- **Minimal curriculum requirements for the first aid should be extended to 30 education hours for the first year students of medicine and the minimal curriculum for emergency medicine should be extended to uniform 80 - 100 education hours (for the fifth year of medical students)**
- **Final emergency medicine exam should be introduced to students of medicine.**

# **ACADEMIC CURRICULUM FOR EMERGENCY MEDICINE**

## A. First aid curriculum

Medicine and dental medicine major		
Year of studies	First	
Units responsible for realization of the programme	Department of Emergency Medicine	
	Institute of Emergency Medicine	Clinic of Emergency Medicine
Type of classes	Seminaries, practical classes	
Number of hours	Seminars, practical classes and clinical exercises	30
	Total	30
ECTS points	2,0	
Basic subject from elementary group		
Assessment	Graded credit	
Course objectives		











# **ACADEMIC CURRICULUM FOR EMERGENCY MEDICINE**

## A. Curriculum for emergency medicine.

Medical specialty		
Year of studies	Fifth, sixth	
Units responsible for realization of the programme	Chair of Emergency Medicine	
	Department of Emergency Medicine	Clinic of Emergency Medicine
Type of classes	Lectures, seminars, practical classes and clinical exercises	
Number of hours	Lectures	20
	Seminars, practical classes and clinical exercises	80
	Total	100
ECTS points	5,0	
Subject included in major content of studies		
Assessment	Exam	



# **ACADEMIC CURRICULUM FOR EMERGENCY MEDICINE**

<b>Dental medicine specialty</b>		
<b>Year of studies</b>	Fourth	
<b>Units responsible for realization of the programme</b>	Chair of Emergency Medicine	
	Department of Emergency Medicine	Clinic of Emergency Medicine
<b>Type of classes</b>	Lectures, seminars, practical classes and clinical exercises	
<b>Number of hours</b>	Lectures	10
	Seminars, practical classes and clinical exercises	35
	<b>Total</b>	<b>45</b>
<b>ECTS points</b>	3,0	

# **ACADEMIC CURRICULUM FOR EMERGENCY MEDICINE**

## **Course objectives**

- Acquire and establish knowledge in the area of basic and advanced life-saving actions.
- Developing ability of differential recognition and diagnosis of acute medical condition.
- Learning recent specialized procedures in emergency medicine.
- Recognition of currently effective legal acts and regulations concerning lifesaving actions.
- Recognition of the most common psychological and ethical problems in lifesaving professions.
- Recognition of medical documentation and the means of data gathering in emergency medicine.
- Recognition of organization and legal situation of emergency medicine and lifesaving in Poland.
- Acquisition and establishment of knowledge in the area of lifesaving for disasters.
- Developing abilities of taking individual and creative decisions.

# **EMERGENCY MEDICINE EDUCATION PROGRAMME**

- **Shall encompass knowledge on pathophysiology, diagnosis and procedure skill in whole spectrum of EM clinical and prehospital practice**
- **Shall prepare physician to quick qualified therapeutic procedures in all type of health or life emergencies**
- **Shall prepare physician for staff management and team work in case of mass casualties and disasters**



# **ACADEMIC CURRICULUM IN EMERGENCY MEDICINE FOR MEDICAL STUDENTS**

- **Principles of emergency care**
- **Pathophysiology and practice of cardiac and respiratory arrest**
  - **Basic life support**
  - **Principles of advanced management**
  - **Post-resuscitation care**
- **Pathophysiology and practice of major trauma**
  - **Principles of initial assessment**
  - **Advanced trauma resuscitation**
  - **Wound management**

# **ACADEMIC CURRICULUM IN EMERGENCY MEDICINE FOR MEDICAL STUDENTS**

- **Toxicology**
- **Management of acute internal emergencies**
- **Management of environmental emergencies**
- **Medical technologies in emergency medicine**
- **Emergency diagnostics**
- **Functioning of emergency medical system**
- **Basics of disaster medicine**

## **ACADEMIC CURRICULUM FOR EMERGENCY MEDICINE**

<b>Lecture blocks</b>	
<b>Subject</b>	<b>Number of hours</b>
The historical background of emergency medicine	<b>1</b>
Emergency medicine in health protection systems.	<b>2</b>
Introduction to clinical procedures of emergency medicine.	<b>3</b>
Introduction to emergency treatment of multiple and multi-organ body injuries.	<b>3</b>
Techniques and technologies in emergency medicine clinic.	<b>3</b>
Structure and functioning of an emergency unit.	<b>2</b>
Natural disasters and human made disasters	<b>3</b>
Organization of lifesaving actions during mass incidents and disasters.	<b>3</b>
<b>TOTAL HOURS</b>	<b>20</b>



## **ACADEMIC CURRICULUM FOR EMERGENCY MEDICINE**

<b>Seminar, practice and clinical classes</b>	
<b>Subject</b>	<b>Number of hours</b>
<b>Cardio-pulmonary resuscitation</b>	12
<b>Internal medicine emergencies</b>	35
<b>Trauma</b>	15
<b>Environmental emergencies</b>	5
<b>Diagnostic techniques and clinical procedures for emergency medicine</b>	5
<b>Disaster medicine</b>	8
<b>TOTAL HOURS</b>	80

# **ACADEMIC CURRICULUM FOR EMERGENCY MEDICINE**

<b>Block No. 1</b>	
<b>Subject</b>	<b>Number of hours</b>
<b>Cardio-pulmonary resuscitation</b>	
Basic actions for resuscitation of adults	<b>4</b>
Advanced actions for adult resuscitation.	<b>6</b>
Advanced resuscitation for children	<b>2</b>
<b>TOTAL HOURS</b>	<b>12</b>

# **ACADEMIC CURRICULUM FOR EMERGENCY MEDICINE**

<b>Block No. 2</b>	
<b>Subject</b>	<b>Number of hours</b>
<b>Internal medicine emergencies</b>	
Cardiovascular emergencies	3
Respiratory emergencies	3
Neurological emergencies	2
Psychical disorder emergencies	1
Gastrointestinal emergencies	2
Nefrological emergencies	2
Infectious emergencies	1
Metabolical emergencies	3
Endocrynological emergencies	1
Allegical emergencies	1
Sudden pathology risk factors in obstetrics	3
Preliminary therapy of acute food poisoning	3
Pathophysiology, diagnosis and treatment of shock	3
Guidelines for lifesaving for children emergencies	3
Guidelines for acute skin conditions	2
Guidelines for acute ophthalmological condition	2
Guidelines for acute laryngological ailments	3
Guidelines for acute hematological conditions	2
<b>TOTAL HOURS</b>	<b>40</b>

## **ACADEMIC CURRICULUM FOR EMERGENCY MEDICINE**

<b>Block No. 3</b>	
<b>Subject</b>	<b>Number of hours</b>
<b>Trauma</b>	
Multiple injuries <ul style="list-style-type: none"> <li>• Priorities for preliminary actions</li> <li>• Preliminary and secondary assessment</li> <li>• Treatment strategy for emergency unit.</li> </ul>	<b>3</b>
Chest trauma	<b>1</b>
Abdominal cavity trauma	<b>1</b>
Organ of locomotion trauma	<b>1</b>
Guidelines for pediatric trauma	<b>4</b>
Special trauma: scalds, gunshot wounds	<b>2</b>
Mass incident - Triage	<b>3</b>
<b>TOTAL HOURS</b>	<b>15</b>



## **ACADEMIC CURRICULUM FOR EMERGENCY MEDICINE**

<b>Block No. 4</b>	
<b>Subject</b>	<b>Number of hours</b>
<b>Environmental emergencies</b>	
Electrical shock, lightning stroke	<b>1</b>
Animal emergencies	<b>1</b>
Altitude illness	<b>1</b>
Near-drowning	<b>1</b>
Diving trauma	<b>1</b>
Thermal trauma	<b>1</b>
<b>TOTAL HOURS</b>	<b>6</b>

# **ACADEMIC CURRICULUM FOR EMERGENCY MEDICINE**

<b>Block No. 5</b>	
<b>Subject</b>	<b>Number of hours</b>
<b>Diagnostic techniques and clinical procedures for emergency medicine</b>	
Modern techniques of diagnostic imaging	2
Modern techniques of lifesaving treatment	2
Medical documentation of lifesaving actions	1
<b>TOTAL HOURS</b>	<b>5</b>

<b>Block No. 6</b>	
<b>Subject</b>	<b>Number of hours</b>
<b>Disaster medicine</b>	
Organization and medical guidelines for mass incidents and disasters Regional disaster planning for medicine	3
Psychology of lifesaving Humanitarian medicine	3
Biochemical contamination Bioterrorism	3
<b>TOTAL HOURS</b>	<b>9</b>















# **WHAT IS HOSPITAL EMERGENCY DEPARTMENT ?**

**Organisational and functional unit within the  
structure of multiprofile hospital**

**created for**

**performing medical treatment in every health or  
life emergency**



# **EMERGENCY DEPARTMENT**

## **Structure and management**

**based on hospital units:**

- ✓ **department chairman**
- ✓ **head nurse**

## **Basic duties**

**emergency medical care**

## **Main partners**

- ✓ **hospital units**
- ✓ **hospital administration**
- ✓ **EMS**

# **HOSPITAL EMERGENCY DEPARTMENT INCREASES SAFETY OF:**

## **PATIENT**

**quick access to qualified  
emergency care facilities**

## **HOSPITAL**

**rational use of resources rational  
by law hospital responsibility**



## **EM TEACHING DEPARTMENT ACCREDITATION**

- **Full profile hospital emergency department in: structure, staffing and function**
- **At least 2 specialists full time employed**
- **Being part of full profile teaching hospital**





# **ACADEMIC DEPARTMENT OF EMERGENCY MEDICINE**

## **Structure and management**

**based on medical school and on hospital**

**(Chair or Department of Emergency Medicine) :**

**head of chair,**

**department chairman,**

**head nurse**

## **Basic duties**

**emergency medical care on referential level**

**education**

**research**

**system monitoring**

# **ACADEMIC DEPARTMENT OF EMERGENCY MEDICINE**

## **Education duties**

### **Academic curriculum for Emergency Medicine:**

**Medical students**

**Nurses**

**EM technicians**

### **Postgraduate education**

**Residents**

**Other disciplines specialists**

### **Health promotion**

**First aid ( lay public, volunteers, ...)**

**Qualified First Aiders**

**First Aid Instructors**

## **DUAL MISSION OF THE ACADEMIC DEPARTMENT OF EMERGENCY MEDICINE**

- **The best art and practice of emergency medicine**
- **Fulfilling expectations in education**
- **Successful practice for patient satisfaction**



# **ACADEMIC DEPARTMENT OF EMERGENCY MEDICINE**

## **CHALLENGES FOR EDUCATION**

- **High number of emergencies**
- **Flexible, problem orientated approach**
- **Reversible causes of emergencies immediately apparent to the students**
- **Wide spectrum of diagnoses**
- **Direct resource for training**

# **ACADEMIC DEPARTMENT OF EMERGENCY MEDICINE**

## **CHALLENGES FOR PATIENTS**

- **Referential level hospital**
- **Permanent supervision of consultants**
- **Higher number of personnel**
- **High quality of service**
- **Broader medical documentation**





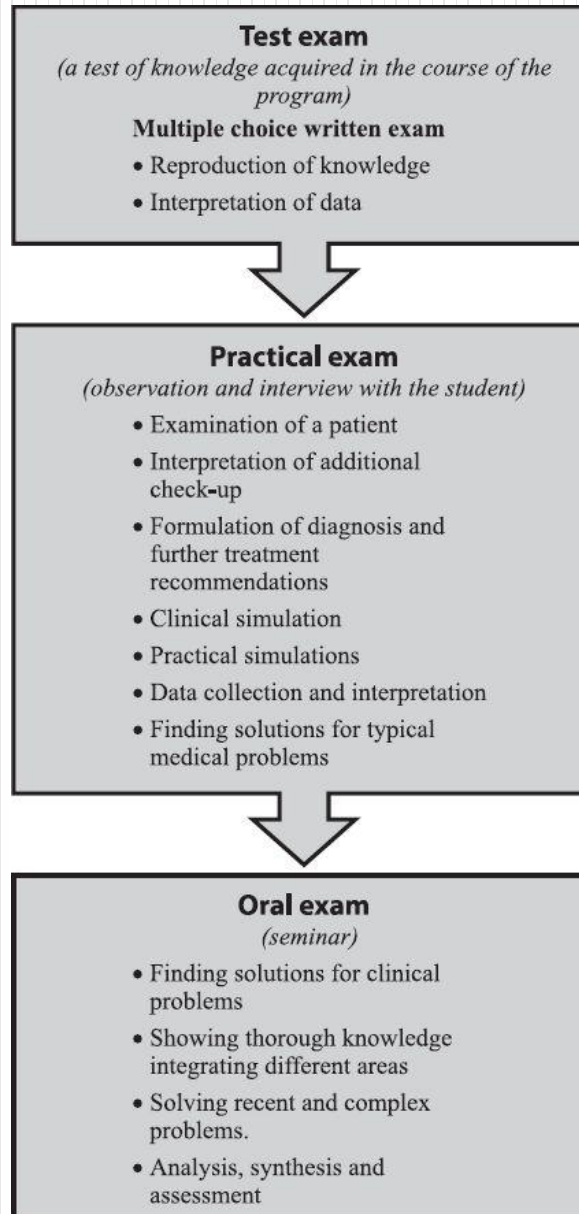








# OUTLINE OF EMERGENCY MEDICINE EXAM



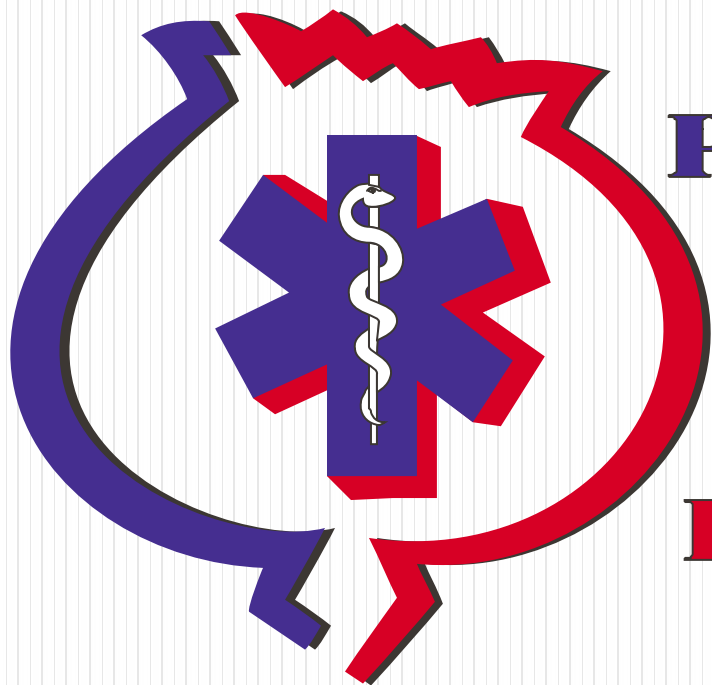
## EXAMPLE TEST PLAN

<div> <div>Areas</div> <div>Problems</div> </div>	Cardiopulmonary resuscitation	Internal emergencies	Trauma	Environmental emergencies	Diagnostic techniques and clinical procedures in emergency medicine	Disaster emergency	Total points
	Points						
Etioptogenesis							
Pathophysiology							
Diagnostics							
Electrocardiography							
Diagnostic imaging							
Clinical pharmacology							
Treatment							
Total points							



## **EMERGENCY MEDICINE CURRICULUM FOR MEDICAL STUDENTS**

<b>BLOCK</b>	<b>SUBJECT</b>	<b>HOURS</b>
I	Cardiopulmonary resuscitation	10
II	Internal emergencies	26
III	Trauma emergencies	16
IV	Envinromental emergencies	8
V	Diagnostic and clinical procedures in EM	8
VI	Disaster medicine	12
VII	Lecutres	20
	<b>TOTAL EDUCATIONAL HOURS</b>	<b>100</b>



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*<http://www.medycynaratunkowa.wroc.pl>*