



Univerza v Mariboru
University of Maribor

Medicinska fakulteta
Faculty of Medicine



OPIS PREDMETA / SUBJECT SPECIFICATION

Predmet:	KLINIČNA PATOFIZIOLOGIJA NUJNIH STANJ
Subject Title:	Clinical pathophysiology of emergencies

Študijski program Study programme	Študijska smer Study field	Letnik Year	Semester Semester
BIOMEDICINSKA TEHNOLOGIJA BIOMEDICAL TECHNOLOGY		2	3 ali 4

Univerzitetna koda predmeta / University subject code:

Predavanja Lectures	Seminar Seminar	Sem. vaje Tutorial	Lab. vaje Lab. work	Teren. vaje Field work	Samost. delo Individ. work	ECTS
15	20		10		105	5

Nosilec predmeta / Lecturer:

Doc. dr. Dušan MEKIŠ

Jeziki /

Languages:

Predavanja / Lecture:

Vaje / Tutorial:

Slovenščina, angleščina / Slovenian, English

Slovenščina, angleščina / Slovenian, English

Pogoji za vključitev v delo oz. za opravljanje študijskih obveznosti:

Kandidat mora imeti pred vpisom ustrezno znanje iz naravoslovnih ved z ustreznega področja na nivoju univerzitetnega študija.

Prerequisites:

Prior to entering the candidate for postgraduate program must have an appropriate knowledge and understanding of bioscience (biology, chemistry, physics, mathematics) on the university level.

Vsebina:

Predmet obravnava fiziologijo in pojasnjuje patofiziologijo nekaterih nujnih stanj, znamenj in simptomov z prikazom primernih kliničnih testov in oskrbo. Pričakovani simptomi in znamenja so predstavljena s specifičnim patofiziološkim procesom. Predmet je razdeljen v štiri dela:

1. osnovna načela patofizioloških procesov
2. patofiziologija srčno-žilnega sistema d patofiziologijo i n oskrbo poškodbe miokarda pri oživljanju in patofiziologija šoka
3. klinična patofiziologija akutnega respiratornega popuščanja in kapnografije
4. patofiziologija hude poškodbe možganov

Contents (Syllabus outline):

The subject reviews normal physiology and explains the pathophysiology underlying emergency disease, signs and symptoms, and selection of tests and treatments. Expected signs and symptoms are related to the specific pathophysiologic processes occurring. The subject is divided in four parts:

1. basic principles of pathophysiology
2. cardiovascular pathophysiology with pathophysiology and management of myocardial injury during cardiopulmonary resuscitation and pathophasiology opf shock
3. clinical pathophysiology of acute respiratory insufficiency and capnography
4. pathophysiology of severe brain injury

Temeljni študijski viri / Textbooks:

1. Groer M Advanced Pathophysiology :Applcation to Clinical Practice, Philadelphia: Lippincott Williams& Wilkins, 2001.
2. Huether SE and McCance KL. Understanding Pathophysiology, 2nd ed. St.Louis: Mosby-year Book, Inc.,2000.
3. Gravenstein JS, Jaffe MB and Paulus DA. Capnography - Clinical Aspects. Cambridge University Press, Cambridge, 2004.
4. Vincent JL (ed). 2004 Yearbook of Intensive Care and Emergency Medicine, Springer Verlag Berlin, 2004.
5. Vincent JL (ed.) 2005 Yearbook of Intensive Care and Emergency Medicine, Springer Verlag, Berlin 2005.

6. RJ Gazmuri, Ayoub IM, Kolarova JD, Radhakrishnan J, Wang S, Taglieri D. Pathophysiology nad management of myocardial injury during cardiopulmonary resuscitation. In: Grmec Š, Kupnik D. Akutna stanja - znamenja, simptomi, sindromi, diferencialna diagnoza in ukrepanje, Zbornik predavanj, Zbirka Acuta, Medicinska fakulteta Maribor, Katedra za družinsko medicino, 2005:37 - 45.
7. Najnovejši prispevki iz Circulation, Resuscitation, Shock, Chest, Intensive Medicine Care, Critical Care, Critical Care Medicine

Cilji:

Znanje osnovnih patofizioloških načel nujnih stanj in sodobnih informacij o novih možnostih oskrbe takšnih stanj. Klinična aplikacija algoritmov (načelo opazovanja in odločanja).

Objectives:

Knowledge of basic principal of pathophysiology of some emergencies and up-to-date information about new options for management of emergencies. Application of the philosophy of the algorithms (alternating observation and decision steps).

Predvideni študijski rezultati:

Intended learning outcomes:

Znanje in razumevanje:

Razumevanje in aplikacija algoritmov kardiopulmonalnega oživljanja. Razumevanje strategije minimaliziranja poškodbi po oživljanju povezanih z uporabo trenutno veljavnih tehnik in seznanjanje z novimi terapevtskimi pristopi za preprečevanje omenjenih poškodb. Znanje monitoringa kritično bolanega bolnika, posebej kapnografije in EKG-a. Prenesljive/ključne spretnosti in drugi atributi: Monitoring, tehnike proste venske poti, endotrahealna intubacija, kapnografija, očitavanje EKG-a, uporaba medikamentov v urgentnih situacijah(volumna resuscitacija, inotropi, vazoaktivna terapija) hitra sekvenčna intubacija, sinhronizirana kardioverzija in zunanja elektrostimulacija). Reševanje scenarije po načelu PBL (problem basic learning)

Knowledge and Understanding:

Understanding and application the algorithms in CPR. Understanding the strategies for minimizing post resuscitation injury associated with current resuscitation techniques and examine novel therapies aimed at minimizing ischemia and reperfusion injury. Knowledge of monitoring critically ill patients, especially capnography and ECG.

Transferable/Key Skills and other attributes:

Monitoring, intravenous access, endotracheal intubation, capnography, electrocardiography and cardiac monitoring, drugs in emergencies (volume resuscitations, inotropes, vasopressors), rapid sequence intubation, synchronised cardioversion, cardiac pacing. PBL scenarios.

Metode poučevanja in učenja:

Predavanja, vaje v Simulacijskem centru, samostojno projektno seminarsko delo izbranih poglavji, PBL, ogled in delo na instrumentih,

Learning and teaching methods:

Lectures, laboratory work in Centre of simulation, project seminar, PBL, observation and work with instrumentts

Delež (v %) /

Weight (in %)

Načini ocenjevanja:

Assessment:

Način (pisni izpit, ustno izpraševanje, naloge, projekt): projektna seminarska naloga z javno predstavitvijo in ustni izpit.

Type (examination, oral, coursework, project): Project seminar - coursework with public demonstration, oral examination

Materialni pogoji za izvedbo predmeta:

Material conditions for subject realization:

Obveznosti študentov:

Students' commitments:

(pisni, ustni izpit, naloge, projekti)

(written, oral examination, coursework, projects):

Seminarska projektna naloga, vaje in ustni izpit.

Coursework, work Centre of simulation, oral examination