UNIVERSITY OF NOVI SAD
FACULTY OF MEDICINE

Study program: Integrated Academic Studies in Dental Medicine

Course title: Pharmacology

Teacher: Aleksandar L. Rašković, Zdenko S. Tomić, Velibor M. Vasović, Isidora N. Samojlik, Olga J. Horvat, Saša N. Vukmirović, Boris T. Milijašević, Vesna M. Mijatović, Nebojša P. Stilinović

Course status: compulsory

ECTS Credits: 8

Condition: Microbiology with Parasitology and Immunology (Exam)

Course aim

To give students basic knowledge about the drug as a substance, its movement through the body, the ways, mechanisms and site of action, types of side effects, interactions and poisonings. Acquaint students with drug classes, representatives, indications and contraindications.

Expected outcome of the course

At the end of the teaching process, students should know why, how and when can be applied to a drug, its characteristics, movement through the body, place and mechanism of action and danger of its application. Student:must know how to correctly fill a prescription (Main, officinal, almost medicinal) and to explain; must know that the registers used drugs; must know to fulfill the registration form unwanted effects of the drug. At the end of the teaching process, students should know why, how and when to apply the drug, to know the characteristics of drugs, its circulation through the body, sites and mechanism of action and potential hazards of its application. Student should be able to independently write the prescription.

Course description

Theoretical education:

History of Pharmacology. The division of the discipline. The drug and poison. Drug administration. The dosage of drugs. Doses. Therapeutic index and therapeutic range of the drug.Moving the drug through the body. The passage of drugs through the biomembrane. Reabsorption and distribution of drugs. Excretion of drugs. Metabolism of drugs. Induction and inhibition of enzymes. Factors altering the drug metabolism. Pharmacokinetic models. Pharmacokinetic parameters. Modes of action. Action sites. Mechanisms of action of drugs. Receptors. G-protein. Interactions of drugs. Synergism and antagonism. Administration of drugs in special circumstances (children, elderly, pathological condition, pregnant women, breastfeeding). Pharmakogenetics. Adverse effects of drugs. Addiction. Toxicology. Poisons. Poisoning drugs. Transmitters and receptors in the nervous system. Vegetative nerve system. Drugs that act through receptors in the VNS. Histamine and antihistaminics. Drugs in the treatment of GIT disorders and diseases. Drugs in the treatment of disorders and diseases of the respiratory system. Drugs in the treatment of CVS disorders and diseases. Thrombolytics, antiaggregation drugs, anticoagulants. Hypolypemics. Treatment of anemia. Antimicrobial agents. Antimycotics, Antivirals, Antiparasitic drugs. Antiseptics and disinfectants. Treatment of diabetes. Drugs in the treatment of disorders and diseases of the endocrine system. D-vitamin, calcium, fluoride. Treatment of osteoporosis. General and local anesthesia. Strong analgesics. Nonsteroidal anti-inflammatory drugs. Drugs in the therapy of CNS-disorders (antiepileptic drugs, psychopharmaka) of importance in dentistry. Drugs in the therapy of degenerative CNS-disorders (antiparkinson drugs) of importance in dentistry. Sedation in Dentistry.

Antiseptics and disinfectants – practical application, concentration calculation, precautions during handling and application. Fluoride preparations – dosage and calculation. Elaborating the topics addressed during theoretical lectures and writing prescription. Filling up the drug adverse reaction reporting forms

Practical education:

Classification of drugs. Putting drugs on the market. Names of drugs. Pharmacopoeia. Prescription scheme. Magistral and generic formulas. Readymade drugs. Solid forms of drugs. Liquid forms of drugs. Semi-solid forms of drugs. Inhalation. Bandage material. Prescribing drugs according to pharmacotherapeutic group. Antiseptics and disinfectants – practical application, concentration calculation, precautions during handling and application. Fluoride preparations – dosage and calculation. Elaborating the topics addressed during theoretical lectures and writing prescription. Filling up the drug adverse reaction reporting forms

Literature

Compulsory

1. Rang HP, Dale MM, Ritter JM, Moore PK. Pharmacology. Churchill Livingstone, Edinburgh, New York, 2003.
2. Brenner GM, Stevens C. Pharmacology, 4th edition. Elsevier, 2012

Number of active classes	**Theoretical classes:** 75	**Practical classes:** 60

Teaching methods theoretical and practical

Student activity assessment (maximally 100 points)			
Pre-exam activities	**points**	**Final exam**	**points**
Lectures	5	Written*	40
Practices	15	Oral	40
Colloquium*	4x10	.....	
*if the students does not pass both colloquiums, he/she should take the exam in written form			