



MEDICAL UNIVERSITY
“PROF. DR. PARASKEV STOYANOV” - VARNA
FACULTY OF DENTAL MEDICINE



Approved:
DEAN:
/ Assoc. Prof. **Georgi Papanchev**, DMD, PhD/

EDUCATIONAL PROGRAMME
OF
„Dental physical therapy“ (general and special)

Specialty “DENTAL MEDICINE”

Educational-qualification degree “MASTER”

Professional qualification “DOCTOR IN DENTAL MEDICINE”

	Semester	Horarium weekly	Total horarium
Lectures	VIII	1	15
Exercises	VIII	1	15
Extracurricular activities			30
Total			30
Monitoring and evaluation forms	Current control		Exam – VIII semester
Credits (ECTS)			2

Lecturers: Assoc. Prof. Dr. Maya Doychinova, DMD, PhD

Dr. Detitsa Grozdeva, Dr. Genoveva Balcheva

ANNOTATION:

THE TRAINING COURSE IN DENTAL PHYSICAL THERAPY ALLOWS FOR GETTING THEORETICAL AND PRACTIAL SKILLS IN PHYSICAL MEDICINE, INCLUDING PRINCIPLES OF ACTION AND THERAPEUTIC EFFECTS OF PHYSICAL FACTORS, INDICATIONS AND CONTRAINDICATIONS FOR THEIR APPLICATION; DOSAGE; APPARATUSES AND METHODS IN DENTAL MEDICINE.

PLAN OF TOPICS OF LECTURES AND PRACTICAL CLASSES

Lectures VIII semester

№	Topic	Hours
1.	Introduction. Hystorical aspects and current guidelines. Parts of dental physical therapy. Principles of action of physical factors. Ultrasound therapy – physical characteristic of ultrasound. Techniques, appliances, methods and dosage. Biophysical and therapeutic effects of ultrasound; indications and contraindications. Phonophoresis.	2
2.	Electrotherapy. Low intensity currents – constant direct (galvanic) current; direct pulsed (diadynamic) current; low-frequenced variable currents. Techniques, appliances, methods and dosage. Indications and contraindications. Physical methods of diagnosis in dental medicine.	2

3.	Electrophoresis/iontophoresis – Principles, concentration and dosage of drug delivery by iontophoresis. Techniques, appliances, methods and dosage. High frequency currents – ultra high frequency ; shotwave/microwave currents. Techniques, appliances; methods and dosage. Biophysical and therapeutic effects. Indications and contraindications	2
4.	Phototherapy. Physical characteristic of light. Infrared and ultraviolet irradiation sources. Methods of application and dosage. Biological and therapeutic effects. Indications and contraindications. LASER therapy. Physical characteristic of LASER radiation. Apparatuses and appliances. Methods, dosage, therapeutic effect, indications and contraindications.	2
5.	Physical methods for treatment and prophylaxis of dental hard tissue diseases. Remineralisation and fluoridation by electro/iontophoresis. Electroanalgesia.	2
6.	Teeth whitening using physical factors. Physical methods for treatment of pulp and periodontal diseases.	2
7.	Physical methods for treatment of dental soft tissue diseases. Physical methods for treatment in surgery.	3
	Total	15

Practical classes VIII semester

Nº	Topic	Hours
1.	Dental physical therapy training course – purpose and tasks.	2

	Pulp vitality testing using electrical and thermal stimulation. Techniques and methods; interpretation of the values.	
2.	Electrotherapy. Low intensity currents – constant direct (galvanic) current; direct pulsed (diadynamic) currents; low-frequenced variable currents Electrophoresis. Techniques, appliances, methods and dosage. Indications and contraindications.	2
3.	High frequency currents – ultra highfrequency; shortwave/microwave currents. Techniques, appliances; methods and dosage. Biophysical and therapeutic effects. Indications and contraindications.	2
4.	Phototherapy. Physical characteristic of light. Infrared and ultraviolet radiation sources. Methods of application and dosage. LASER therapy. Physical characteristic of LASER radiation. Techniques appliances and methods.	2
5.	Ultrasound therapy – physical characteristic of ultrasound. Techniques, appliances, methods and dosage.	2
6.	Practice. Patient visits	3
8.	Practical examination	2
	Total	15

MONITORING AND EVALUATION FORMS:

Routine assessment, seminar participation, tests, preliminary oral examination, practical examination, oral examination.

QUESTIONNAIRES:

VERSION 1

1. FOR THE TREATMENT OF PAIN, CAUSED BY PERIAPICAL HAEMATOMA AND ROOT CANAL OVERFILLING, CAN BE USED:

- a) ultrashort waves
- b) microwaves
- c) red laser
- d) a + b + c

2. THE METHOD OF ELECTROELIMINATION IS BASED ON:

- a) electrolysis
- b) electro osmosis
- c) electrophoresis

3. CONTRAINDICATIONS FOR PHYSICAL THERAPY OF INFECTED ROOT CANALS ARE:

- a) impassable root canals
- b) root canal broken instrument
- c) periodontitis, resistant to medical treatment
- d) pulp perforation and uncompleted root maturation

4. INDICATIONS FOR ANODE GALVANIZATION ARE: /

- a) purulent periodontitis
- b) chronic periodontitis
- c) exacerbations of chronic periodontitis
- d) pulp perforation

5. THE EFFECT OF 10% KJ ELECTROPHORESIS IS DUE TO:

- a) J ions
- b) O ions
- c) H ions
- D) NONE

VERSION 2

1. AS A RESULT OF CATHODE ELECTROPHORESIS, ONE ACTION CAN NOT BE OBSERVED IN ROOT CANALS:

- a) bactericidal effect
- b) alcalinization of root canal system
- c) stimulation of periapical alkaline phosphatase
- d) tooth bleaching

2. ELECTROPHORESIS OF ANTIBIOTICS IS MOST EFFECTIVE WHEN IT IS USED:

- a) separately
- b) both with peroral use of antibiotics
- c) combined with preceeding microwave procedure and peroral intake of antibiotics

3. THE USE OF ULTRASHORT WAVES AND MICROWAVES IS APPROPRIATE FOR THE TREATMENT OF:

- a) acute periodontitis
- b) excarebatons of chronic periodontitis
- c) chronic periodontitis
- d) all listed

4. OPTIMAL DOSIS OF MICROWAVES USING CONTACT APPLICATOR IS:

- a) 5 W
- b) 10 W
- c) 15 W

5. ANTIINFLAMMATORY POWER OF RED LASER IS:

- a) 50-100 mW/ cm²
- b) 100- 200 mW/cm²
- c) 200- 250 mW/ cm²
- D) 250- 300 MW/C

Department's council protocol

Faculty's council protocol № 2/27.05.2026

PREPARED:.....

/Dr. Denitsa Grozdeva, DMD, PhD /

HEAD OF DEPARTMENT:.....

/Assoc. Prof. Dr. Tsvetelina Borisova, DMD, PhD /