

Subject	Physiotherapy in Cardiology and Pulmonary Medicine
Study programme	Tri-year studies for Diploma in Physiotherapy.
Code	SF-222
Year of studies	Second
Semester	Fourth
Total number of hours	220
Credits	12
Type of subject	Mandatory
Prerequisites	Enrollment in second study year.
Performs	Department of Internal Medicine
Head teacher	Prof. Dr. Mitko Kaev, Prof Dr. Biserka Kaeva
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Key words	Physiotherapy, professional subjects, cardiology, pulmonology
Teaching objective	To attain basic knowledge of the multidisciplinary approach to the patients with cardiac and pulmonary diseases to improve the physical, psychological and social functions and to decrease the morbidity and/or mortality from the unwanted adverse events.
	Theory (40hours)

Excerpt: Cardiology(20 hours)

Pathophysiology of the heart diseases.

Physiology of the stress and it's effect on the cardiocirculatory system.

EKG

Cardiac rehabilitation-definition, history, goals.

Heart diseases indicated for rehabilitation.

Components of cardiac rehabilitation:

Patient evaluation;

Risk stratification.

Indication and contraindications.

Types of stress-tests and aerobic exercises.

Interpretation of the results.

Follow-up in the rehabilitation programme.

Patient education about the risk factors and avoidance.

Individual rehabilitation plan.

Evaluation of the rehabilitation programme.

Phases in the cardiac rehabilitation (inpatient, programmed-organized, maintenance phase)

Cardiac rehabilitation: risks, safety and costs.

Rehabilitation specifics in particular cardiocirculatory conditions (heart failure, heart transplant, peripheral vascular disease).

Cardiac rehabilitation in patients with comorbidities (Diabetes Mellitus, renal failure, COPD, spinal injury).

Excerpt cont'd

Pulmonology (20 hours):

Pathophysiological processes in the pulmonary diseases.

Pulmonary rehabilitation-definition, goals.

Criteria for the pulmonary rehabilitation.

Components of the pulmonary rehabilitation:

Evaluation of the symptoms and the lung capacity of the patient.

Indications and contraindications.

Passive and active methods to improve the breathing.

Physical strain-training: types of tests and aerobic exercise.

Rehabilitation aides.

Interpretation of the results.

Follow up in the rehabilitation.

Patient education.

Individual plan.

Evaluation of the rehabilitation plan.

Pulmonary rehabilitation: Risk, safety, cost.

Pulmonary rehabilitation in specific lung diseases.

Pulmonary rehabilitation in patients with comorbidities (Diabetes

Mellitus

renal failure, AIDS, spinal injury).

Seminars (20hours)

EKG

PFT

Assisted ventilation (performed in the intensive care unit)

Draft an individualized rehabilitation plan for the particular heart and respiratory diseases.

Practice (160 hours):

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This part is mandatory. It is performed in designated rehabilitation centers under the supervision of the

professor and a physiotherapist responsible for the department. The student will participate full time in all

activities in the field of the physical therapy, and will record them in the student diary.

Organization

Theory: 40 hours

Seminars: 20 hours.

Practice: 160 hours.

Learning methods

Interactive lectures, seminars, practice.

Anticipated and study

Knowledge and understanding of the indications, contraindications, goals components of the cardiorespiratory rehabilitation programmes.

results Key skills: The student will be able to apply in practice the attained theoretical knowledge.

The student has the responsibility to complete all the activities planned for the studies.

Point system for the student activities:

Type of activity	Points	
	Cardiology	Pulmonology
Theory	4-8	4-8
Seminars	2.5-5	2.5-5
Practice	8-16	8-16
Continuous eval.-2	8-11	8-11
Practical examination	7.5-10	7.5-10
Total	60-100	

Attendance of the theoretical classes:

51%-60%----- 8 points
61%-70%-----10 points
71%-80%-----12 points
81%-90%-----14 points
91%-100%----- 16 points

Seminar attendance:

51%-60%----- 1 point
61%-70%----- 2 points
71%-80%----- 3 points
81%-90%----- 4 points
91%-100%-----5 points

Participation in the seminars: 4-10 points.

Success rate in the practical(hands on) work:

51%-60%----- 16 points
61%-70%----- 20 points
71%-80%----- 24 points
81%-90%----- 28 points
91%-100%-----32 points

The student will be allowed to take the final exam after completion of the classes. The theoretical exam is in a written form. The practical exam consists of evaluation of the hands on skills and grading of the student diary. The final grade is based upon the total number of points of all the segments. The student should achieve minimum points (60%) from the practical and continued eval. or will have to return for a complete final exam.

Complete final examination is written and/or "hands on". It consists of the continuous knowledge eval and/or practical part of the exam the student did not attain minimum points.

Teaching materials

Basic:

Authorized lectures from the respective departments.