

COURSE OUTLINE

1. GENERAL

SCHOOL	PHYSICAL EDUCATION & SPORT SCIENCE		
DEPARTMENT	PHYSICAL EDUCATION & SPORT SCIENCE		
LEVEL OF STUDIES	7		
COURSE CODE	K102	SEMESTER	1 ^ο
COURSE TITLE	NEUROLOGICAL DISEASES AND EXERCISE		
TEACHING ACTIVITIES <i>If the ECTS Credits are distributed in distinct parts of the course e.g. lectures, labs etc. If the ECTS Credits are awarded to the whole course, then please indicate the teaching hours per week and the corresponding ECTS Credits.</i>		TEACHING HOURS PER WEEK	ECTS CREDITS
		3	7,5
<i>Please, add lines if necessary. Teaching methods and organization of the course are described in section 4.</i>			
COURSE TYPE <i>Background, General Knowledge, Scientific Area, Skill Development</i>	Scientific area		
PREREQUISITES:			
TEACHING & EXAMINATION LANGUAGE:	Greek		
COURSE OFFERED TO ERASMUS STUDENTS:	NO		
COURSE URL:	https://clinextech.phyed.duth.gr/courses/λ102/		

2. LEARNING OUTCOMES

Learning Outcomes <i>Please describe the learning outcomes of the course: Knowledge, skills and abilities acquired after the successful completion of the course.</i>																		
<p>After completing the course, students will be able to:</p> <ul style="list-style-type: none"> • know and understand the pathophysiology and symptomatology of the main neurological diseases. • analyze and evaluate, through laboratory exercises, the motor disorders and the functional capacity of people with neurological diseases. • know and understand the mechanisms by which exercise improves the fitness, movement and quality of life of people with these diseases. • know and understand the role of exercise in the prevention of neurological disorders. • design and implement exercise programs for people with neurological diseases. 																		
<p>General Skills <i>Name the desirable general skills upon successful completion of the module</i></p> <table border="0"> <tr> <td><i>Search, analysis and synthesis of data and information,</i></td> <td><i>Project design and management</i></td> </tr> <tr> <td><i>ICT Use</i></td> <td><i>Equity and Inclusion</i></td> </tr> <tr> <td><i>Adaptation to new situations</i></td> <td><i>Respect for the natural environment</i></td> </tr> <tr> <td><i>Decision making</i></td> <td><i>Sustainability</i></td> </tr> <tr> <td><i>Autonomous work</i></td> <td><i>Demonstration of social, professional and moral responsibility and sensitivity to gender issues</i></td> </tr> <tr> <td><i>Teamwork</i></td> <td><i>Critical thinking</i></td> </tr> <tr> <td><i>Working in an international environment</i></td> <td><i>Promoting free, creative and inductive reasoning</i></td> </tr> <tr> <td><i>Working in an interdisciplinary environment</i></td> <td></td> </tr> <tr> <td><i>Production of new research ideas</i></td> <td></td> </tr> </table>	<i>Search, analysis and synthesis of data and information,</i>	<i>Project design and management</i>	<i>ICT Use</i>	<i>Equity and Inclusion</i>	<i>Adaptation to new situations</i>	<i>Respect for the natural environment</i>	<i>Decision making</i>	<i>Sustainability</i>	<i>Autonomous work</i>	<i>Demonstration of social, professional and moral responsibility and sensitivity to gender issues</i>	<i>Teamwork</i>	<i>Critical thinking</i>	<i>Working in an international environment</i>	<i>Promoting free, creative and inductive reasoning</i>	<i>Working in an interdisciplinary environment</i>		<i>Production of new research ideas</i>	
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<p>The general skills that are supported involve:</p> <ul style="list-style-type: none"> - Search, analysis and synthesis of data and information, using appropriate ICT - Adaptation to new situations 																		

- Decision making
- Autonomous work
- Teamwork
- Working in an interdisciplinary environment
- Production of new research ideas
- Project design and management
- Critical thinking
- Promoting free, creative and inductive reasoning

3. COURSE CONTENT

1. Introduction to motor control
2. Philosophy of exercise in neurological diseases
3. Extrapyrmidal diseases – diseases of the peripheral nervous system
4. Exercise and Parkinson’s disease
5. Dementia
6. Exercise and dementia
7. Stroke
8. Exercise and stroke
9. Gait rehabilitation in children with cerebral palsy
10. Demyelinating diseases of the central nervous system
11. Exercise and multiple sclerosis
12. Clinical evaluation of motor disorders
13. Laboratory gait analysis

4. LEARNING & TEACHING METHODS - EVALUATION

<p>TEACHING METHOD <i>Face to face, Distance learning, etc.</i></p>	<ul style="list-style-type: none"> - Face to face - Theoretical lectures - Laboratory courses - Distance learning 														
<p>USE OF INFORMATION & COMMUNICATIONS TECHNOLOGY (ICT) <i>Use of ICT in Teaching, in Laboratory Education, in Communication with students</i></p>	Utilization of new technologies in teaching, laboratory education and communication with students														
<p>TEACHING ORGANIZATION <i>The ways and methods of teaching are described in detail.</i> <i>Lectures, Seminars, Laboratory Exercise, Field Exercise, Bibliographic research & analysis, Tutoring, Internship (Placement), Clinical Exercise, Art Workshop, Interactive learning, Study visits, Study / creation, project, creation, project. Etc.</i> <i>The supervised and unsupervised workload per activity is indicated here, so that total workload per semester complies to ECTS standards.</i></p>	<table border="1"> <thead> <tr> <th style="background-color: #d9ead3;"><i>Activity</i></th> <th style="background-color: #d9ead3;"><i>Workload/semester</i></th> </tr> </thead> <tbody> <tr> <td>Lectures</td> <td>39</td> </tr> <tr> <td>Laboratory exercise</td> <td>15</td> </tr> <tr> <td>Project</td> <td>72</td> </tr> <tr> <td>Bibliographic research & analysis</td> <td>58,5</td> </tr> <tr> <td>Examinations</td> <td>3</td> </tr> <tr> <td>Total</td> <td>187,5</td> </tr> </tbody> </table>	<i>Activity</i>	<i>Workload/semester</i>	Lectures	39	Laboratory exercise	15	Project	72	Bibliographic research & analysis	58,5	Examinations	3	Total	187,5
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<p>STUDENT EVALUATION <i>Description of the evaluation process</i> <i>Assessment Language, Assessment Methods, Formative or Concluding, Multiple Choice Test, Short Answer Questions, Essay Development Questions, Problem Solving, Written Assignment, Essay / Report, Oral Exam,</i></p>	<ol style="list-style-type: none"> 1. Interim evaluations 2. Individual project 3. Written exams including: multiple choice tests, short answer questions and development questions designed to solve problems 														

Presentation in audience, Laboratory Report, Clinical examination of a patient, Artistic interpretation, Other/Others

Please indicate all relevant information about the course assessment and how students are informed

The assessment language is Greek

5. SUGGESTED BIBLIOGRAPHY

1. Nichols Larsen, D.S. et al. (2015). *Neurologic Rehabilitation: Neuroscience and Neuroplasticity in Physical Therapy Practice*. McGraw-Hill Education.
2. ACSM (2013). *ACSM's Guidelines for Exercise Testing and Prescription*, Lippincott Williams & Wilkins, ISBN/ISSN: 9781609139551.
3. Lecture files of the course Neurological Diseases and Exercise (2019) – Postgraduate Program “Clinical Exercise & Applications of Technology in Health”

ANNEX OF THE COURSE OUTLINE

Alternative ways of examining a course in emergency situations

Contact details:	By email: nagelous@phyed.duth.gr
Supervisors: (1)	Yes
Evaluation methods: (2)	Written or oral examination with distance learning methods, via eClass. Identification and monitoring of examinees through Microsoft Teams
Implementation Instructions: (3)	<p>The examination in the course will be done in randomly created groups of users (examinees). The compositions of the user groups will be announced in time.</p> <p>The total examination duration of each group will be 1 hour. In the first twenty minutes of each examination period, the examinees will be identified through the MS Teams app. For this purpose, there must be a camera, microphone and headphones connected to their terminal device (PC or smartphone). The relevant link will be sent via eClass, exclusively to the institutional accounts of those who have registered for the course and have accepted the terms of distance examination. For identification, students will display their student ID on camera when requested.</p> <p>The main examination will be carried out through the "Exercises" application of eClass. In particular, at the beginning of the second twenty minutes of each examination period, an exercise entitled "Examination K102 - Group X (where X = 1 to n)" will be activated in the eClass, which will include 20 questions. The time limit for answering the 20 questions will be 30 minutes. During this period, all questions should be answered and finalized. Each of the questions will be graded with 0.5 points.</p> <p>Students should log in to the eClass platform through their institutional account.</p> <p>Also during the exam the camera and microphone of the examinees have to be continuously activated and the MS Teams application should be open.</p>