COURSE OUTLINE EXERCISE IN CLINICAL POPULATIONS

1. GENERAL

| SCHOOL | PHYSICAL EDUCATION, SPORT SCIENCES & OCUUPATIONAL THERAPY | | | | |
|---|--|-------------------------------|---|--------------|---|
| DEPARTMENT | PHYSICAL EDUCATION AND SPORT SCIENCE | | | | |
| LEVEL OF STUDIES | ISCED level 6 – Bachelor's or equivalent level | | | | |
| COURSE CODE | C143 | C143 SEMESTER 4 th | | | |
| COURSE TITLE | EXERCISE IN CLINICAL POPULATIONS | | | | |
| TEACHING ACTIVITIES 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. | | TEACHING HOURS PEF WEEK | 2 | ECTS CREDITS | |
| | | | 3 | | 6 |
| Please, add lines if necessary. Teaching methods and organization of | | | | | |
| the course are described in section 4. | DACKCDOUN | | | | |
| Background, General Knowledge, Scientific Area, Skill Development | BACKGROUNI | U | | | |
| PREREQUISITES: | No | | | | |
| TEACHING & EXAMINATION | Greek | | | | |
| LANGUAGE: | | | | | |
| COURSE OFFERED TO ERASMUS STUDENTS: | No | | | | |
| COURSE URL: | | | | | |

2. LEARNING OUTCOMES

Learning Outcomes

Please describe the learning outcomes of the course: Knowledge, skills and abilities acquired after the successful completion of the course.

Upon the completion of this course, students will be able to:

- Recognize, as future coaches, the early symptoms exhibited by both athletes and the general population with musculoskeletal problems. Furthermore, they will be able to design and organize an intervention rehabilitation program for these specific population groups
- Identify and understand the symptoms presented by patients with musculoskeletal issues, such as spinal deviations and osteoarthritis
- **Organize appropriate intervention rehabilitation programs** tailored to the symptoms of patients suffering from musculoskeletal issues, including spinal deviations and osteoarthritis
- **Supervise and provide corrections** to ensure the proper execution of exercises by individuals with musculoskeletal conditions, such as spinal deviations and osteoarthritis
- Understand the basic principles of the pathophysiology of the cardiovascular, respiratory and metabolic systems
- Know and understand the acute and long-term physiological adaptations that exercise occurs in the most important chronic cardiometabolic, noncommunicable diseases (coronary artery disease, hyperlipidemia, obesity, diabetes mellitus, hypertension, metabolic syndrome, cancer)

- Understand the basic mechanisms through which exercise improves functional capacity and health parameters of patients with chronic cardiometabolic non-communicable diseases
- Design and implement specialized exercise programs in individuals with cardiometabolic and neurological diseases
- Know the exercise guidelines in clinical populations with musculoskeletal, cardiometabolic and neurological diseases

General Skills

Name the desirable general skills upon successful completion of the module

| Search, analysis and synthesis of data and information, | Project design and management |
|---|--|
| ICT Use | Equity and Inclusion |
| Adaptation to new situations | Respect for the natural environment |
| Decision making | Sustainability |
| Autonomous work | Demonstration of social, professional and moral responsibility |
| Teamwork | and sensitivity to gender issues |
| Working in an international environment | Critical thinking |
| Working in an interdisciplinary environment | Promoting free, creative and inductive reasoning |
| Production of new research ideas | |

- Search, analysis and synthesis of data and information, ICT Use
- Adaptation to new situations
- Decision making
- Autonomous work
- Teamwork
- Working in an interdisciplinary environment
- Project design and management
- Respect for diversity and multiculturalism
- Demonstration of social, professional and ethical responsibility and sensitivity to gender issues
- Exercise of criticism and self-criticism
- Promotion of free, creative and inductive thinking

3. COURSE CONTENT

- 1. **Spinal Deviations: Scoliosis** Physiology of the spine, pathophysiology of scoliosis, evaluation, and exercise programs for individuals with scoliosis.
- 2. **Spinal Deviations: Lordosis** Pathophysiology of lordosis, flat back syndrome, pathophysiology, and exercise program design.
- 3. Spinal Deviations: Kyphosis Pathophysiology of kyphosis.
- 4. **Spinal Deviations** Evaluation and exercise capacity.
- 5. **Osteoarthritis** Pathophysiology, physical examination, symptoms, clinical effects, role of weight, and prevention.
- Osteoarthritis and Exercise Impact of the severity of the condition (arthroplasty) on exercise capacity, recommendations for exercise program planning and evaluation.
- 7. Exercise and Coronary Heart Disease
- 8. Exercise and Obesity
- 9. Exercise and Diabetes Mellitus
- 10. Exercise and Hypertension
- 11. Exercise and Metabolic Syndrome

- 12. Exercise and Cancer
- 13. Exercise and Neurological Diseases

| 4. LEARNING & TEACHING METH | IODS - EVALUATION | |
|--|--|-------------------|
| TEACHING METHOD | Face to face Lectures as well as distance learning | |
| Face to face, Distance learning, etc. | | |
| | Use of ICT in Teaching | |
| | | |
| (ICT) | | |
| Education. in Communication with students | | |
| TEACHING ORGANIZATION | Activity | Workload/semester |
| The ways and methods of teaching are | Lectures | 39 |
| Lectures, Seminars, Laboratory Exercise, Field | Assignments | 40 |
| Exercise, Bibliographic research & analysis, | Mid-term written | 10 |
| Tutoring, Internship (Placement), Clinical Exercise, Art Workshop, Interactive learning | assignments | 18 |
| Study visits, Study / creation, project, creation, | Literature study and | |
| project. Etc. | analysis | 50 |
| The supervised and unsupervised workload per | Exams | 3 |
| activity is indicated here, so that total | Tatal | 150 |
| workload per semester complies to ECTS | lotai | 150 |
| standards. | | |
| STUDENT EVALUATION | Final written examination | (60%) |
| Description of the evaluation process | Mid-term written assignm | ients (40%) |
| Assessment Language, Assessment Methods, | | |
| Formative or Concluding, Multiple Choice Test, | | |
| Short Answer Questions, Essay Development | | |
| Assignment, Essay / Report, Oral Exam, | | |
| 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 | | |
| | | |

5. SUGGESTED BIBLIOGRAPHY

1. Kennedy-Armbruster C. & Yoke M. (2018). Methods of Group Exercise Instructions, KONSTANTARAS Publications, Athens. 2. Theodorakou K. (2010). Gymnastics: A multifaceted approach, TELETHRION Publications, Athens.

ANNEX OF THE COURSE OUTLINE

Alternative ways of examining a course in emergency situations

| Teacher (full name): | Paraskevi Malliou, Professor / Helen Douda, Professor / Nikolaos Agelousis, Professor |
|----------------------|--|
| Contact details: | pmalliou@phyed.duth.gr / edouda@phyed.duth.gr / nagelous@phyed.duth.gr |

| Evaluation methods:Written examination with distance learning methodsImplementation Instructions:The examination in the course will be carried out in subgroups of users in the e- class, depending on the number of participants in the course, on the day according to the examination program announced by the Secretariat. The exam will be conducted through Teams. The link will be sent to students via e-class exclusively to the institutional accounts of those who have registered for the course and have accepted the terms of distance methods. Students will have to log in to the examination room through their institutional account, otherwise they will not be able to participate. They will also take part in the examination with a camera, which will be on during the examination. Before the start of the exam, students will show their identity to the camera, so that they can be identified. Each student should answer multiple choice questions, free text development, critical thinking. Each of the questions is graded from 0.2 to 2.0 points depending on the question category. | Supervisors: | NO |
|---|---------------------------------|---|
| Implementation Instructions: The examination in the course will be carried out in subgroups of users in the e- class, depending on the number of participants in the course, on the day according to the examination program announced by the Secretariat. The exam will be conducted through Teams. The link will be sent to students via e-class exclusively to the institutional accounts of those who have registered for the course and have accepted the terms of distance methods. Students will have to log in to the examination room through their institutional account, otherwise they will not be able to participate. They will also take part in the examination with a camera, which will be on during the examination. Before the start of the exam, students will show their identity to the camera, so that they can be identified. Each student should answer multiple choice questions, free text development, critical thinking. Each of the questions is graded from 0.2 to 2.0 points depending on the question category. | Evaluation methods: | Written examination with distance learning methods |
| | Implementation Instructions: | The examination in the course will be carried out in subgroups of users in the e- class, depending on the number of participants in the course, on the day according to the examination program announced by the Secretariat. The exam will be conducted through Teams. The link will be sent to students via e-class exclusively to the institutional accounts of those who have registered for the course and have accepted the terms of distance methods. Students will have to log in to the examination room through their institutional account, otherwise they will not be able to participate. They will also take part in the examination with a camera, which will be on during the examination. Before the start of the exam, students will show their identity to the camera, so that they can be identified. Each student should answer multiple choice questions, free text development, critical thinking. Each of the questions is graded from 0.2 to 2.0 points depending on the question category. |