Course Description Form

Course Description

This course description provides a concise summary of the main characteristics of the course and the learning outcomes expected of students, demonstrating whether maximum benefit has been gained from the learning opportunities available. It must be linked to the programmed description.

1. Educational institution	College of Physical Education and Sports Sciences
2. Scientific Department / Center	Sport Sciences Branch
3. Course Name/Code	Physiology of athletic training Stage 3 **SESS25G3051 / SESS25F3051**
4. Available attendance forms	theoretical
5. Chapter/Year	2024- 2025
6. Number of study hours (total)	2 hours per week
7. Date this description was prepared	2024 - 2025

8. Course objectives:

- Students learn the basic principles of physiology and the physiology of sports training.
- Knowing the concepts of theoretical sports training physiology.
- The possibility of teaching students the required theoretical lessons after their graduation from the college. This is the main goal of the college to graduate physical education teachers, as it will teach students various teaching skills.
- Developing and upgrading administrative, teaching and psychological skills and qualities that enhance the ability to focus, think and observe.
- Employing the science of training physiology in all sports events to enhance the training and teaching process to achieve the technique with the least possible effort according to the physiological variables of the skill.

9. Course outcomes, teaching, learning and assessment methods:

A- Cognitive objectives

A1- At the end of the course, students should be able to identify the functional systems in the human body.

A2- At the end of the course, students should be able to know the basic functions of the body's systems.

A3- At the end of the course, students should be able to identify the changes that occur to the body's systems during physical effort and how to employ them to serve the training process.

A4- At the end of the course, students will be able to draw a diagram of the concepts of the subject of sports training physiology.

B - Course specific skill objectives

1 - At the end of the course, students should be able to perform the basic skills of the subject of Physiology of Sports Training.

2 - At the end of the course, students should be able to understand the levels of difficulty of educational skills.

3 - At the end of the course, students should be able to visualize the technical stages of performing teaching skills.

Teaching methods	Learning methods
1- Lecture method	1- Partial method
2- Advanced Lecture Method	2- The total method
3- Blended learning method	3- Trial and error method
4- E-learning method	4- Learning method for mastery

Evaluation methods:

1- Individual assessment
2- Group evaluation
3- Self-assessment
4- Project evaluation

C- Emotional and value-based goals:

1- The curriculum should develop the spirit of perseverance among students.
2- The curriculum should develop a spirit of cooperation among students.
3- The curriculum should develop national values among students.
4- The curriculum should develop moral values among students.

D - General and transferable skills (other skills related to employability and personal development):
1- The curriculum should develop the students' distinctive personal characteristics. 2- The curriculum should develop students' leadership skills. 3- The curriculum should develop students' entrepreneurial skills. 4- The curriculum should develop functional skills related to teaching.
Teaching and learning methods:
1- Guidance programs 2-Academic workshops 3- Specialized courses
Evaluation methods:
1- Value standards 2- Ethical standards 3- Behavioral standards

10. Course structure:

The week	Hours	Required learning outcomes	Unit name/topic	Teaching method	Evaluation method
1	2 hours	Physiology, its divisions, and the organic organization of the human body	Physiology and cell physiology	The lecture	Group evaluation
2	2 hours	The importance of studying physiology in the sports field		The lecture	Group evaluation
3	2 hours	The cell and its components		The lecture	Group evaluation

4	2 hours	Energy, its definition, types, transformations, units of measurement, and the biological cycle of energy	Energy	The lecture	Group evaluation
5	2 hours	Energy production systems, their features and practical applications in the sports field	Energy	Advanced Lecture	Group evaluation
6	2 hours	Interaction of energy systems, energy balance, and basal metabolic rate	Energy	Advanced Lecture	Group evaluation
7	2 hours	**First exam of the first semester**			
8	2 hours	The nervous system, its components and functions	Nervous system	Advanced Lecture	Group evaluation
9	2 hours	Nerve cell and parts of the nervous system	Nervous system	Advanced Lecture	Group evaluation
10	2 hours	Reflex arc, autonomic nervous system and its functions	Nervous system	Blended learning	Group evaluation
11	2 hours	Muscular system, types of muscles in the body, and muscle cell proteins	musculature	Advanced Lecture	Group evaluation
12	2 hours	Types of muscle fibers and the mechanism of muscle contraction	musculature	Advanced Lecture	Group evaluation
13	2 hours	Fatigue, its causes and the difference between stress, exhaustion and fatigue + motor unit and neuromuscular connection	musculature	Blended learning	Group evaluation
14	2 hours	Functional changes associated with strength and endurance training in skeletal muscle	musculature	Blended learning	Individual assessment
15	**2 hours**	**Second exam for the first semester / practical exam for the first semester of the kinetic chains**			
Mid-year holiday					
16	2 hours	Respiratory system, its components and breathing mechanism	Respiratory system	The lecture	
17	2 hours	Lung volumes, capacities and partial pressures of gases	Respiratory system	Advanced Lecture	Group evaluation
18	2 hours	Gas exchange and regulation of respiration	Respiratory system	Advanced Lecture	Group evaluation
19	2 hours	Physiological changes in the respiratory system resulting from exercise training	Respiratory system	Advanced Lecture	Group evaluation

20	2 hours	Changes in pulmonary ventilation before, during and after physical exertion + ventilation of the pulmonary alveoli	Respiratory system	Advanced Lecture	Group evaluation
21	2 hours	Body fluids + Effect of physical exertion on body fluids	Body fluids	Advanced Lecture	Group evaluation
22	2 hours	Blood components and functions	Body fluids	The lecture	Group evaluation
23	2 hours	Mechanism of regulation of red blood cell formation and life span + platelets	Body fluids	Blended learning	Group evaluation
24	2 hours	White blood cells, their types, functions, and life span + the effect of training on red and white blood cells	Body fluids	Blended learning	Group evaluation
25	2 hours	**First exam of the second semester**			
26	2 hours	Acid-base balance and regulation mechanism	acid-base balance	Blended learning	Group evaluation
27	2 hours	Cardiovascular system (heart and blood vessels)	Cardiovascular system	Blended learning	Group evaluation
28	2 hours	Cardiac output, its components, and the effect of physical effort on it + blood pressure and factors affecting it	Cardiovascular system	Blended learning	Group evaluation
29	2 hours	Endocrine glands, hormones and hormone function during physical exertion	Endocrine glands and hormones	Blended learning	Group evaluation
30	2 hours	**Second exam for the second semester**			

11. Infrastructure:	
1) Required textbooks.	Sports training physiology books available in Arabic.
2) Main References (Sources)	A book on the physiology of sports training prepared by Assistant Professor Dr. Nashwan Ibrahim Abdullah.
3) Recommended books and references (scientific journals, reports, etc.)	Some foreign books related to the physiology of exercise or training The athlete.
4) Electronic references, websites	

12. Curriculum Development Plan
- Periodic review of the study sites. - Diversifying the methods used in the teaching process.

Sports Training Physiology Teachers
Third Stage / Morning and Evening Study

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Assistant Professor Dr. Omar Yousef Khalil

Assistant Professor Dr. Mazen Sami Hassan

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