



## Module (Course Syllabus) Catalogue

2023-2024

|                          |                           |                          |                          |
|--------------------------|---------------------------|--------------------------|--------------------------|
| College/ Institute       | Health Technical College  |                          |                          |
| Department               | Physiotherapy             |                          |                          |
| Module Name              | Human Physiology          |                          |                          |
| Module Code              | INS102                    |                          |                          |
| Semester                 | 2                         |                          |                          |
| Credits                  | 6                         |                          |                          |
| Module type              | Assist.                   | <input type="checkbox"/> | <input type="checkbox"/> |
| Weekly hours             | 150h                      |                          |                          |
| Weekly hours (Theory)    | ( 4 )hr Class             | ( 4 )hr Workload         |                          |
| Weekly hours (Practical) | ( 2 ) hr. Class           | ( 2 )hr. Workload        |                          |
| Lecturer (Theory)        | Sawsan aziz abdullah      |                          |                          |
| E-Mail & Mobile NO.      | sawsan.abdulla@epu.edu.iq |                          |                          |
| Lecturer (Practical)     | Sawsan aziz abdullah      |                          |                          |
| E-Mail & Mobile NO.      | sawsan.abdulla@epu.edu.iq |                          |                          |

### Course Book

|                    |  |
|--------------------|--|
| Course Description | <p>At the end of the course, the student should be able to:</p> <ul style="list-style-type: none"> <li>-Identify essential basics of physiology.</li> <li>- Identify different system of human body.</li> <li>-Recognize the function of different systems of the body including the neuromuscular and the autonomic nervous system.</li> <li>-Identify physiology of human body vascular and respiratory systems.</li> <li>- Recognize the function of different systems of the body including the vascular and respiratory systems.</li> <li>-Demonstrate the function of endocrine glands &amp; abnormalities resulting from disturbance in secretion.</li> <li>-Define physiology of exercise and metabolic changes</li> </ul> |
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|                      | <p>during exercise.</p> <ul style="list-style-type: none"> <li>-Identify Physiological terms &amp; basis of renal &amp; GIT system.</li> </ul>  |
|                      | <p>At the end of the course, the student should be able to:</p> <ul style="list-style-type: none"> <li>-Recognize fundamental concepts and definitions human physiology that can be applied to practice.</li> <li>- Identify human physiological principles related to the neuromuscular system &amp; autonomic nervous system, which underpin physical therapy.</li> <li>-Understand the changes that result from physical therapy including physiological changes in neuromuscular system &amp; autonomic nervous system (ANS).</li> <li>-Recognize linked information from human physiology of neuromuscular system &amp; autonomic nervous system (ANS) and determine its impact on physical therapy practice.</li> <li>- Recognize fundamental concepts and definitions of human physiology vascular and respiratory systems that can be applied to practice.</li> <li>-Understand the changes that result from physical therapy including physiological changes in vascular and respiratory systems.</li> <li>-Understand physiology emphasizing the dynamic relationships of human structures and function.</li> </ul> |
| Student's obligation | <ol style="list-style-type: none"> <li>1- All student should be prepared in all times of hours in the classroom</li> <li>2- All days, we had a quiz about the before subject in the classroom.</li> <li>3- Having a seminar.</li> </ol> <p>Student must have attended to all required core course during</p>  |

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|                                 | academic year. They should take all quizzes and complete both main exams, assignment of weekly homework. Practically, a weekly experiment must be conducted, result and question must be discussed in groups, and submit a weekly report about their trail.  |                  |
| Required Learning Materials     | Speaker, laptop, net, data show, Text Book, White board.   |                  |
| Assessment scheme               | 16% Mid Term (Theory and practical)<br>4% Quiz<br>40% Assignment (report, paper, homework, seminar...)<br>25% final practical<br>15% final theory  |                  |
| Specific learning outcome:<br>α | <p>1-Apply the physiological principles in evaluation of musculoskeletal and neuromuscular disorders.</p> <p>2-Apply understanding of human physiology of neuromuscular system &amp; autonomic nervous system (ANS) demonstration of evidence based practice.</p> <p>3-Apply the physiological principles in evaluation of vascular and respiratory systems disorders.</p> <p>4-Apply understanding of human physiology of vascular and respiratory systems on demonstration of evidence based practice.</p> <p>5-Apply the relevant physiological principles in evaluation of different clinical cases.</p> <p>6-Apply understanding of principles of physiology on demonstration of evidence based practice.</p> |                  |
| Course References:              | <p>1-Concise physiology – Chaudhari.</p> <p>2-Understanding physiology – Bijlani.</p> <p>3-Text-book of physiology – Guyton.</p> <p>4-T.B of Physiology – vol.-A.K.Jain.</p>   |                  |
| Course topics (Theory)          | Week   | Learning Outcome |

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|--|------|---------------------|
| Introduction to human physiology   | 1    |                     |
| General Physiology   | 2    |                     |
| Transport across cell membrane   | 3    |                     |
| Blood<br>Introduction, composition, functions. plasma,<br>composition, functions             | 4    |                     |
| Blood groups, Hemoglobin, Hemostasis.  | 5    |                     |
| Cardiovascular system, cardiac cycle.  | 6    |                     |
| Heart rate and its regulation, blood pressure.<br>Shock – definition, classification, causes | 7    |                     |
| Respiratory system, mechanics of respiration,<br>lung volumes and capacities.                | 8    |                     |
| Factors affecting respiration, regulation of<br>respiration – neural regulation.             | 9    |                     |
| Muscle physiology, classification, structures,<br>Motor unit.                                | 10   |                     |
| Nerve physiology,  | 11   |                     |
| Sense organ & Skin   | 12   |                     |
| Digestion system   | 13   |                     |
| Reproductive system  | 14   |                     |
| Endocrinology  | 15   |                     |
| Practical Topics   | Week | Learning<br>Outcome |
| The Microscope, Type & Uses.   | 1    |                     |
| Finger puncture, blood film and staining of blood<br>film.                                   | 2    |                     |

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| Blood grouping (ABO & Rh system) Estimate of Haemoglobin.   | 3  |  |
| RBC and WBC count.  | 4  |  |
| Differential diagnosis of white blood cells.  | 5  |  |
| Bleeding & clotting time.   | 6  |  |
| Packed cell volume PVC, Erythrocyte sedimentation rate ESR.   | 7  |  |
| Examination of pulse, heart sounds.   | 8  |  |
| Blood pressure measurement  | 9  |  |
| Electrocardiography ECG   | 10 |  |
| Respiratory rate, breath sounds.  | 11 |  |
| Pulmonary function tests.   | 12 |  |
| Lung volumes measurement and Spirometer device.   | 13 |  |
| Muscle twitch, effect of load on muscle twitch  | 14 |  |
| Sensory system  | 15 |  |
| <p>Questions Example Design</p> <p>Type of question</p> <p>1-multiple choice</p> <p>2-short answer</p> <p>3-matching pairs</p> <p>4-Definition</p> <p>5- Do as require</p> <p>6- Explanations</p> <p>7- True and False question</p> |    |  |

Extra notes:

Seeing and listening the film video and ask the pupil about the subjects.

External Evaluator

Seeing and listening the film video and ask the student about the subjects.

Type of question

1-multiple choice

2-short answer

3-matching pairs

4-Definition

5- Do as require

6- Explanations

7- True and False question

