



COLLEGE OF  
**HEALTH  
SCIENCES**



## PHYSIOTHERAPY DEPARTMENT

### Physiotherapy Laboratories

Lab Name	Location	Person in Charge	Programs Served	Courses Served
Physical Agents Lab	W12-204	Hanan Youssef	Physiotherapy Dept.	<ul style="list-style-type: none"> <li>- Therapeutic Modalities</li> <li>- Orthotics and Prosthetics</li> <li>- Cardio-Res-pulmonary Conditions</li> <li>- Exercise Physiology</li> </ul>
Physiotherapy Supplementary Laboratory	W12-203	Hanan Youssef	Physiotherapy Dept.	<ul style="list-style-type: none"> <li>- Physiotherapy for Musculoskeletal Conditions</li> <li>- Therapeutic Modalities</li> <li>- Cardiopulmonary Conditions</li> <li>- Exercise Physiology</li> </ul>
Physical Examination and Simulation Lab	W12-209	Asma Javed	Physiotherapy Dept.	<ul style="list-style-type: none"> <li>- Physiotherapy for Obstetrics &amp; Gynecology</li> <li>- Physiotherapy for Geriatrics</li> <li>- Selected Topics in Physiotherapy</li> <li>- Physiotherapy for Musculoskeletal Conditions</li> </ul>
Isokinetic Analysis Lab	<ul style="list-style-type: none"> <li>- M23-039</li> <li>- M23-040</li> </ul>	Sara Atef	Physiotherapy Dept.	<ul style="list-style-type: none"> <li>- Physiotherapy for Pediatrics</li> <li>- Assessment in physiotherapy</li> <li>- Therapeutic Exercise</li> </ul>
Posture and Balance Assessment Lab	<ul style="list-style-type: none"> <li>- M23-34</li> <li>- M23-35</li> </ul>	May Tamim	Physiotherapy Dept.	<ul style="list-style-type: none"> <li>- Physiotherapy for Medical &amp; Surgical Conditions</li> <li>- Physiotherapy for Neurological Conditions</li> <li>- Research</li> </ul>
<ul style="list-style-type: none"> <li>- Physiotherapy for neurology lab</li> <li>- Pediatrics &amp; exercise physiology lab</li> </ul>	M23- 039	Sara Atef	Physiotherapy Dept.	<ul style="list-style-type: none"> <li>- Physiotherapy for Pediatric conditions</li> <li>- Assessment in Physiotherapy</li> <li>- Therapeutic Exercise.</li> </ul>

### Physiotherapy Lab Staff

#	Name	Ext.	Email
1	Sara Atef	065057547	saali@sharjah.ac.ae
2	Asma Javed	065057537	Ajaved@sharjah.ac.ae
3	Hanan Yousef	065057463	halkalih@sharjah.ac.ae
4	May Tamim	065057546	mtamim@sharjah.ac.ae
5	Amal Ahbouch	065057594	aahbouch@sharjah.ac.ae

## PHYSICAL AGENTS LABORATORY



Location	Lab Staff in Charge	Contacts
W12-204	Hanan Yousef	065057463

### INTRODUCTION

This Laboratory is utilized in teaching a variety of clinical skills in Physiotherapy that serves the following laboratory courses: Therapeutic Modalities, Orthotics, Cardiopulmonary Conditions, & Exercise Physiology. W12-204 is a wet lab that contains valuable equipment used in hospitals and Physiotherapy clinics.

### EQUIPMENT & INSTRUMENTS

- Different Types of plinths and hospital beds that are used to mimic a hospital or a clinical setting. (E.g., Wooden Beds used during Electrotherapy sessions, Adjustable hospital Beds and Traction Beds).
- Electrotherapy Equipment (Portable and Non-Portable) including Ultrasound machines, Interferential therapy machines, Shockwave therapy machines, Laser, Ultraviolet & Infrared lamps.
- Hydrotherapy Units such as Whirlpools.
- Cryotherapy and Thermotherapy including, but not limited to hot packs, cold packs, and paraffin baths.
- CPM Machine (Continuous Passive Movement) and Weights Cart.
- Gait and Ambulation Training Equipment (e.g., Parallel Bars, Stairs of Different Heights, Ramp, Wheelchairs etc).
- Variety of Assessment Tools including Sensory assessment equipment, Range of Motion assessment tools, etc.
- Treatment Tools for Sports Rehabilitation Such as Kinesiotape and rigid sports tapes.
- Different types of aids and Assistive devices (crutches, walkers, and wheelchairs).
- Orthotic Equipment (Casting Material, Orthotics Material, Thermal Baths)
- A variety of teaching Charts, skeletons and body anatomy Models.
- The lab is also fully equipped with audiovisual Tools used in the teaching process as computer,

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LCD, slide projector and movable white boards.

### **EXPERIMENTS**

- Teaching assessment and treatment techniques.

### **TESTS & SERVES**

- Certain electrotherapy modalities can be used for treating some cases for symptomatic pain reduction, spasm and swelling reduction and tissue healing which helps to restore optimal function
- diagnostic/therapeutic muscle stimulation and re-education for denervated muscles
- Generating Strength duration curve to detect innervation status of the muscles
- Chronaxia and Rheobase

## PHYSICAL EXAMINATION AND SIMULATION LABORATORY



Location	Lab Staff in Charge	Contacts
W12-209	Asma Javed	065057537

### INTRODUCTION

This Laboratory is specialized in teaching a variety of courses such as, Physiotherapy for Obstetrics & Gynecology, Physiotherapy for Geriatrics, Selected Topics in Physiotherapy, and Physiotherapy for Musculoskeletal Conditions. It contains all the required equipment for assessment and treatment of geriatrics, musculoskeletal and gynecological conditions among other topics.

The laboratory equipment and resources available at this lab include Physiotherapy mats, medical beds, movable plinths, anatomical models, medical charts, Obstetrics & Gynecology treatment tools, demonstration manikins, cardiovascular rehabilitation and pediatrics treatment equipment (such as therapy balls, rolls, etc.)

The lab is readily equipped with an office and a storage room that contain the equipment needed for the mentioned specializations. The storage area is well equipped and serves all our physiotherapy students across all levels.

### EQUIPMENT AND INSTRUMENTS

- Different types of beds (Tilting Table, Adjustable Hospital Beds, Manual Therapy Beds, Hoists)
- ICU Equipment (e.g., Adult and Pediatric Simulated Manikins for Suctioning, CPR and other ICU Tools)
- Cardiovascular and Pulmonary teaching equipment (e.g., Manikin for Breathing and Heart Sounds, Rehabilitation equipment, Pulmonary Functional Test, Pulse oximeter, Neonatal Precursors, Respiratory Exercisers, Lymphedema Drainage Machine, ABI Doppler Flow Meter)
- Obstetrics and Gynecology Models, Fetus Development Models, Exercise Tools and Charts (Pelvic Floor Exercise Tools, etc. )
- Rehabilitation Equipment (Finger Ladder, Shoulder Wheel, Pulleys, Ergometer, Suspension Cage, Different Types of Balance Boards, Multi-Purpose Cart with Weights and Audiovisual Materials for Teaching)

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- Fully Equipped with Audiovisual Tools used in Learning Process as Computer, Printer, LCD, Slide Projector, and Movable White Boards
  - Aqua therapy equipment (flip eggs, paddles, kick boards)
  - Geriatric Aids (Reacher, Non-slip mats, Modified ADL Equipment)
  - Neurological Rehabilitation tools (sliding boards, Roho cushion, fine motor Rehab. Tools)

## **EXPERIMENTS**

- Teaching assessment and treatment techniques.

## PHYSIOTHERAPY SUPPLEMENTARY LABORATORY



Location	Lab Staff in Charge	Contacts
W12-203	Hanan Yousef	065057463

### INTRODUCTION

This Laboratory specializes in teaching several Physiotherapy courses that include Physiotherapy for Musculoskeletal Conditions, Therapeutic Modalities, Cardiorespiratory Conditions, Exercise Physiology.

Currently, this room contains few equipment and is used as a supplementary lab for other labs 204/224 and 209, especially when separation of female and male students for application of practical skills is needed.

### EQUIPMENT & INSTRUMENTS

- Wooden Beds
- Magneto-Therapy Units
- Quadriceps Bench
- Traction Bed
- Treadmill
- Weighing Scales (Body Mass Analyzer)
- Measurement tools (Skin fold Calipers)

### EXPERIMENTS

- Teaching assessment and treatment techniques.

### TESTS & SERVES

- Assessment of body fat, lean muscle mass and Body mass index
- Measuring of subcutaneous fat

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## ISOKINETIC ANALYSIS LABORATORY



Location	Lab Staff in Charge	Contacts
M23-039 & M23-040	Sara Atef	065057547

### INTRODUCTION

This Laboratory specializes in teaching several physiotherapy courses including Physiotherapy for Pediatric conditions, Assessment in Physiotherapy, and Therapeutic Exercise.

The available laboratory equipment and resources include therapeutic mats, hospital beds, teaching models, Exercise physiology equipment, manikins, pediatric dolls used in simulation and pediatrics treatment equipment such as therapeutic balls, wedges, rolls, etc.

### EQUIPMENT & INSTRUMENTS

- Biodex Equipment
- Assessment equipment (e.g., Goniometers, Pedometer, Scoliometer, Reflex hammer)
- Neurological Assessment and Treatment Equipment (Motor Functional Testing Tools, Occupational Therapy Tools, Working Table for Adults, Mats, Standing Frame and Balance Board)
- Pediatrics Corner for Assessment and Treatment Tools (Corner Chair, Working Table for Pediatrics, Balls, Wedges, Rolls, Balance Playing Board, Rockers)
- IT and Audiovisual Tools such as Computer, Camera, LCD and White Board

### EXPERIMENTS

This Laboratory is used in specializations related to research in the areas of Isokinetic. In addition, it serves as a teaching lab for the above-mentioned courses during theoretical and practical sessions.

### TESTS & SERVES

- Isokinetic Dynamometer to assess the strength of muscles around joints as part of a rehabilitation exercise program to improve the strength of various body joints. There are 5 modes that can be applied while using this machine: Isokinetic Resistance, Reactive Eccentric, Passive Motion, Isometric and Isotonic movements.

## POSTURE AND BALANCE ASSESSMENT LABORATORY



Location	Lab Staff in Charge	Contacts
M23-34& M23-35	May Tamim	065057546

### INTRODUCTION

This Laboratory is dedicated for the purpose of research that is carried out by the faculty and students of the Physiotherapy department in the University of Sharjah. The lab is well equipped with the latest, recognized modern devices used in studies and research in the field of rehabilitation and physiotherapy. The lab utilizes and caters a group of studies conducted by the physiotherapy department faculty and students and continues to serve its purpose in providing the most modern techniques used in the current field.

This lab is a teaching lab. Some of the courses taught are the following but not limited to: Physiotherapy for Medical & Surgical Conditions, Physiotherapy for Neurological Conditions and for Research.

### EQUIPMENT & INSTRUMENTS

- DIERS Formetric 4D/3D Spine and Posture Analysis Machine
- Neuro-MEP-Micro (EMG) device
- Treadmill
- Biodex Balance System
- Pulmonary Function Testing Device

### EXPERIMENTS

- Research in the areas of:
  - Posture analysis
  - Gait analysis
  - Flat foot examination
  - Static balance assessment
  - Nerve conduction velocity assessment

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## TESTS & SERVES

- Neuro-MEP-Micro
- DIERS Formatic 4D/3D Spine and posture analysis
- Tests for Pulmonary function like lung volume, vital capacity, rates of flow and gas exchange
- Static Biodex Balance system to assess neuromuscular control (fall risk, athletic single leg stability, limits of stability and postural stability).

## PHYSIOTHERAPY FOR NEUROLOGY LABORATORY / PEDIATRICS & EXERCISE PHYSIOLOGY LABORATORY



Location	Lab Staff in Charge	Contacts
M23-039	Sara Atef Ali	065057547

### INTRODUCTION

#### Isokinetic Analysis Lab

This Laboratory specializes in teaching several physiotherapy courses including Physiotherapy for Pediatric conditions, Assessment in Physiotherapy, and Therapeutic Exercise.

The available laboratory equipment and resources include therapeutic mats, hospital beds, teaching models, Exercise physiology equipment, manikins, pediatric dolls used in simulation and pediatrics treatment equipment such as therapeutic balls, wedges, rolls, etc.

### EQUIPMENT AND INSTRUMENTS

- Biodex Equipment.
- Assessment equipment (e.g., Goniometers, Pedometer, Scoliometer, Reflex hammer)
- Neurological Assessment and Treatment Equipment (Motor Functional Testing Tools, Occupational Therapy Tools, Working Table for Adults, Mats, Standing Frame and Balance Board)
- Pediatrics Corner for Assessment and Treatment Tools (Corner Chair, Working Table for Pediatrics, Balls, Wedges, Rolls, Balance Playing Board, Rocker)
- IT and Audiovisual Tools like Computer, Camera, LCD, White Board and interactive screen.

### EXPERIMENTS

This Laboratory is used in specializations related to research in the areas of Isokinetic. In addition, it serves as a teaching lab for the above-mentioned courses during theoretical and practical sessions.

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## TESTS AND SERVICES

- Isokinetic Dynamometer (Biodex, system 4 pro): This machine is used to assess the strength of muscles around joints as part of a rehabilitation exercise program to improve the strength of various body joints. There are 5 modes that can be applied while using this machine: Isokinetic Resistance, Reactive Eccentric, Passive Motion, Isometric and Isotonic movements.