Ministry of Higher Education and Scientific Research
Scientific Supervision and Scientific Evaluation Apparatus
Directorate of Quality Assurance and Academic Accreditation
Accreditation Department

Academic Program Description Form

University Name: **Northern Technical University**
Faculty/Institute: **College of Health and Medical Techniques_Al-Dour**
Scientific Department: **Physical Therapy Techniques**
Academic or Professional Program Name: **Physical Therapy Techniques**
Final Certificate Name: **Bachelor in Physical Therapy Techniques**
Academic System: **Courses**
Description Preparation Date: **01-09-2025**
File Completion Date: **15-09-2025**

Signature:
Head of Department Name:
Assist.Prof. Mazin N. Farhan
Date: 15-09-2025

Signature:
Scientific Associate Name:
Dr. Ahmed Moussa Khalaf
Date: 15-09-2025

The file is checked by:
Department of Quality Assurance and University Performance
Director of the Quality Assurance and University Performance Department:
Dr. Ghassan Jasim Hadi
Date: 15-09-2025
Signature:

Approval of the Dean
Dr. Maksood Adil Mahmoud

Description of the academic program

1-Program Vision

Leadership in preparing specialized physiotherapy technicians equipped with strong scientific and practical skills to deliver innovative rehabilitation services that effectively enhance quality of life and community health at both local and regional levels.

2-Program Mission

The Department of Physical therapy Techniques is committed to providing high-quality technical education aligned with modern scientific advancements, and to graduating competent professionals capable of delivering excellence in physiotherapy services. The department also strives to support applied scientific research and strengthen community partnerships in rehabilitation and physiotherapy, contributing to the advancement of public health and the achievement of sustainable development goals.

3- Program Objectives:

- **Academic Excellence** (Curriculum development and modernization of teaching methodologies)
- **Support for Scientific Research and Innovation** (Establishing applied research groups and encouraging innovation and invention)
- **Community Service** (Operating training clinics, conducting health awareness campaigns, and promoting institutional and environmental sustainability)
- **Professional and Leadership Development** (Annual staff training and capacity building)
- **Financial and Material Sustainability** (Establishing new funding partnerships and developing infrastructure)

 Transparency and Governance (Issuing annual transparency reports and strengthening academic accountability)

 International Collaboration (Academic exchange programs)

4- Program Accreditation:

None

5- Other external infleunce

1. Alignment with the Labor Market and Healthcare Sector

- Ensuring that program-learning outcomes align with the needs of hospitals, health centers, and rehabilitation facilities.
- Strengthening partnerships with healthcare and community institutions that deliver physiotherapy services.

2. Provision of Material, Logistical, and Training Support

- Supplying modern physiotherapy equipment and advanced medical devices.
- Supporting student research initiatives and applied academic projects.
- Organizing specialized advanced training workshops under expert supervision.

3. Employment Facilitation and Practical Training Opportunities

- Providing structured clinical training placements in accredited hospitals and healthcare institutions.
- Expanding employment pathways for program graduates through institutional partner networks.

4. Continuous Program Advisory and Development Support

- Offering technical and professional consultations to enhance curricula and ensure alignment with emerging trends in physiotherapy.

- Contributing to strategic program development to improve graduate competency and strengthen employability in the labor market.

6-Program Structure

Notes	Percentage	Credit Units	Number of Courses	Component
11 core courses, 1 elective	12.3%	20	12	Institution Requirements
Core courses	17.3%	28	12	College Requirements
Core courses	70.4%	114	38	Department Requirements
			Available	Summer Training
				Other

Notes: Courses may be classified as either core (mandatory) or elective

الخطة الدراسية لقسم تقنيات العلاج الطبيعي العام الدراسي ٢٠٢٥-٢٠٢٦

الجامعة التقنية الشمالية	كلية التقنيات الصحية والطبية الدور	القسم : تقنيات العلاج الطبيعي

المستوى الاول

نوع المتطلب	اسم المقرر		عدد الساعات النظرية	عدد الساعات العملية	عدد الوحدات	الفصل الدراسي	الممهد ان وجد	الرمز
	باللغة العربية	باللغة الانكليزية						
المتطلبات الجامعية (المتطلبات المعرفية)	حقوق الانسان والديمقراطية	Human rights and Democracy	2	-	2	ف١		NTU 100
	اللغة الإنكليزية	English Language	2	0	2	ف٢		NTU101
	الحاسوب	Computer	1	1	2	ف١		NTU102
	اللغة العربية	Arabic Language	2	-	2	ف٢		NTU103
	التربية الرياضية	Sports	1	1	2	ف١	يتم اختيار مقرر واحد فقط	NTU104
	اللغة الفرنسية	French Language	2	0				NTU105
	مجموع وحدات الجامعة		10	2	10		النسبة	20.4%
متطلبات الكلية	مبادئ علم الأحياء الطبية	Principle of Medical Biology	2	4	4	ف١		MTCD101
	احياء مجهرية طبية	Medical Microbiology	2	4	4	ف٢		MTCD102
	مجموع وحدات الكلية		4	8	8		النسبة	16.3%
متطلبات القسم العلمي	ميكانيك حيوي	Biomechanics	2	-	2	ف١		PTT 101
	علم الحركة	kinesiology	2	-	2	ف٢		PTT 102
	أسس التمريض و الاسعافات الاولية	Basic nursing and first aids	2	3	3	ف١		PTT 103
	مدخل في العلاج الطبيعي	introduction to physical therapy	2	4	4	ف٢		PTT 104
	مبادئ علم الفسلجة	Principle of Human physiology	2	4	4	ف١		PTT 105
	علم الفسلجة البشري	Human physiology	2	4	4	ف٢		PTT 106
	اساسيات علم التشريح	Basics of anatomy	2	4	4	ف٢		PTT 107
	كيمياء حياتية سريرية	Clinical biochemistry	2	4	4	ف١		PTT 108
	الفيزياء الطبية	Medical physics	2	4	4	ف٢		PTT 109
	مجموع وحدات القسم العلمي		18	27	31		النسبة	63.3%
	مجموع وحدات المستوى الاول				49			

الخطة الدراسية للعام ٢٠٢٥-٢٠٢٦)								
الجامعة التقنية الشمالية		الكلية التقنية الطبية الدور				القسم : تقنيات العلاج الطبيعي		
المستوى الثاني								
نوع المتطلب	اسم المقرر		عدد الساعات النظرية	عدد الساعات العملية	عدد الوحدات	الفصل الدراسي	الممهد ان وجد	الرمز
	باللغة العربية	باللغة الانكليزية						
المتطلبات الجامعية (المتطلبات المعرفية)	اللغة الإنكليزية	English Language	2	-	2	ف١		NTU200
	الحاسوب	Computer	1	1	2	ف٢		NTU201
	اللغة العربية	Arabic Language	2	-	2	ف١		NTU202
	جرائم نظام البعث في العراق	The crimes of the Baath regime in Iraq	2	-	2	ف١		NTU203
	اخلاقيات مهنة	Professional Ethics	2	-	2	ف٢		NTU204
	مجموع وحدات الجامعة		9	1	10		النسبة	20.8%
متطلبات الكلية	علم النفس الطبي	Medical psychology	2	-	2	ف٢		MTCD201
	الايض الغذائي	Metabolism	2	2	3	ف١		MTCD202
	احصاء حيوي	Biostatistics	2	2	3	ف٢		MTCD203
	التدريب الصيفي	summer training	مستوفي					MTCD204
	مجموع وحدات الكلية		6	4	8		النسبة	16.7%
متطلبات القسم التخصصية	اسس التمارين العلاجية	Basic of Therapeutic Exercises	2	3	3	ف١		PTT201
	التمارين العلاجية المتقدمة	Advanced therapeutic exercises	2	3	3	ف٢		PTT202
	العلاج الطبيعي للجراحة العامة	Physiotherapy for General Surgery	2	4	4	ف١		PTT203
	العلاج الطبيعي لأمراض الجهاز العضلي	Physical therapy for diseases of the muscular system	2	4	4	ف٢		PTT204
	اجهزة العلاج الأولية	Primary Therapeutic equipment	2	3	3	ف١		PTT205
	أجهزة العلاج المتخصصة	Specialized treatment devices	2	3	3	ف٢		PTT206
	علم الأمراض	Pathology	2	-	2	ف١		PTT207
	علم الدوائيات	pharmacology	2	-	2	ف٢		PTT208
	العلاج الطبيعي لطب العظام	Physiotherapy for Orthopedics	2	3	3	ف٢		PTT209
	علم التشريح البشري	Human anatomy	2	3	3	ف١		PTT210
	مجموع وحدات القسم العلمي		20	26	30		النسبة	62.5%
	مجموع وحدات المستوى الثاني				48			

الخطة الدراسية للعام (٢٠٢٥-٢٠٢٦)								
الجامعة التقنية الشمالية		الكلية التقنية الطبية الدور				القسم : تقنيات العلاج الطبيعي		
المستوى الثالث								
نوع المتطلب	اسم المقرر		عدد الساعات النظرية	عدد الساعات العملية	عدد الوحدات	الفصل الدراسي	الممهد ان وجد	الرمز
	باللغة العربية	باللغة الانكليزية						
المتطلبات الجامعية (المتطلبات المعرفية)								
	مجموع وحدات الجامعة		0	0	0		النسبة	0.0%
متطلبات الكلية	تطبيقات الحاسوب	computer applications	1	2	2	فصل ١		MTCD301
	الامان في المختبرات	Safety in laboratories	2	-	2	فصل ٢		MTCD302
	طرق البحث العلمي	Medical research	2	-	2	فصل ١		MTCD303
	التدريب الصيفي	summer training	مستوفي					MTCD304
المجموع	مجموع وحدات الكلية		5	2	6		النسبة	17.6%
متطلبات القسم التخصصية	العلاج الطبيعي للأمراض الباطنية	Physiotherapy for Medical Diseases	2	3	3	فصل ١		PTT301
	العلاج الطبيعي للجراحة المتقدمة	Physiotherapy for advanced surgery	2	3	3	فصل ٢		PTT302
	أساسيات العلاج الطبيعي للأمراض العصبية	Basic Physiotherapy for Neurological Diseases	2	3	3	فصل ١		PTT303
	العلاج الطبيعي لإصابات الحبل الشوكي	Physiotherapy for Spinal Cord Injuries	2	3	3	فصل ٢		PTT304
	العلاج الطبيعي لأمراض الجهاز الهيكلي	Physical therapy for diseases of the skeletal system	2	3	3	فصل ١		PTT305
	العلاج الطبيعي للإصابات الرياضية	Physiotherapy for Sport Injuries	2	3	3	فصل ٢		PTT306
	الاطراف الصناعية والمساند	Prostheses and Orthotics	1	3	2	فصل ١		PTT307
	تأهيل البتور	Amputee rehabilitation	1	3	2	فصل ٢		PTT308
	تمارين علاجية	Therapeutic exercises	2	3	3	فصل ١		PTT309
	اجهزة علاج	Therapeutic equipment	2	3	3	فصل ٢		PTT310
	مجموع وحدات القسم العلمي		18	30	28		النسبة	82.4%
	مجموع وحدات المستوى الثالث				34			

الخطة الدراسية للعام (٢٠٢٥-٢٠٢٦)								
الجامعة التقنية الشمالية		الكلية التقنية الطبية الدور				القسم : تقنيات العلاج الطبيعي		
المستوى الرابع								
نوع المتطلب	اسم المقرر		عدد الساعات النظرية	عدد الساعات العملية	عدد الوحدات	الفصل الدراسي	الممهدان وجد	الرمز
	باللغة العربية	باللغة الانكليزية						
المتطلبات الجامعية (المتطلبات المعرفية)	منهجية البحث العلمي	Scientific research	2	-	2			NTU400
	مجموع وحدات الجامعة		0	0	0		النسبة	0.0%
متطلبات الكلية	الطب الوقائي والاجتماعي	Preventive and social medicine	2	-	2		يتم اختيار مادة واحدة	MTCD401
	علم الدم والامصال	Serology and Vaccines	2	-		فصل اول		MTCD402
	مشروع بحث التخرج	Graduation Project	-	-	4	فصل ثاني		MTCD403
	مجموع وحدات الكلية		4	0	6		النسبة	19.4%
متطلبات القسم التخصصية	العلاج الطبيعي للامراض العصبية	Physiotherapy for Neurological Diseases	2	3	3	فصل اول		PTT401
	العلاج الطبيعي للأمراض العصبية المتخصصة	Advance Physiotherapy for Neurological Diseases	2	3	3	فصل ثاني		PTT402
	العلاج الطبيعي لنمو و تطور الطفل	Physiotherapy for Growth and Development of	2	3	3	فصل اول		PTT403
	العلاج الطبيعي لامراض الاطفال	Physiotherapy for Pediatric Diseases	2	3	3	فصل ثاني		PTT404
	الطب الاشعاعي والتصوير التشخيصي للعلاج الطبيعي	Radiology and Diagnostic Imaging for physiotherapy	2	-	2	فصل ثاني		PTT405
	العلاج الطبيعي للأمراض القلبية والرئوية	Physiotherapy for Cardiopulmonary Diseases	2	3	3	فصل اول		PTT406
	ورشة التمارين العلاجية	Workshop Therapeutic Exercises	-	4	2	فصل اول		PTT407
	تأهيل السمع والتخاطب	Hearing and Speech Rehabilitation	2	3	3	فصل ثاني		PTT408
	الصحة النفسية	Health Psychology	2	3	3	فصل اول		PTT409
	مجموع وحدات القسم العلمي		16	25	25		النسبة	81%
	مجموع وحدات المستوى الرابع				31			

7–Program Description

Credit Hours		Course Name	Course Code	Level / year
theory	Practical			
0	2	Human rights and Democracy	NTU100	First / 2026-2025
0	2	English Language	NTU101	First / 2026-2025
1	1	Computer	NTU102	First / 2026-2025
0	2	Arabic Language	NTU103	First / 2026-2025
1	1	Sports	NTU104	First / 2026-2025
4	2	Principle of Medical Biology	MTCD101	First / 2026-2025
4	2	Medical Microbiology	MTCD102	First / 2026-2025
0	2	Biomechanics	PTT101	First / 2026-2025
0	2	Kinesiology	PTT102	First / 2026-2025
3	2	Basic nursing and first aids	PTT103	First / 2026-2025
4	2	Introduction to physical therapy	PTT104	First / 2026-2025
4	2	Principle of Human physiology	PTT105	First / 2026-2025
4	2	Human physiology	PTT106	First / 2026-2025
4	2	Basics of anatomy	PTT107	First / 2026-2025
4	2	Clinical biochemistery	PTT108	First / 2026-2025
4	2	Medical physics	PTT109	First / 2026-2025
0	2	English language	NTU200	Second / 2026-2025
1	1	Computer	NTU201	Second / 2026-2025
0	2	Arabic language	NTU202	Second / 2026-2025
0	2	The crims of the Baath	NTU203	Second / 2026-2025
0	2	Professional Ethics	NTU204	Second / 2026-2025
0	2	Medical psychology	MTCD201	Second / 2026-2025
2	2	Metabolism	MTCD202	Second / 2026-2025
2	2	Biostatistics	MTCD203	Second / 2026-2025
3	2	Basic of Therapeutic Exercises	PTT201	Second / 2026-2025
3	2	Advanced therapeutic exercises	PTT202	Second / 2026-2025
4	2	Physiotherapy for General Surgery	PTT203	Second / 2026-2025
4	2	Physical therapy for diseases of the nervous system	PTT204	Second / 2026-2025
3	2	Primary Therapeutic equipment	PTT205	Second / 2026-2025
3	2	Specialized treatment devices	PTT206	Second / 2026-2025

0	2	Pathology	PTT207	Second / 2026-2025
0	2	Pharmacology	PTT208	Second / 2026-2025
3	2	Physiotherapy for Orthopedics	PTT209	Second / 2026-2025
3	2	Human anatomy	PTT210	Second / 2026-2025
2	1	computer applications	MTCD301	Third / 2026-2025
	2	Laboratory safety	MTCD302	Third / 2026-2025
	2	Medical research methods	MTCD303	Third / 2026-2025
3	2	Physical therapy for internal diseases	PTT301	Third / 2026-2025
3	2	Advanced Surgery Physiotherapy	PTT302	Third / 2026-2025
3	2	Fundamentals of Physical Therapy for Neurological Diseases	PTT303	Third / 2026-2025
3	2	Physical therapy for spinal cord injuries	PTT304	Third / 2026-2025
3	2	Physical therapy for musculoskeletal disorders	PTT305	Third / 2026-2025
				Third / 2026-2025
3	2	Physical therapy for sports injuries	PTT306	Third / 2026-2025
3	1	prosthetics and orthotics	PTT307	Third / 2026-2025
3	1	Amputation rehabilitation	PTT308	Third / 2026-2025
3	2	Therapeutic exercises	PTT309	Third / 2026-2025
3	2	Treatment devices	PTT310	Third / 2026-2025
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8-Expected Learning Outcomes for the program

A-Knowledge

A.1. Preparing the student to apply knowledge in the medical fields in general and in the field of physical therapy techniques in particular.

A.2. Ensuring the student understands of the principles and ethical responsibilities of the field of specialization.

A.3. Familiarizing the student with the basics of laboratory machines, equipment, and workshops in the field of specialization.

A.4. Teaching the student the main principles of how to interact with patients in need of rehabilitation or physical therapy across all its branches.

B – Skills

B.1. The ability to work and integrate into multidisciplinary teams for rehabilitation or physical therapy.

B.2. Providing medical services to patients through consulting clinics in all their branches, managed by specialists with the assistance of technical staff from graduates of the department.

B.3. Preparing students to use modern technologies, skills, and tools specialized in the field of physical therapy techniques.

B.4. The ability to identify and articulate medical problems within the field of specialization.

C - Affective and Value Goals

C.1. The ability to communicate effectively with stakeholders in the field of specialization.

C.2. Recognizing the need and ability to engage in lifelong learning.

C.3. Understanding contemporary issues in the field of specialization.

C.4. A broad education necessary to understand global solutions and the economic, environmental, and social problems that feed into healthcare institutions according to their needs in the fields of rehabilitation and patient treatment in specialized hospitals and consulting clinics.

9. Teaching and Learning Strategies

(Theoretical lectures / Discussion and dialogue / Practical lectures / Field visits / Seminars / Laboratories / Library activities / Solving examples / Graduation project / Summer training)

10. Assessment Methods

Conducting daily, midterm, and final exams, submitting weekly reports, in addition to oral exams that demonstrate the ability to communicate and interact with others using modern dialogue techniques

11- Faculty

Faculty Members

Faculty Members		Special Requirements/Skills (if applicable)		Specialization		Academic Rank
Lecturer	Staff			Specific	General	
	Faculty			Parasite	Biology	Assistant Professor
	Faculty			Microbiology	Biology	Assistant Professor
	Faculty			physiology	Biology	Assistant Professor
	Faculty			Medical Devices	Medical Instrumentation Engineering	Assistant Professor
	Faculty			Chemical Engineering	Chemical engineering	Assistant Professor
	Faculty			Refrigeration and Air Conditioning	Mechanical Engineering	Lecturer
Lecturer				Orthopedics and Joints	General Medicine	Lecturer

Lecturer				**Fractures and Joints**	**General Medicine**	**Lecturer**
	Faculty			**Sport**	**Sport**	**Lecturer**
Lecturer				**Fractures and Joints**	**General Medicine**	**Assistant Lecturer**
	Faculty			**physiology**	**Biology**	**Assistant Lecturer**
	Faculty			**Sold Physical**	**Physics**	**Assistant Lecturer**
	Faculty			**microbiology**	**Biology**	**Assistant Lecturer**
	Faculty			**Blant anatomy**	**Biology**	**Assistant Lecturer**
	Faculty			**Grammar and Morphology**	**Arabic**	**Assistant Lecturer**
	Faculty			**Computer**	**Computer**	**Assistant Lecturer**

Professional Development

Guidance for New Faculty Members

Developmental and qualifying courses for work in specialized physical therapy centers.

Training courses for working with advanced specialized physical therapy equipment.

Conducting specialized scientific studies and research in the field of physical therapy and benefiting from specialized personnel.

Professional Development for Faculty Members

Developmental and qualifying courses for work in specialized centers.

Training courses for working with advanced physical therapy equipment.

Conducting specialized scientific studies and research in the field of physical therapy.

Attending specialized scientific discussion forums.

Correspondence and self-education

12. Admission Criteria

- Scientific Branch
- GPA

13. Key Sources of Information about the Program

Curriculum books.

Additional sources such as the digital library and online resources.

Scientific articles with specialized topics.

The college library.

Academic theses.

14. Program Development Plan

Reviewing the Curriculum:

- **Updating Academic Content:** The curriculum will be updated based on recent research and new techniques in physical therapy, such as technology-assisted therapy and robotics.
- **Introducing Modern Skills:** Focus on developing advanced physical therapy skills, such as aquatic therapy, manual therapy, and neurokinetics.

Advanced Practical Training:

- **Intensive Clinical Training:** Enhance practical training in hospitals and health centers to increase students' exposure to diverse cases.
- **Focusing on Practical Competencies:** Such as the ability to accurately assess a condition and provide a comprehensive treatment plan based on patient needs.

Integrating Modern Technology:

- **Using Modern Techniques in Therapy:** Such as virtual reality therapy, wearable devices to monitor patient progress, and robotics to assist in motor rehabilitation.
- **Developing Health Information Systems:** Supporting the use of electronic health records and applications to track treatment progress to improve communication with patients.

Scientific Research:

- **Encouraging Research in the Field:** Investing in research related to physical therapy, whether related to new techniques or a better understanding of recovery processes.
- **Supporting Research Publication:** Promoting collaboration with universities and scientific journals to publish advanced research in physical therapy.

- **Continuous Training and Education:**
  - **Continuing Education Programs for Practitioners:** Providing workshops, training courses, and online education programs to update the skills of practicing professionals.
  - **Specialized Courses:** Offering specialized tracks such as sports physical therapy or neurological physical therapy.
- **Focusing on Public Health and Prevention:**
  - **Enhancing Preventive Roles:** Emphasizing injury prevention and chronic disease programs through awareness of the importance of physical therapy as part of preventive healthcare.
  - **Community Engagement:** Promoting awareness campaigns about the importance of physical therapy and its role in improving quality of life.
- **Developing Infrastructure:**
  - **Improving Training and Practical Facilities:** Expanding university clinics and practical training centers with modern equipment.
  - **Providing Financial Support:** Increasing funding to support research, facilities, and infrastructure

Program Skills Outline

Year/ Level	Course Code	Course Name	Basic or optional	Required program Learning outcomes											
				Knowledge				Skills				Ethics			
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
The first Stages	MTCD102	Medical microbiology	Basic	•		•		•		•	•	•	•		•
	PTT106	Human physiology	Basic	•				•		•			•		•
The Second Stages	PTT201	Basic of Therapeutic Exercises	Basic	•		•		•			•		•		
	PTT203	Physiotherapy for General Surgery	Basic	•	•	•									•
The Third Stages	PTT307	Prostheses and Orthotics	Basic	•	•			•			•		•		
	PTT310	Therapeutic equipment	Basic	•	•			•			•				•
The fourth Stages	PTT408	Hearing and Speech Rehabilitation	Basic	•	•			•			•				
	PTT 409	Health Psychology	Optional	•	•	•									

Courses Description – First Level

1. Course Name: Biomechanics
2. Course Code: PTT101
3. Semester / Year: First semester / 2025-2026
4. Description Preparation Date: 1/9/2025
5. Available Attendance Forms: In-person Lectures
6. Number of Credit Hours (Total) / Number of Units (Total)
30 Theoretical / 2 Units
7. Course administrator's name (mention all, if more than one name)
Name: Dr. Salah Fadhil Email:
8. Course Objectives

Course Objectives	• Knowing the types and analysis of movement in the human body
9. Teaching and Learning Strategies	
Strategy	A. Cognitive objectives Definition of the natural laws affecting human body movement. Definition of factors that help analyze human body movement. Iron deficiency or dysfunction in body movement and how to restore it to normal B. Course specific skill objectives

	Conducting scientific research experiments represented by kinetic analysis bilateral Three- dimensional and some physical and body measurements . 1. Educating students and developing their abilities and skills in conducting motion analysis experiments on cameras and advanced analysis 2. programs, and conducting physical and anthropometric measurements. 3. Holding educational and training courses and seminars to qualify staff how to use the equipment in the laboratory. 4.Contributing with other concerned parties to prevent movement disorders through sports programs

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
The First	2 Theoretical	Knowledge and Application	Basic Concepts in Biomechanics Kinematics	whiteboard, powerpoint	whiteboard, powerpoint
The Second	2 Theoretical	Knowledge and Application	Basic Concepts in Biomechanics: Kinematics and Kinetics (Reaction forces, Equilibrium, Objects in Motion, Force of friction, Concurrent force systems, Parallel	slides , hands-on experiments Reports, oral and written theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams
The Third	2 Theoretical	Knowledge and Application	Basic Concepts in Biomechanics: Kinematics and Kinetics (Moment arm of force, Force components, Equilibrium of levers , Supporting base, types, and equilibrium in static and dynamic state	whiteboard, powerpoint	whiteboard, powerpoint

The Fourth	2 Theoretical	Knowledge and Application	Muscle structure and function: Mobility and stability functions of muscles, Elements of muscle structure, Muscle function, Effects of immobilization, and aging	slides , hands-on experiments Reports, oral and written theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams
Fifth	2 Theoretical	Knowledge and Application	Levers - Definition, function, classificatio and application of lev in physiotherapy & orde of levers with example of lever in human body	whiteboard, powerpoint	whiteboard, powerpoint
Sixth	2 Theoretical	Knowledge and Application	Elasticity – Definition , stress, strain, HOOKE'S Law	slides , hands-on experiments Reports, oral and written theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams
Seventh	2 Theoretical	Knowledge and Application	Muscular System : Definition, properties of muscle, muscular contraction, structural classification, action of muscle in moving bone, direction of pull, angle of pull, functional	whiteboard, powerpoint	whiteboard, powerpoint
eighth	2 Theoretical	Knowledge and Application	Muscular System : Definition, properties of muscle, muscular contraction, structural classification, action of muscle in moving bone, direction of pull, angle of pull, functional classification,	slides , hands-on experiments	slides , hands-on experiments
ninth	2 Theoretical	Knowledge and Application	Joint Structure and Function: Describe the basic principles of joint design and a human joint, Describe the tissues present in human joints, including dense fibrous tissue, bone,	Reports, oral and written theoretical exams	Reports, oral and written theoretical exams
Tenth	2 Theoretical	Knowledge and Application	Joint Structure and Function: Describe the basic principles of joint design and a human joint, Describe the tissues present in human joints, including dense fibrous tissue, bone,	whiteboard, powerpoint	whiteboard, powerpoint

Eleventh	2 Theoretical	Knowledge and Application	Joint Structure and Function: Classify joints: Synarthrosis, amphiarthrosis, diarthrosis, subclassification of synovial joints	slides , hands-on experiments	slides , hands-on experiments
Twelfth	2 Theoretical	Knowledge and Application	Joint Structure and Function: Describe joint functions, kinematics, range of motion, Describe the general effects of injury and disease.	Reports, oral and written theoretical exams	Reports, oral and written theoretical exams
Thirteenth	2 Theoretical	Knowledge and Application	Posture – dynamic and static posture, kinetic and kinematics of posture, analysis of posture,.	iteboard, powerp	whiteboard, powerpoint
Fourteenth	2 Theoretical	Knowledge and Application	Gait – kinematics and kinetics of gait, gait in running and stair climbing.	slides , hands-on experiments	slides , hands-on experiments
Fifteenth	2 Theoretical	Knowledge and Application	Revision	Reports, oral and written theoretical exams	Reports, oral and written theoretical exams

11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Basic Biomechanics of the Musculoskeletal Sys (4th ed.). Lippincott Williams & Wilkin
Main references (sources)	Hamill, J., Knutzen, K. M., & Derrick, T. R. (2015). *Biomechanical Basis of Human Movem* (4th ed.). Wolters Kluwer
Recommended books and references (scientific journals, reports...)	Journal of Biomechanics Clinical Biomechanics Gait & Posture
Electronic References, Websites	National Center for Biotechnology Information (NCBI)

1.Course Name: Principles of Physiology

2.Course Code: PTT105

3.Semester / Year: First semester / 2025-2026

4.Description Preparation Date: 1/9/2025

5.Available Attendance Forms: In-Person lectures

6.Number of Credit Hours (Total) / Number of Units (Total)

30 Theoretical + 60 Practical hours / 4 Units

7.Course administrator's name (mention all, if more than one name)

Name: Dr. Abeer Talib
Email:

8. Course Objectives

Course Objectives	• Acquire the skill in addition to information related to the medical condition

9. Teaching and Learning Strategies

Strategy	A. Cognitive objectives The cognitive objectives of studying medical physiology in the Department of Physical Therapy Technology include providing students with a deep and comprehensive understanding of how biological systems in the human body function under normal conditions and how disease or injury affects these functions. The following are basic cognitive objectives in this field: . Understand normal functions: Learn how different body systems function under normal conditions. Physiological mechanisms: Understanding the mechanisms of physiological regulation and how to control the body's internal environment. . Stress Response: Understanding how the body adapts to different stressors such as trauma, infection, and environmental changes. Impact of Disease: Learn the physiological changes that occur during illness or injury and how they affect bodily systems. Systems Integration: Understanding how different physiological systems interact and function in an integrated manner. By achieving these cognitive objectives, physical therapy students gain the cognitive foundation necessary to understand the physiological needs of their patients and how to use this knowledge to improve physical therapy and rehabilitation outcomes B. Course specific skill objectives .

	The skill objectives for studying medical physiology in the Department of Physical Therapy Technology focus on developing practical skills that can be used in assessing and managing patients' conditions and improving the physical therapy process. Some of the main objectives are Assessment skills: Develop the ability to conduct an accurate physiological assessment of patients, using a variety of assessment tools and equipment. Application of measurements: The ability to interpret physiological data and use them in treatment planning. Intervention skills: The ability to design and implement physical therapy plans based on an understanding of the physiology of different conditions. Therapeutic Responses: Learn how to modify physical therapy interventions based on the patient's physiological responses. Manual Skills: Acquire specialized manual skills in handling therapeutic exercises and other techniques based on physiological principles. By achieving these skill objectives, physical therapy graduates become equipped with the practical skills necessary to provide high-quality, effective care based on a thorough understanding of medical physiology

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
The First	2Theoretical +4 Practical's	Knowledge and Application	Reproductive System: 1. Sex determination and developmen Puberty. 2. Male sex hormones a their functions, spermatogenesi	whiteboard, powerpoint	whiteboard, powerpoint
The Second	2Theoretical +4 Practical's	Knowledge and Application	Reproductive System: 3. Female se hormones and functions, menstrual c ovulation and contraceptives. 4. Pregnancy, functions of placenta a lactation	slides , hands-on experiments Reports, oral and written theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams
The Third	2Theoretical +4 Practical's	Knowledge and Application	Excretory System: 1. Gross and minute structure of Kidr and features of Renal circulation. . Mechanism of formation of Urine, C and Tubular function	whiteboard, powerpoint	whiteboard, powerpoint

The Fourth	2Theoretical +4 Practical's	Knowledge and Application	Excretory System: Renal function Physiology of Micturition	slides , hands-on experiments Reports, oral and written theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams
Fifth	2Theoretical +4 Practical's	Knowledge and Application	Muscle and Nerve: 1. Structure of Neurons, membrane potential and generation of action potential. 2. Nerve impulse conduction, saltatory conduction	whiteboard, powerpoint	whiteboard, powerpoint
Sixth	2Theoretical +4 Practical's	Knowledge and Application	Muscle and Nerve: 3. Neuromuscular junction and drugs acting on it – Myasthenia. 4. Degeneration and regeneration in peripheral nerves – Wallerian degeneration of electrotonus and flaggers Law	slides , hands-on experiments Reports, oral and written theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams
Seventh	2Theoretical +4 Practical's	Knowledge and Application	Muscle: 1. Type of muscles and th gross structure, stimulus chronaxi strength duration curve. 2. Structur sarcomere – Basis of muscle contraction, Starling's Law and char during muscle contraction	whiteboard, powerpoint	whiteboard, powerpoint
eighth	2Theoretical +4 Practical's	Knowledge and Application	Muscle: 3. Electrical – Biphasic a monophasic action potentials. 4 Chemical, thermal and physical changes, isometric and isotonic contraction.	slides , hands-on experiments	slides , hands-on experiments
ninth	2Theoretical +4 Practical's	Knowledge and Application	Muscle: 5. Motor units and its properties, Clonus, Tetanus, All o None Law, Beneficial Effect. 6. Na of Voluntary contraction, Fatigu	Reports, oral and written theoretical exams	Reports, oral and written theoretical exams
Tenth	2Theoretical +4 Practical's	Knowledge and Application	Nervous System: 1. Types and properties of receptors, types of sensations. 2. Structure of Synaps Reflex and its properties, occlusio summation, sub minimal fringe , e	whiteboard, powerpoint	whiteboard, powerpoint
Eleventh	2Theoretical +4 Practical's	Knowledge and Application	Nervous System: 3. Tracts of Spir Cord. 4. Descending, pyramidal a extra pyramidal tracts	slides , hands-on experiments	slides , hands-on experiments
Twelfth	2Theoretical +4 Practical's	Knowledge and Application	Nervous System: 5. Hemi section a complete section of spinal cord, up and lower motor neuron paralysis. Cerebral cortex – areas and functio EEG	Reports, oral and written theoretical exams	Reports, oral and written theoretical exams
Thirteenth	2Theoretical +4 Practical's	Knowledge and Application	Nervous System: 7. Structure, connections and functions of Cerebellum. 8. Connections and functions of Basal Ganglia and Thalamus	whiteboard, powerpoint	whiteboard, powerpoint
Fourteenth	2Theoretical +4 Practical's	Knowledge and Application	Nervous System: 9. Reticular formation, tone, posture and balan 10. Autonomic nervous system.	slides , hands-on experiments	slides , hands-on experiments
Fifteenth	2Theoretical +4 Practical's	Knowledge and Application	Revision	Reports, oral and written theoretical exams	Reports, oral and written theoretical exams

11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Guyton, A. C., & Hall, J. E. (2021). *Guyton and Hall Textboo Medical Physiology* (14th ed.). Elsevier
Main references (sources)	Costanzo, L. S. (2018). *Physiology* (6th ed.). Elsevier
Recommended books and references (scientific journals, reports…)	American Journal of Physiology Journal of Applied Physiology Physiological Reviews
Electronic References, Websites	American Physiological Society (APS)

1.Course Name: Human Physiology
2.Course Code: PTT106
3.Semester / Year: Second semester / 2025-2026
4.Description Preparation Date: 1/9/2025
5.Available Attendance Forms: In-person lectures
6.Number of Credit Hours (Total) / Number of Units (Total)
30 Theoretical + 60 Practical hours / 4 Units
7.Course administrator's name (mention all, if more than one name)
Name: Dr. Abeer Talib Email:
8. Course Objectives

Course Objectives	• Acquire the skill in addition to information related to the medical condition

9. Teaching and Learning Strategies

Strategy	A. Cognitive objectives The cognitive objectives of studying medical physiology in the Department of Physical Therapy Technology include providing students with a deep and comprehensive understanding of how biological systems in the human body function under normal conditions and how disease or injury affects these functions. The following are basic cognitive objectives in this field: . Understand normal functions: Learn how different body systems function under normal conditions. Physiological mechanisms: Understanding the mechanisms of physiological regulation and how to control the body's internal environment.

. Stress Response: Understanding how the body adapts to different stressors such as trauma, infection, and environmental changes.

Impact of Disease: Learn the physiological changes that occur during illness or injury and how they affect bodily systems.

Systems Integration: Understanding how different physiological systems interact and function in an integrated manner.

By achieving these cognitive objectives, physical therapy students gain the cognitive foundation necessary to understand the physiological needs of their patients and how to use this knowledge to improve physical therapy and rehabilitation outcomes

B. Course specific skill objectives .

The skill objectives for studying medical physiology in the Department of Physical Therapy Technology focus on developing practical skills that can be used in assessing and managing patients' conditions and improving the physical therapy process. Some of the main objectives are Assessment skills: Develop the ability to conduct an accurate physiological assessment of patients, using a variety of assessment tools and equipment.

Application of measurements: The ability to interpret physiological data and use them in treatment planning.

Intervention skills: The ability to design and implement physical therapy plans based on an understanding of the physiology of different conditions.

Therapeutic Responses: Learn how to modify physical therapy interventions based on the patient's physiological responses.

Manual Skills: Acquire specialized manual skills in handling therapeutic exercises and other techniques based on physiological principles.

By achieving these skill objectives, physical therapy graduates become equipped with the practical skills necessary to provide high-quality, effective care based on a thorough understanding of medical physiology

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
The First	2Theoretical +4 Practical's	Knowledge and Application	Reproductive System: 1. Sex determination and developmen Puberty. 2. Male sex hormones a their functions, spermatogenesi	iteboard, powerpo	whiteboard, powerpoint

The Second	2Theoretical +4 Practical's	Knowledge and Application	Reproductive System: 3. Female se hormones and functions, menstrual c ovulation and contraceptives. 4. Pregnancy, functions of placenta a lactation	slides , hands-on xperiments Repor oral and written theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams
The Third	2Theoretical +4 Practical's	Knowledge and Application	Excretory System: 1. Gross and minute structure of Kidr and features of Renal circulation. . Mechanism of formation of Urine, C and Tubular function	iteboard, powerpo	whiteboard, powerpoint
The Fourth	2Theoretical +4 Practical's	Knowledge and Application	Excretory System: Renal function. Physiology of Micturition	slides , hands-on xperiments Repor oral and written theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams
Fifth	2Theoretical +4 Practical's	Knowledge and Application	Muscle and Nerve: 1. Structure of Neurons, membrane potential and generation of action potential. 2. Nerve impulse conduction, saltatory conduction	iteboard, powerpo	whiteboard, powerpoint
Sixth	2Theoretical +4 Practical's	Knowledge and Application	Muscle and Nerve: 3. Neuromuscular junction and drugs acting on it – Myasthenia. 4. Degeneration and regeneration in peripheral nerves – Wallerian degeneration of electrotonus and flaggers Law	slides , hands-on xperiments Repor oral and written theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams
Seventh	2Theoretical +4 Practical's	Knowledge and Application	Muscle: 1. Type of muscles and th gross structure, stimulus chronaxi strength duration curve. 2. Structur sarcomere – Basis of muscle contraction, Starling's Law and cha during muscle contraction	iteboard, powerpo	whiteboard, powerpoint
eighth	2Theoretical +4 Practical's	Knowledge and Application	Muscle: 3. Electrical – Biphasic a monophasic action potentials. 4 Chemical, thermal and physical changes, isometric and isotonic contraction.	slides , hands-on experiments	slides , hands-on experiments
ninth	2Theoretical +4 Practical's	Knowledge and Application	Muscle: 5. Motor units and its properties, Clonus, Tetanus, All or N Law, Beneficial Effect. 6. Nature Voluntary contraction, Fatigue	Reports, oral and written theoretica exams	Reports, oral and written theoretical exams
Tenth	2Theoretical +4 Practical's	Knowledge and Application	Nervous System: 1. Types and properties of receptors, types of sensations. 2. Structure of Synaps Reflex and its properties, occlusio summation, sub minimal fringe , e	iteboard, powerpo	whiteboard, powerpoint
Eleventh	2Theoretical +4 Practical's	Knowledge and Application	Nervous System: 3. Tracts of Spir Cord. 4. Descending, pyramidal a extra pyramidal tracts	slides , hands-on experiments	slides , hands-on experiments
Twelfth	2Theoretical +4 Practical's	Knowledge and Application	Nervous System: 5. Hemi section a complete section of spinal cord, up and lower motor neuron paralysis.	Reports, oral and written theoretica exams	Reports, oral and written theoretical exams

			Cerebral cortex – areas and functio EEG		
Thirteenth	2Theoretical +4 Practical's	Knowledge and Application	Nervous System: 7. Structure, connections and functions of Cerebellum. 8. Connections and functions of Basal Ganglia and Thalamus	iteboard, powerpo	whiteboard, powerpoint
Fourteenth	2Theoretical +4 Practical's	Knowledge and Application	Nervous System: 9. Reticular formation, tone, posture and balan 10. Autonomic nervous system.	slides , hands-on experiments	slides , hands-on experiments
Fifteenth	2Theoretical +4 Practical's	Knowledge and Application	Revision	Reports, oral and written theoretica exams	Reports, oral and written theoretical exams

11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Guyton, A. C., & Hall, J. E. (2021). *Guyton and Hall Textboo Medical Physiology* (14th ed.). Elsevier
Main references (sources)	Costanzo, L. S. (2018). *Physiology* (6th ed.). Elsevier
Recommended books and references (scientific journals, reports…)	American Journal of Physiology Journal of Applied Physiology Physiological Reviews
Electronic References, Websites	PubMed - Human Physiology Research

1. Course Name: Kinesiology

2. Course Code: PTT102

3. Semester / Year: Second semester / 2025-2026

4. Description Preparation Date: 1/9/2025

5. Available Attendance Forms: In-person Lectures

6. Number of Credit Hours (Total) / Number of Units (Total)

30 Theoretical / 2 Units

7. Course administrator's name (mention all, if more than one name)

Name: Dr. Salah Fadhil
Email:

8. Course Objectives

Course Objectives	• Learn the types and analysis of advanced movement in the human body and how to deal with it

9. Teaching and Learning Strategies

Strategy	A. Cognitive objectives Definition of the natural laws affecting human body movement. Definition of factors that help analyze human body movement. Iron deficiency or dysfunction in body movement and how to restore it to normal B. Course specific skill objectives

	B1 . Identify the deficiency or defect in body movement and how to restore it to its normal state . B2 . Knowing the specific exercises for each of the different body movements

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
The First	2 Theoretical	Knowledge and Application	peripheral joints The shoulder complex: Structure and component the shoulder complex a their integrated functio	iteboard, powerp	whiteboard, powerpoint
The Second	2 Theoretical	Knowledge and Application	The elbow complex: Structure and function of the elbow joint – humeroulnar and humeroradial articulations, superior and inferior radioulnar joints; mobility and stability of the elbow complex; the effects of immobilization and injury	slides , hands-or xperiments Repor oral and written theoretical exam	slides , hands-on experiments Reports, oral and written theoretical exams
The Third	2 Theoretical	Knowledge and Application	The wrist and hand complex: Structural components and functions of the wrist complex; structure of the hand complex; comprehension; functional position of the wrist and hand.	iteboard, powerp	whiteboard, powerpoint
The Fourth	2 Theoretical	Knowledge and Application	The hip complex: Structure and function o the hip joint; hip joint pathology - arthrosis fracture, bone abnormal of the femur	slides , hands-or xperiments Repor oral and written theoretical exam	slides , hands-on experiments Reports, oral and written theoretical exams
Fifth	2 Theoretical	Knowledge and Application	The knee complex: Structure and function of the knee joint – tibiofemoral joint and patellofemoral joint; effects of injury and disease	iteboard, powerp	whiteboard, powerpoint
Sixth	2 Theoretical	Knowledge and Application	The ankle and foot complex.: structure a function of the ankle jo subtalar	slides , hands-or xperiments Repor oral and written theoretical exam	slides , hands-on experiments Reports, oral and written

			joint, talocalcaneonavicular joint, transverse tarsal joint, tarsometatarsal joi metatarsophalangeal joi interphalangeal joints structure and function of plantar arches, muscles the ankle and foot, deviations from norm structure and function – Pes Pla and Pes Cavus		theoretical exams
Seventh	2 Theoretical	Knowledge and Application	The ankle and foot complex.: structure and function of the ankle joint, subtalar joint, talocalcaneonavicular joint, transverse tarsal joint, tarsometatarsal joints, metatarsophalangeal joints, interphalangeal joints, structure and function of the plantar arches, muscles of the ankle and foot, deviations from normal structure and function – Pes Planus and Pes Cavus	iteboard, powerp	whiteboard, powerpoint
eighth	2 Theoretical	Knowledge and Application	Thorax and Chest wall: General structur and function, Rib cage the muscles associate with the rib cage, Ventilatory movements: coordination and integra Developmental aspects structure and functior Changes in normal struc and function I relation pregnancy, scoliosis a COPD	slides , hands-or experiments	slides , hands-on experiments
ninth	2 Theoretical	Knowledge and Application	Thorax and Chest wall: General structur and function, Rib cag and the muscles associa with the rib cage, Ventila movements: its coordina and integration, Developmental aspects structure and functior Changes in normal struc and function I relation pregnancy, scoliosis a COPD	Reports, oral and written theoretica exams	Reports, oral and written theoretical exams
Tenth	2 Theoretical	Knowledge and Application	Temporomandibular Joint: General feature structure, function an dysfunction	iteboard, powerp	whiteboard, powerpoint
Eleventh	2 Theoretical	Knowledge and Application	Gait: Define, the stance, swing and do support phases of gait, sup-division of the star and swing phases of gait time and distance parame of gait	slides , hands-or experiments	slides , hands-on experiments

Twelfth	2 Theoretical	Knowledge and Application	Gait: Joint motion at the knee and able for one extreme during a gai cycle. The location of lin gravity in relation to the knee and ankle durin the stance phases of gait. The gravitationa moments of force acting at the hip, kne and able during the sta phase	Reports, oral and written theoretica exams	Reports, oral and written theoretical exams
Thirteenth	2 Theoretical	Knowledge and Application	Gait: Muscle activity at the hop, knee and able throughout the ga cycle, including why and when a particula muscle is active and the type of constructio required. The role of eac the determinants of ga	iteboard, powerp	whiteboard, powerpoint
Fourteenth	2 Theoretical	Knowledge and Application	Gait: The muscle activ that occurs in the upp extremity and trunk. Pathological gaits and gait deviations.	slides , hands-or experiments	slides , hands-on experiments
Fifteenth	2 Theoretical	Knowledge and Application	Revision	Reports, oral and written theoretica exams	Reports, oral and written theoretical exams

11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Neumann, D. A. (2017). *Kinesiology of the Musculoske System: Foundations for Rehabilitation* (3rd ed.). Elsev
Main references (sources)	Enoka, R. M. (2015). *Neuromechanics of Human Movement* (5th ed.). Human Kinetics
Recommended books and references (scientific journals, reports…)	Journal of Biomechanics Journal of Applied Biomechanics
Electronic References, Websites	PubMed – Kinesiology & Human Movement Research:

1.Course Name: Clinical Chemistry

2.Course Code: PTT109

3.Semester / Year: First semester / 2025-2026

4.Description Preparation Date: 1/9/2025

5.Available Attendance Forms: In-person lectures

6.Number of Credit Hours (Total) / Number of Units (Total)

30 Theoretical + 60 Practical hours / 4 Units

7.Course administrator's name (mention all, if more than one name)

Name: Dr. Ahmed Mousa
Email:

8. Course Objectives

Course Objectives	• Acquire the skill in addition to information related to the medical condition

9. Teaching and Learning Strategies

Strategy	A. Cognitive objectives The cognitive objective of studying clinical chemistry in the Department of Physical Therapy Technology includes understanding the chemical and biochemical processes that occur in the body and how these processes affect patients' health and treatment. Other objectives include : 1. Understanding the chemical composition of the body: Identifying the basic chemical components such as proteins, fats, carbohydrates, and vitamins and their role in maintaining health 2. Clinical Analysis: Learn how to perform and interpret various clinical chemical tests that help diagnose diseases and monitor the course of treatment 3. The relationship between chemistry and physical therapy: Understanding how chemical changes in the body can affect functional performance and healing, and how physical therapy

can interfere with these processes.

4. Integrating chemical knowledge into therapeutic practices: Using clinical chemistry

knowledge to improve physical therapy techniques and develop personalized treatment programs for each patient.

5. Clinical Decision Making: Develop the ability to evaluate clinical chemical data and use them effectively in making medical decisions related to physical therapy .

This comprehensive understanding helps students in physical therapy techniques better communicate with the patient care team and contribute more to the patient's overall treatment

plan

B. Course specific skill objectives .

The skill objectives for studying clinical chemistry in the Department of Physiotherapy Technology focus on enabling students to perform a variety of practical and applied activities. Some of these objectives are as follows :

. Sample analysis skills: Learn how to properly collect and prepare biological samples for chemical analysis .

. Operating laboratory equipment: Acquiring the ability to handle laboratory equipment and techniques used in clinical chemistry, such as spectrometers and blood chemical analyzers .

. Laboratory technology skills: Developing the ability to conduct biochemical tests and interpret their results accurately .

. Laboratory safety skills: Understanding and applying biological and chemical safety rules within the laboratory

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
The First	2Theoretical +4 Practical's	Knowledge and Application	CELL	iteboard, powerp	whiteboard, powerpoint

The Second	2Theoretical +4 Practical's	Knowledge and Application	BODY FLUIDS	slides , hands-on xperiments Repor oral and written theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams
The Third	2Theoretical +4 Practical's	Knowledge and Application	BIOMOLECULES: AMINO ACIDS, PEPTIDES & PROTEINS	iteboard, powerp	whiteboard, powerpoint
The Fourth	2Theoretical +4 Practical's	Knowledge and Application	BIOMOLECULES: AMINO ACIDS, PEPTIDES & PROTEINS	slides , hands-on xperiments Repor oral and written theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams
Fifth	2Theoretical +4 Practical's	Knowledge and Application	ENZYMES	iteboard, powerp	whiteboard, powerpoint
Sixth	2Theoretical +4 Practical's	Knowledge and Application	CARBOHYDRATES	slides , hands-on xperiments Repor oral and written theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams
Seventh	2Theoretical +4 Practical's	Knowledge and Application	LIPIDS	iteboard, powerp	whiteboard, powerpoint
eighth	2Theoretical +4 Practical's	Knowledge and Application	LIPIDS	slides , hands-on experiments	slides , hands-on experiments
ninth	2Theoretical +4 Practical's	Knowledge and Application	NUCLEIC ACIDS	Reports, oral and written theoretica exams	Reports, oral and written theoretical exams
Tenth	2Theoretical +4 Practical's	Knowledge and Application	NUTRITIONAL BIOCHEMISTR MINERALS & TRACE ELEMEN	iteboard, powerp	whiteboard, powerpoint
Eleventh	2Theoretical +4 Practical's	Knowledge and Application	NUTRITIONAL BIOCHEMISTR MINERALS & TRACE ELEMEN	slides , hands-on experiments	slides , hands-on experiments
Twelfth	2Theoretical +4 Practical's	Knowledge and Application	VITAMINS	Reports, oral and written theoretica exams	Reports, oral and written theoretical exams
Thirteenth	2Theoretical +4 Practical's	Knowledge and Application	NUTRITION	iteboard, powerp	whiteboard, powerpoint

Fourteenth	2Theoretical +4 Practical's	Knowledge and Application	MOLECULAR BIOLOGY	slides , hands-on experiments	slides , hands-on experiments
Fifteenth	2Theoretical +4 Practical's	Knowledge and Application	Revision	Reports, oral and written theoretical exams	Reports, oral and written theoretical exams

11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

12.Learning and Teaching Resources

Required textbooks (curricular books, if any)	**Burtis, CA, Ashwood, ER, & Bruns, DE (2017). Tietz Fundamentals of Clinical Chemistry and Molecu Diagnostics (8th ed.). Elsevier**
Main references (sources)	**Mayne, P. D. (2010). Clinical Chemistry in Diagnosis and Treatment (7th ed.). CRC Press**
Recommended books and references (scientific journals, reports...)	**Clinical Biochemistry (Journal)**
Electronic References, Websites	**PubMed - Clinical Biochemistry Research**

1.Course Name: Medical physics

2.Course Code: PTT110

3.Semester / Year: Second semester / 2025-2026

4.Description Preparation Date: 1/9/2025

5.Available Attendance Forms: In-person Lectures

6.Number of Credit Hours (Total) / Number of Units (Total)

30 Theoretical + 60 Practical hours / 4 Units

7.Course administrator's name (mention all, if more than one name)

Name: Dr. Mohamed Ajami Abed
Email:

8. Course Objectives

Course Objectives	• **Acquiring skills in addition to information related to the relationsl between** • **its relationship to physical therapy physics and movement and**

9. Teaching and Learning Strategies

Strategy	A. Cognitive objectives It involves understanding how the laws of physics apply to the human body and using physical therapies to improve health. Goals include: . Understanding the scientific foundations and physical principles that underlie natural therapies . Learn how to use physics based medical machines and devices in physical therapy . . Explain how movement , forces and pressure affect the human body . . Learn how to use heat , cold, ultrasound and electricity therapy in managing patients' conditions Develop the ability to analyze data and conduct appropriate assessments to select the optima treatment .

B. Course specific skill objectives .

The skill objectives for studying medical physics in the Department of Physical Therapy

Technology aim to develop a set of practical skills that enhance the student's ability to interact directly with patients and use various tools and technologies. These objectives may include :

. Proficiency in the use of specialized devices and tools in physical therapy .

. Applying therapeutic techniques based on physical principles safely and effectively .

. Developing effective communication skills with patients while providing physical therapy .

. Evaluating individual cases and determining appropriate doses of physiotherapy using medical physics .

. Developing critical thinking and problem-solving skills related to physical therapy .

. Learn how to conduct tests and interpret results to evaluate the effectiveness of treatments .

These skills help students become professionals who can work independently and contribute effectively to healthcare teams

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
The First	2Theoretical +4 Practical's	Knowledge and Application	ELECTRICITY AND MAGNETISM	iteboard, powerp	whiteboard, powerpoint
The Second	2Theoretical +4 Practical's	Knowledge and Application	static electricity	slides , hands-on xperiments Repor oral and written theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams

The Third	2Theoretical +4 Practical's	Knowledge and Application	CURRENT ELECTRICITY	iteboard, powerpo	whiteboard, powerpoint
The Fourth	2Theoretical +4 Practical's	Knowledge and Application	Electromagnetism	slides , hands-on xperiments Repor oral and written theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams
Fifth	2Theoretical +4 Practical's	Knowledge and Application	ELECTRO MECHANICS	iteboard, powerpo	whiteboard, powerpoint
Sixth	2Theoretical +4 Practical's	Knowledge and Application	CLASSIFICATION OF CURRENTS	slides , hands-on xperiments Repor oral and written theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams
Seventh	2Theoretical +4 Practical's	Knowledge and Application	Medium Frequency Current	iteboard, powerpo	whiteboard, powerpoint
eighth	2Theoretical +4 Practical's	Knowledge and Application	High Frequency Current	slides , hands-on experiments	slides , hands-on experiments
ninth	2Theoretical +4 Practical's	Knowledge and Application	SOUND WAVES	Reports, oral and written theoretica exams	Reports, oral and written theoretical exams
Tenth	2Theoretical +4 Practical's	Knowledge and Application	HEAT	iteboard, powerpo	whiteboard, powerpoint
Eleventh	2Theoretical +4 Practical's	Knowledge and Application	ELECTROMAGNETIC RADIATI	slides , hands-on experiments	slides , hands-on experiments
Twelfth	2Theoretical +4 Practical's	Knowledge and Application	SAFETY IN BIOMEDICAL INSTRUMENTS	Reports, oral and written theoretica exams	Reports, oral and written theoretical exams
Thirteenth	2Theoretical +4 Practical's	Knowledge and Application	RADIATION PROTECTION	iteboard, powerpo	whiteboard, powerpoint
Fourteenth	2Theoretical +4 Practical's	Knowledge and Application	PRACTICAL	slides , hands-on experiments	slides , hands-on experiments
Fifteenth	2Theoretical +4 Practical's	Knowledge and Application	Revision	Reports, oral and written theoretica exams	Reports, oral and written theoretical exams

11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Hendee, W. R., Ritenour, E. R., & Kanal, E. (2013). *Med Imaging Physics* (4th ed.). Wiley
Main references (sources)	Podgorsak , E. B. (2006). *Radiation Physics for Medic Physicists.* Springer
Recommended books and references (scientific journals, reports…)	Medical Physics (Journal, AAPM)
Electronic References, Websites	ScienceDirect – Medical Physics Articles

1.Course Name: Medical Biology

2.Course Code: MTCD101

3.Semester / Year: Second semester / 2025-2026

4.Description Preparation Date: 1/9/2025

5.Available Attendance Forms: In-person lectures

6.Number of Credit Hours (Total) / Number of Units (Total)

30 Theoretical + 60 Practical hours / 4 Units

7.Course administrator's name (mention all, if more than one name)

Name: Dr. Maksood Adil Mahmood
Email:

8. Course Objectives

Course Objectives	• Knowing the history and branches of medical biology and dealing with them through • accurate diagnosis of the relationship with the impact on the body's systems, which • helps the physical therapist to deal with such cases

9. Teaching and Learning Strategies

Strategy	A. Cognitive objectives Knowing the types of pathogens that cause injuries to the body Genetic factors and chromosomal changes The body's defense mechanism against pathogens

	Some pathogens and how to prevent them A. Course specific skill objectives Develop an understanding of the fundamentals of microbiology and the research methods used in this field . Gain technical skills in using microscopes and other laboratory tools used in the analysis of live samples . Identify different types of microorganisms including bacteria, viruses, fungi, and parasites . Develop the ability to estimate the size, shape and cellular structure of living organisms using a microscope

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
The First	2Theoretical +4 Practical's	Knowledge and Application	Histo microbiology - History	iteboard, powerp	whiteboard, powerpoint
The Second	2Theoretical +4 Practical's	Knowledge and Application	Branches of Microbiology	slides , hands-on xperiments Repor oral and written theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams
The Third	2Theoretical +4 Practical's	Knowledge and Application	Structure of Microbes	iteboard, powerp	whiteboard, powerpoint

The Fourth	2Theoretical +4 Practical's	Knowledge and Application	Morphology of Bacteria	slides , hands-on xperiments Repor oral and written theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams
Fifth	2Theoretical +4 Practical's	Knowledge and Application	Requirement of Bacteria	iteboard, powerpo	whiteboard, powerpoint
Sixth	2Theoretical +4 Practical's	Knowledge and Application	Nutrition (Autotrophic: Photoautotrophic, Chemoautotrophic) Heterotroph	slides , hands-on xperiments Repor oral and written theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams
Seventh	2Theoretical +4 Practical's	Knowledge and Application	Factors influencing growth (Physical factors + Chemical factors)	iteboard, powerpo	whiteboard, powerpoint
eighth	2Theoretical +4 Practical's	Knowledge and Application	Physical and chemical Metho	slides , hands-on experiments	slides , hands-on experiments
ninth	2Theoretical +4 Practical's	Knowledge and Application	ANTIBIOTICS THE BASES C CHEMOTHERAPY	Reports, oral and written theoretica exams	Reports, oral and written theoretical exams
Tenth	2Theoretical +4 Practical's	Knowledge and Application	Classification tissue / Nucleic acid / properties Tissu	iteboard, powerpo	whiteboard, powerpoint
Eleventh	2Theoretical +4 Practical's	Knowledge and Application	growth curve	slides , hands-on experiments	slides , hands-on experiments
Twelfth	2Theoretical +4 Practical's	Knowledge and Application	Introduction to Biosafety and Security, The main components of bio risk management, Safety measures in all laboratories and laboratory design, General safety precaution Personal protective equipment.	Reports, oral and written theoretica exams	Reports, oral and written theoretical exams
Thirteenth	2Theoretical +4 Practical's	Knowledge and Application	Biosafety level, risk assessment strategy, Hazard groups, biosafet levels and equipment, Standard practices required in biological laboratories	iteboard, powerpo	whiteboard, powerpoint
Fourteenth	2Theoretical +4 Practical's	Knowledge and Application	The biological factors, Routes of infection, Risk group classificat Biosafety measures, Control of substances hazardous to health	slides , hands-on experiments	slides , hands-on experiments
Fifteenth	2Theoretical +4 Practical's	Knowledge and Application	Revision	Reports, oral and written theoretica exams	Reports, oral and written theoretical exams

11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Tortora, G. J., & Derrickson, B. (2018). *Principles of Anatomy and Physiology* (15th ed.). Wiley
Main references (sources)	Marieb, E. N., & Hoehn, K. (2019). *Human Anatomy & Physiology* (11th ed.). Pearson
Recommended books and references (scientific journals, reports…)	Annual Review of Cell and Developmental Biology
Electronic References, Websites	PubMed - Medical Biology Research

1.Course Name: Nursing and First aid Basics

2.Course Code: PTT103

3.Semester / Year: First semester / 2025-2026

4.Description Preparation Date: 1/9/2025

5.Available Attendance Forms: In-person lectures

6.Number of Credit Hours (Total) / Number of Units (Total)

30 Theoretical + 45 Practical hours / 3 Units

7.Course administrator's name (mention all, if more than one name)

Name: Nada Wahab
Email:

8. Course Objectives

Course Objectives	• Acquire the skill in addition to information related to the medical condition

9. Teaching and Learning Strategies

Strategy	A. Cognitive objectives A1 . Knowledge of the practical application of the nursing profession and how to solve problems related to it. A2 . How to treat the patient and create an atmosphere of understanding and cooperation between the patient and the therapist Course specific skill objectives B. B1 . How to measure vital signs . B2 . How to give injections and their types

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
The First	2Theoretical +3 Practical's	Knowledge and Application	Introduction Definition of firs aid. Importance of first aid, Gol rules of first aid, Scope and concept of emergency.	iteboard, powerp	whiteboard, powerpoint
The Second	2Theoretical +3 Practical's	Knowledge and Application	First aid emergencies Burns & Scalds: Causes, Degrees of burns, First aid treatment, General treatment	slides , hands-on xperiments Repor oral and written theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams
The Third	2Theoretical +3 Practical's	Knowledge and Application	First aid emergencies *Poisonin* Classification (irritants, acid, alkali, narcotics), Signs and symptoms. First aid treatmen general treatment	iteboard, powerp	whiteboard, powerpoint
The Fourth	2Theoretical +3 Practical's	Knowledge and Application	First aid emergencies Trauma due to foreign body intrusion: Eye, ear, nose , thro stomach and lungs	slides , hands-on xperiments Repor oral and written theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams
Fifth	2Theoretical +3 Practical's	Knowledge and Application	First aid emergencies *Bites:* First aid, signs, symptoms and treatment. Dog bite: rabbit bite Snake bite neurotoxin, bleeding diathesi Snake bite: neurotoxin, bleeding diathesis	iteboard, powerp	whiteboard, powerpoint
Sixth	2Theoretical +3 Practical's	Knowledge and Application	Skeletal injuries Definition: Types of fractures of various pa of the body. Causes, Signs an Symptoms. Rules of treatmen transportation of patient with fracture and spinal cord injurie First aid measures in dislocatio joints . Treatment of muscle injuries.	slides , hands-on xperiments Repor oral and written theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams
Seventh	2Theoretical +3 Practical's	Knowledge and Application	Respiratory emergencies: Asphy Etiology, Signs & Symptoms, r of treatment	iteboard, powerp	whiteboard, powerpoint

eighth	2Theoretical +3 Practical's	Knowledge and Application	Respiratory emergencies: Drowning: Definition and management	slides , hands-on experiments	slides , hands-on experiments
ninth	2Theoretical +3 Practical's	Knowledge and Application	Respiratory emergencies: Artifi respiration: Types and techniqu	Reports, oral and written theoretica exams	Reports, oral and written theoretical exams
Tenth	2Theoretical +3 Practical's	Knowledge and Application	Wounds and Hemorrhage Wound Classification, management	iteboard, powerpo	whiteboard, powerpoint
Eleventh	2Theoretical +3 Practical's	Knowledge and Application	Wounds and Hemorrhage Wound Classification, management Woun and Hemorrhage Haemorrhages Classification, signs and sympton rules for treatment of hemorrhag	slides , hands-on experiments	slides , hands-on experiments
Twelfth	2Theoretical +3 Practical's	Knowledge and Application	Wounds and Hemorrhage Treatmer hemorrhage from special areas (scalp, mouth, nose, ear , palm a various veins).Internal Haemorrhag Visible and concealed	Reports, oral and written theoretica exams	Reports, oral and written theoretical exams
Thirteenth	2Theoretical +3 Practical's	Knowledge and Application	F. Shock and unconsciousness Definition: Types of shock, Common causes of shock, signs and symptoms of shock (assessmer established shock). General and special treatment of established sh	iteboard, powerpo	whiteboard, powerpoint
Fourteenth	2Theoretical +3 Practical's	Knowledge and Application	Transportation of the injured 1. Methods of transportation: Sing helper, Hand seat, Stretcher, Whee transport (ambulance). 2. Precautions taken: Blanket lif Air and Sea travel	slides , hands-on experiments	slides , hands-on experiments
Fifteenth	2Theoretical +3 Practical's	Knowledge and Application	Revision	Reports, oral and written theoretica exams	Reports, oral and written theoretical exams

11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	**Potter, P. A., Perry, A. G., Hall, A., & Stockert, P. A. (20** ***Fundamentals of Nursing*** **(10th ed.). Elsevier**
Main references (sources)	**American Red Cross. (2017).** ***First Aid/CPR/AED Participant's Manual.*** **StayWell**
Recommended books and references (scientific journals, reports…)	**Journal of Nursing Education**
Electronic References, Websites	**American Red Cross – First Aid Resources**

1.Course Name: Anatomy Basics
2.Course Code: PTT108
3.Semester / Year: Second semester / 2025-2026
4.Description Preparation Date: 1/9/2025
5.Available Attendance Forms: person lectures-In
6.Number of Credit Hours (Total) / Number of Units (Total)
30 Theoretical + 60 Practical hours / 4 Units
7.Course administrator's name (mention all, if more than one name)
Name: Dr. Assad Hameed Taha Email:

8. Course Objectives	
Course Objectives	• Learn the importance of anatomy and the location of organs for the student • in his field of specialization

9. Teaching and Learning Strategies	
Strategy	A. Cognitive objectives 1. Gaining knowledge of the structure of the human body in general. 2. Knowledge of anatomical positions, terminology and levels. 3. Types of tissues. 4. Understanding the histological features of different organs 5. Identify muscle tissue and its types Course specific skill objectives B.

	. The general objective of teaching basic sciences in the field of human anatomy is to provide important scientific knowledge that involves knowledge of the structural composition of the body at the level of systems, organs and cells. - Raising students' ability to link anatomical facts with clinical applications using radiographs, ultrasound, MRI, and histological slides. - Implementing professional and ethical education for students

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
The First	2Theoretical +4 Practical's	Knowledge and Application	Introduction: Define Anatomy and mention its sub-divisions Name regions, cavities and syste of the body.	iteboard, powerpo	whiteboard, powerpoint
The Second	2Theoretical +4 Practical's	Knowledge and Application	istology: General Histology, stud the basic tissues of the body classify and mention the microsco structure of types of tissues) such Cell, Epithelium, Connective Tissue, Cartilage, Bone, Muscula tissue	slides , hands-on xperiments Repor oral and written theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams
The Third	2Theoretical +4 Practical's	Knowledge and Application	Osteology: Anatomical position the body, axes, planes, commo anatomical terminologies (groov tuberosity, trochanters etc), Connective tissue classificatio	iteboard, powerpo	whiteboard, powerpoint
The Fourth	2Theoretical +4 Practical's	Knowledge and Application	Osteology: Bones Composition functions, classification of typ according to morphology and development, growth and repair, structure of long bone vertebral column, types of vertebrae, bones of extremitie and body landmarks	slides , hands-on xperiments Repor oral and written theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams
Fifth	2Theoretical +4 Practical's	Knowledge and Application	rthrology: Definitions, Classifica of joints, Construction of joint Motions of joints, Structure o fibrous, cartilaginous joints,	iteboard, powerpo	whiteboard, powerpoint

Sixth	2Theoretical +4 Practical's	Knowledge and Application	Arthrology: Blood supply and ne supply of joints, articulations articular surfaces, types of join motions of upper and lower extremities, trunk, head	slides , hands-on xperiments Repor oral and written theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams
Seventh	2Theoretical +4 Practical's	Knowledge and Application	Myology: Types of muscle tiss Muscles of upper extremity, lower extremity, trunk, eye, fa etc. origin, insertion, nerve sup and action (in detail)	iteboard, powerpo	whiteboard, powerpoint
eighth	2Theoretical +4 Practical's	Knowledge and Application	Myology of other systems: Cardiovascular system, Bloo lymph, tissue fluid-characterist composition, and function, Th heart-main arteries, veins, capillaries, Lymph circulatio	slides , hands-on experiments	slides , hands-on experiments
ninth	2Theoretical +4 Practical's	Knowledge and Application	Upper extremity	Reports, oral and written theoretica exams	Reports, oral and written theoretical exams
Tenth	2Theoretical +4 Practical's	Knowledge and Application	Pectoral region, Outline the feature pectoral region, Name and identify sternum, clavicle, scapula and hume Outline the main features of the bones of shoulder girdle, Identif the parts, borders and surfaces o sternum	iteboard, powerpo	whiteboard, powerpoint
Eleventh	2Theoretical +4 Practical's	Knowledge and Application	Scapular region, Comprehend th main features of the muscle sin th scapular region, State the layere arrangements of the muscles of th back, Name and identify the muscle the scapular region. Mention thei origin, insertion, nerve supply an actions	slides , hands-on experiments	slides , hands-on experiments
Twelfth	2Theoretical +4 Practical's	Knowledge and Application	Shoulder Girdle, Comprehend th main features of the joints of th shoulder girdle. Name the joints shoulder girdle. Identify the articu surfaces and name the ligaments a movements of sternoclavicular ar acromioclavicular joints.	Reports, oral and written theoretica exams	Reports, oral and written theoretical exams
Thirteenth	2Theoretical +4 Practical's	Knowledge and Application	Shoulder Girdle, Mention the type the joints. Demonstrate and name movements of scapula. Mention t chief muscles producing these movements	iteboard, powerpo	whiteboard, powerpoint
Fourteenth	2Theoretical +4 Practical's	Knowledge and Application	Shoulder joint, Mention the type articular surfaces and ligaments of shoulder joint.	slides , hands-on experiments	slides , hands-on experiments
Fifteenth	2Theoretical +4 Practical's	Knowledge and Application	Define and demonstrate the movem of the shoulder joint, Name and ider the chief muscles producing thes movements. Mention the blood sup and nerve supply of this joint	Reports, oral and written theoretica exams	Reports, oral and written theoretical exams

11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	**Moore, K. L., Dalley, A. F., & Agur, A. M. R. (2018). Clinic Oriented Anatomy (8th ed.). Wolters Kluwer**
Main references (sources)	**Snell, R. S. (2011). Clinical Anatomy by Systems. Lippin Williams & Wilkins**
Recommended books and references (scientific journals, reports…)	**Journal of Anatomy**
Electronic References, Websites	**Visible Body – Anatomy Learning Tools**

1.Course Name: Medical microbiology

2.Course Code: MTCD 102

3.Semester / Year: Second semester / 2025-2026

4.Description Preparation Date: 1/9/2025

5.Available Attendance Forms: In-person lectures

6.Number of Credit Hours (Total) / Number of Units (Total)

30 Theoretical + 60 Practical hours / 4 Units

7.Course administrator's name (mention all, if more than one name)

Name: Dr. Louay Manaa Ibrahim
Email:

8. Course Objectives

Course Objectives	• **Acquire the skill in addition to information related to the medical condition**

9. Teaching and Learning Strategies

Strategy	A. Cognitive objectives The cognitive objectives of studying medical microbiology in the Department of Physiotherapy Technology are primarily to provide students with the theoretical and scientific foundation they need to understand how different microbes, such as bacteria, viruses, fungi, and parasites, can affect human health and how to manage them. Some of the main cognitive objectives are detailed below . Understand the principles of medical microbiology: learn the basic characteristics of microbes and how to classify them . Knowledge of bacteriology and virology: gaining information about types of bacteria and viruses, their life cycles, and mechanisms of disease causation .

	Develop knowledge of infectious diseases: Learning about various infectious diseases and their effect on the human body . . Laboratory techniques: Knowing how to perform and interpret laboratory tests to diagnose infection . Treatment and clinical management: Understanding the different treatment options for infectious diseases . . Evaluating scientific information: Learn how to evaluate scientific literature and new research in the field of medical microbiology . . Application of knowledge: Students ' ability to apply their knowledge of medical microbiology in physical therapy practice . . Work within a multidisciplinary team : Learn how to work collaboratively with other healthcare professionals to provide comprehensive treatment to patients These cognitive objectives are essential to provide students with the skills and knowledge necessary to understand the impact of infectious diseases in the field of physical therapy and to enhance their ability to contribute effectively to the comprehensive health care of patients Course specific skill objectives B. The skill objectives for studying medical microbiology in the Department of Physical Therapy Technology focus on developing students' practical and technical abilities to work with microorganisms and apply these skills in their professional practice. Here are some of these objectives : . Diagnostic skills : Develop the ability to correctly collect clinical samples and perform laboratory tests to diagnose infectious diseases Laboratory skills: Gain experience in using a microscope, performing microbial cultures, and identifying organisms . Microscopic . Implementing infection control procedures: practicing standard infection prevention procedures, including sterilization control and the use of personal protective measures . . Analytical skills: learning how to analyze laboratory test results and evaluate their relevance to clinical diagnosis .

	. Communication: Develop the ability to communicate effectively with healthcare teams and exchange information about the diagnosis and treatment management of infected patients . Integrated Clinical Skills: Learn how to integrate medical microbiology knowledge with clinical practice in physical therapy . . Ability to self-assess and continuously learn: Encourage students to self-assess their skills and identify the need for continuous learning for continuous improvement in clinical practice

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
The First	2Theoretical +4 Practical's	Knowledge and Application	Introduction	iteboard, powerpo	whiteboard, powerpoint
The Second	2Theoretical +4 Practical's	Knowledge and Application	Classification	slides , hands-on xperiments Repor oral and written theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams
The Third	2Theoretical +4 Practical's	Knowledge and Application	Sterilization & disinfectio	iteboard, powerpo	whiteboard, powerpoint
The Fourth	2Theoretical +4 Practical's	Knowledge and Application	Immunology	slides , hands-on xperiments Repor oral and written theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams
Fifth	2Theoretical +4 Practical's	Knowledge and Application	Immunology	iteboard, powerpo	whiteboard, powerpoint
Sixth	2Theoretical +4 Practical's	Knowledge and Application	Laboratory Diagnosis	slides , hands-on xperiments Repor oral and written theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams
Seventh	2Theoretical +4 Practical's	Knowledge and Application	Bacteriology	iteboard, powerpo	whiteboard, powerpoint
eighth	2Theoretical +4 Practical's	Knowledge and Application	Bacteriology	slides , hands-on experiments	slides , hands-on experiments

ninth	2Theoretical +4 Practical's	Knowledge and Application	Viruses	Reports, oral and written theoretica exams	Reports, oral and written theoretical exams
Tenth	2Theoretical +4 Practical's	Knowledge and Application	Viruses	iteboard, powerpo	whiteboard, powerpoint
Eleventh	2Theoretical +4 Practical's	Knowledge and Application	Mycology	slides , hands-on experiments	slides , hands-on experiments
Twelfth	2Theoretical +4 Practical's	Knowledge and Application	Introduction to Biosafety and Security	Reports, oral and written theoretica exams	Reports, oral and written theoretical exams
Thirteenth	2Theoretical +4 Practical's	Knowledge and Application	Biosafety level, risk assessment strategy	iteboard, powerpo	whiteboard, powerpoint
Fourteenth	2Theoretical +4 Practical's	Knowledge and Application	The biological factors	slides , hands-on experiments	slides , hands-on experiments
Fifteenth	2Theoretical +4 Practical's	Knowledge and Application	Revision	Reports, oral and written theoretica exams	Reports, oral and written theoretical exams

11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	**Alberts, B., Johnson, A., Lewis, J., Morgan, D., Raff, Roberts, K., & Walter, P. (2015).** ***Molecular Biology of Cell*** **(6th ed.). Garland Scienc**
Main references (sources)	**Marieb, E. N., & Hoehn, K. (2019).** ***Human Anatomy & Physiology*** **(11th ed.). Pearson**
Recommended books and references (scientific journals, reports…)	**Journal of Medical Biology**
Electronic References, Websites	**PubMed - Medical Biology Research**

1.Course Name: Computer
2.Course Code: NTU 101
3.Semester / Year: First semester / 2025-2026
4.Description Preparation Date: 1/9/2025
5.Available Attendance Forms: In-person lectures
6.Number of Credit Hours (Total) / Number of Units (Total)
15 Theoretical + 15 Practical hours / 2 Units
7.Course administrator's name (mention all, if more than one name)
Name: Omar Tariq Khatab Email:

8. Course Objectives	
Course Objectives	• Providing students with skills in using basic office applications, creating office • files and documents, using the operating system, and the basics of working in a digital environment.

9. Teaching and Learning Strategies	
Strategy	A. Cognitive objectives Providing the student with knowledge in managing and using various computer applications Course specific skill objectives B. Understand basic concepts in computer science and the history of the development of computer technology Gain skills in using operating systems and office software such as Microsoft Office

	Develop online research skills and learn how to evaluate information sources on the web

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
The First	1Theoretical +1 Practical's	Knowledge and Application	Computer Fundamentals	mputer Fundamer	Computer Fundamentals
The Second	1Theoretical +1 Practical's	Knowledge and Application	Computer Concept, Computer	Computer Concep Computer	Computer Concept, Computer
The Third	1Theoretical +1 Practical's	Knowledge and Application	Life Cycle Phases, Evolution Computer Generations whitebo powerpoint	Life Cycle Phases volution of Compu nerations whitebo powerpoint	Life Cycle Phases, Evolution of Computer Generations whiteboard, powerpoint
The Fourth	1Theoretical +1 Practical's	Knowledge and Application	slides , hands-on experiments Reports, oral and written theoret exams	slides , hands-on xperiments Repor oral and written theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams
Fifth	1Theoretical +1 Practical's	Knowledge and Application	Advantages of computers and the	Advantages of computers and the	Advantages of computers and their

Sixth	1Theoretical +1 Practical's	Knowledge and Application	areas of use. Classification o	areas of use. Classification of	areas of use. Classification of
Seventh	1Theoretical +1 Practical's	Knowledge and Application	computers in terms of purpos	omputers in terms purpose,	computers in terms of purpose,
eighth	1Theoretical +1 Practical's	Knowledge and Application	size, and data type	size, and data typ	size, and data type
ninth	1Theoretical +1 Practical's	Knowledge and Application	whiteboard, powerpoint	iteboard, powerp	whiteboard, powerpoint
Tenth	1Theoretical +1 Practical's	Knowledge and Application	slides , hands-on experiment Reports, oral and written theoret exams	slides , hands-on xperiments Repor oral and written theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams
Eleventh	1Theoretical +1 Practical's	Knowledge and Application	Computer components	omputer compone	Computer components
Twelfth	1Theoretical +1 Practical's	Knowledge and Application	Computer Components Hardw parts of the computer Softwa entities whiteboard, powerpoi	omputer Compone ardware parts of t computer Softwar ntities whiteboar powerpoint	Computer Components Hardware parts of the computer Software entities whiteboard, powerpoint
Thirteenth	1Theoretical +1 Practical's	Knowledge and Application	slides , hands-on experiment Reports, oral and written theoret exams	slides , hands-on xperiments Repor oral and written theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams
Fourteenth	1Theoretical +1 Practical's	Knowledge and Application	Your Personal Computer:	Your Personal Computer:	Your Personal Computer:
Fifteenth	1Theoretical +1 Practical's	Knowledge and Application	Computer Security Concept a Software Licensing	Computer Securit oncept and Softwa Licensing	Computer Security Concept and Software Licensing

11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	**Shelly, G. B., & Vermaat, M. E. (2014). *Discover Computers: Fundamentals* (8th ed.). Cengage Learning**
Main references (sources)	**Brookshear, J. G., & Brylow , D. (2019). *Computer Scien An Overview* (13th ed.). Pearson**
Recommended books and references (scientific journals, reports…)	**Journal of Computer Science and Technology**

Electronic References, Websites	**GeeksforGeeks – Computer Science Portal**

1.Course Name: Human rights and democracy
2.Course Code: NTU 102
3.Semester / Year: First semester / 2025-2026
4.Description Preparation Date: 1/9/2025
5.Available Attendance Forms: In-person Lectures
6.Number of Credit Hours (Total) / Number of Units (Total)
30 Theoretical / 2 Units
7.Course administrator's name (mention all, if more than one name)
Name: Asmaa Mohamed Jassim Email:

8. Course Objectives

Course Objectives	• The subject of Rights and Democracy provides students with increased awareness and training on the importance of active participation in all aspects of life , such as enhancing respect for the principles of general human rights in various aspects of life

9. Teaching and Learning Strategies

Strategy	A. Cognitive objectives The subject of Rights and Democracy provides students with increased awareness and training on the importance of active participation in all aspects of life , such as enhancing respect for the principles of general human rights in various aspects of life To increase the student's knowledge of the theoretical conceptual aspect and historical development of the subject of human rights and democracy. To develop the student's analytical and critical skills regarding the reality and future of human rights and democracy. To enable students to understand the importance of education and its role in spreading the culture of human rights and democracy in building a civilized society based on good governance, one of the most important components of which is belief in human rights

	Course specific skill objectives B. Introduction to the history of human rights and stages of development. Spreading culture and nourishing the student from the Islamic side. How to preserve society and country by promoting love for country. Learn about the most important rights granted to them according to international norms and laws. Promoting citizenship among students

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
The First	2Theoretical	Knowledge	Historical development o human rights, human rights ancient civilizations whitebo powerpoint	Historical development of human rights, human rights cient civilizations whiteboa powerpoint	Historical development of human rights, human rights in ancient civilizations whiteboard, powerpoint
The Second	2Theoretical	Knowledge	slides , hands-on experimen Reports, oral and written theoretical exams	lides , hands-on experimen Reports, oral and written theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams
The Third	2Theoretical	Knowledge	Human rights in divine la	Human rights in divine law	Human rights in divine laws
The Fourth	2Theoretical	Knowledge	with a focus on human rig	with a focus on human righ	with a focus on human rights
Fifth	2Theoretical	Knowledge	n Islam whiteboard, powerpo	Islam whiteboard, powerpo	in Islam whiteboard, powerpoint
Sixth	2Theoretical	Knowledge	slides , hands-on experime Reports, oral and writte theoretical exams	lides , hands-on experimen Reports, oral and written theoretical exams	slides , hands-on experiments Reports, oral

					and written theoretical exams
Seventh	2Theoretical	Knowledge	Human Rights in the Mid	Human Rights in the Midd	Human Rights in the Middle
eighth	2Theoretical	Knowledge	Ages and Modern Time whiteboard, powerpoint	Ages and Modern Times whiteboard, powerpoint	Ages and Modern Times whiteboard, powerpoint
ninth	2Theoretical	Knowledge	slides , hands-on experime Reports, oral and writte theoretical exams	lides , hands-on experimen Reports, oral and written theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams
Tenth	2Theoretical	Knowledge	Regional recognition of hu	egional recognition of hum	Regional recognition of human
Eleventh	2Theoretical	Knowledge	rights at the European, American, African, Islam and Arab levels whiteboa powerpoint	rights at the European, merican, African, Islamic a Arab levels whiteboard, powerpoint	rights at the European, American, African, Islamic and Arab levels whiteboard, powerpoint
Twelfth	2Theoretical	Knowledge	slides , hands-on experime	lides , hands-on experimen	slides , hands-on experiments
Thirteenth	2Theoretical	Knowledge	Reports, oral and writte theoretical exams	Reports, oral and written theoretical exams	Reports, oral and written theoretical exams
Fourteenth	2Theoretical	Knowledge	Non-governmental organizations	n-governmental organizati	Non-governmental organizations
Fifteenth	2Theoretical	Knowledge	and their role in human rig (International Committee the Red Cross, Amnesty International, Human Rig Watch, Arab Organization Human Rights whiteboar powerpoint	nd their role in human righ nternational Committee of Red Cross, Amnesty nternational, Human Righ Vatch, Arab Organization f Human Rights whiteboard powerpoint	and their role in human rights (International Committee of the Red Cross, Amnesty International, Human Rights Watch, Arab Organization for Human Rights whiteboard, powerpoint

11. Course Evaluation
Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

12. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	**Freeman, M. (2017).** ***Human Rights: An Interdisciplin Approach*** **(3rd ed.). Polity Press**
Main references (sources)	**Beetham, D. (2013).** ***Democracy and Human Rights.*** **Polity Press.**
Recommended books and references (scientific journals, reports…)	**Journal of Human Rights**
Electronic References, Websites	**Office of the High Commissioner for Human Rights (OHCHR)**

1.Course Name: Sport Education	
2.Course Code: NTU 104	
3.Semester / Year: First semester / 2025-2026	
4.Description Preparation Date: 1/9/2025	
5.Available Attendance Forms: In-person lectures	
6.Number of Credit Hours (Total) / Number of Units (Total)	
15 Theoretical + 15 Practical hours / 2 Units	
7.Course administrator's name (mention all, if more than one name)	
Name: Dr.Majid Hameed Abed Email:	
8. Course Objectives	
Course Objectives	• The student acquires motor skills
9. Teaching and Learning Strategies	
Strategy	A. Cognitive objectives Sports culture awareness. . Providing students with comprehensive information about the rules of the games and explaining good behavior when participating in races Course specific skill objectives B.

	B1 . Developing students' skills in various sports. B2. Knowing the rules and regulations for each game. B3. Developing and improving physical fitness and motor skills

10 .Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
The First	1Theoretical +1 Practical's	Knowledge and Application	Sports: definition, importance	Sports: definition importance	Sports: definition, importance
The Second	1Theoretical +1 Practical's	Knowledge and Application	and types whiteboard, powerpoi	d types whiteboa powerpoint	and types whiteboard, powerpoint
The Third	1Theoretical +1 Practical's	Knowledge and Application	slides , hands-on experiments Reports, oral and written theoret exams	slides , hands-on xperiments Repor oral and written theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams
The Fourth	1Theoretical +1 Practical's	Knowledge and Application	Mechanism of human body	lechanism of hum body	Mechanism of human body
Fifth	1Theoretical +1 Practical's	Knowledge and Application	movement whiteboard, powerpoi	ovement whiteboa powerpoint	movement whiteboard, powerpoint
Sixth	1Theoretical +1 Practical's	Knowledge and Application	slides , hands-on experiments Reports, oral and written theoret exams	slides , hands-on xperiments Repor oral and written theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams
Seventh	1Theoretical +1 Practical's	Knowledge and Application	Common sports injuries whiteboard, powerpoint	mmon sports inju iteboard, powerpo	Common sports injuries

					whiteboard, powerpoint
Eighth	1Theoretical +1 Practical's	Knowledge and Application	slides , hands-on experiments Reports, oral and written theoret exams	slides , hands-on experiments Repor oral and written theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams
Ninth	1Theoretical +1 Practical's	Knowledge and Application	Basic basketball skills whiteboa powerpoint	asic basketball ski iteboard, powerpo	Basic basketball skills whiteboard, powerpoint
Tenth	1Theoretical +1 Practical's	Knowledge and Application	slides , hands-on experiments	slides , hands-on experiments	slides , hands-on experiments
Eleventh	1Theoretical +1 Practical's	Knowledge and Application	Reports, oral and written theoret exams	Reports, oral and written theoretica exams	Reports, oral and written theoretical exams
Twelfth	1Theoretical +1 Practical's	Knowledge and Application	International Basketball Law whiteboard, powerpoint	ernational Basket Laws whiteboard powerpoint	International Basketball Laws whiteboard, powerpoint
Thirteenth	1Theoretical +1 Practical's	Knowledge and Application	slides , hands-on experiments	slides , hands-on experiments	slides , hands-on experiments
Fourteenth	1Theoretical +1 Practical's	Knowledge and Application	Reports, oral and written theoret exams	Reports, oral and written theoretica exams	Reports, oral and written theoretical exams
Fifteenth	1Theoretical +1 Practical's	Knowledge and Application	Basic table tennis skills and international rules whiteboard powerpoint	sic table tennis sk d international ru iteboard, powerpo	Basic table tennis skills and international rules whiteboard, powerpoint

11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	**Wuest, D. A., & Fisette, J. L. (2014). *Foundations of Phys Education, Exercise Science, and Sport* (18th editi McGraw-Hill**
Main references (sources)	**Siedentop, D. (2004). *Introduction to Physical Education, Fitness, and Sport* (5th ed.). McGraw-Hill**
Recommended books and references (scientific journals, reports…)	**Research Quarterly for Exercise and Sport**
Electronic References, Websites	**WHO – Physical Activity and Health**

1.Course Name: Arabic Language
2.Course Code: NTU 103
3.Semester / Year: Second semester / 2025-2026
4.Description Preparation Date: 1/9/2025
5.Available Attendance Forms: In-person lectures
6.Number of Credit Hours (Total) / Number of Units (Total)
30 Theoretical / 2 Units
7.Course administrator's name (mention all, if more than one name)
Name: Sura Dhia Mahdi Email:

8. Course Objectives

Course Objectives	• The student learns about spelling and grammatical errors and Arabic grammar rules

9. Teaching and Learning Strategies

Strategy	A. Cognitive objectives The student learns the methods and rules of administrative correspondence . The student learns the style of linguistic communication in business administration Course specific skill objectives B. B1 . Develop students' listening, reading and expression skills. B2. Providing students with expression skills in classical Arabic B3. Developing positive attitudes and values among students towards their Arabic language, linked to religion and Arab heritage

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
The First	2Theoretical	Knowledge	Introduction to linguistic error	iteboard, powerpo	whiteboard, powerpoint
The Second	2Theoretical	Knowledge	Rules for writing the extended a shortened alif - solar and luna letters	slides , hands-on xperiments Repor oral and written theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams
The Third	2Theoretical	Knowledge	Dad and Tha	iteboard, powerpo	whiteboard, powerpoint
The Fourth	2Theoretical	Knowledge	Writing the hamza	slides , hands-on xperiments Repor oral and written theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams
Fifth	2Theoretical	Knowledge	punctuation marks	iteboard, powerpo	whiteboard, powerpoint
Sixth	2Theoretical	Knowledge	Noun, verb, and the differenc between them	slides , hands-on xperiments Repor oral and written theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams
Seventh	2Theoretical	Knowledge	Effects	iteboard, powerpo	whiteboard, powerpoint
eighth	2Theoretical	Knowledge	number	slides , hands-on experiments	slides , hands-on experiments
ninth	2Theoretical	Knowledge	Common language errors applications	ports, oral and wri theoretical exams	Reports, oral and written theoretical exams

Tenth	2Theoretical	Knowledge	Common language errors applications	iteboard, powerpo	whiteboard, powerpoint
Eleventh	2Theoretical	Knowledge	Meanings of -and Tanween N Prepositions	slides , hands-on experiments	slides , hands-on experiments
Twelfth	2Theoretical	Knowledge	Formal aspects of administrati discourse	ports, oral and wri theoretical exams	Reports, oral and written theoretical exams
Thirteenth	2Theoretical	Knowledge	The language of administrative discourse	iteboard, powerpo	whiteboard, powerpoint
Fourteenth	2Theoretical	Knowledge	The language of discourse administrative	slides , hands-on experiments	slides , hands-on experiments
Fifteenth	2Theoretical	Knowledge	Examples of administrative correspondence	ports, oral and wri theoretical exams	Reports, oral and written theoretical exams

11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	**Hashem, Mahdi(2018).** ***Introduction to the Study of the*** **Ilmiyah-Kotob Al-Dar Al ‹** ***Arabic Language***
Main references (sources)	**Ansari (Edited by: Muhammad Muhyi-Ibn Hisham Al (Din Abdul Hamid-Al .** ***The Singer of the Intelligent from Books of Grammar.*** **House of Thought**
Recommended books and references (scientific journals, reports…)	**Journal of the Arabic Language Academy in Cairo**
Electronic References, Websites	**Arabic Language Academy in Cairo**

1.Course Name: English Language
2.Course Code: NTU 101
3.Semester / Year: Second semester / 2025-2026
4.Description Preparation Date: 1/9/2025
5.Available Attendance Forms: In-person lectures
6.Number of Credit Hours (Total) / Number of Units (Total)
30 Theoretical / 2 Units
7.Course administrator's name (mention all, if more than one name)
Name: Dr.Bassim Ibrahim Rajab Email:

8. Course Objectives	
Course Objectives	• Acquire the skill of dialogue in the English language and read and analyze scientific • research and medical terminology correctly

9. Teaching and Learning Strategies	
Strategy	A. Cognitive objectives Identify the tenses and verbs used with each tense and adjust the context of the sentence. . Identify general rules, interrogative words, and conversational structure Course specific skill objectives B. B1 . Speak correct English. B2. Ability to read medical tests. B3. Knowing medical terms in English because of their importance in the field of medical work

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
The First	2Theoretical	Knowledge	Cardinal numbers/years/price times(in words and figures).	iteboard, powerpo	iteboard, powerpo
The Second	2Theoretical	Knowledge	Phonetic of alphabet letters, punctuation.	slides , hands-on xperiments Report oral and written theoretical exams	slides , hands-on xperiments Report oral and written theoretical exams
The Third	2Theoretical	Knowledge	Countries/Capitals, arrange words (makes full sentence)/ arrange letters (make full word).	iteboard, powerpo	iteboard, powerpo
The Fourth	2Theoretical	Knowledge	Simple present/1. Verb to be (is/am/are) (affirmative, negative interrogative).	slides , hands-on xperiments Report oral and written theoretical exams	slides , hands-on xperiments Report oral and written theoretical exams
Fifth	2Theoretical	Knowledge	imple present/2. Verb to do(Do/Do (affirmative, negative and interrogative).	iteboard, powerpo	iteboard, powerpo
Sixth	2Theoretical	Knowledge	Simple present/3. Verb to have(have/has) (affirmative, nega and interrogative).	slides , hands-on xperiments Report oral and written theoretical exams	slides , hands-on xperiments Report oral and written theoretical exams
Seventh	2Theoretical	Knowledge	Simple present/4. Ordinary verbs (eat, go , play ...etc.) (affirmativ negative and interrogative).	iteboard, powerpo	iteboard, powerpo
eighth	2Theoretical	Knowledge	Tag questions and short answer yes/no questions).	slides , hands-on experiments	slides , hands-on experiments
ninth	2Theoretical	Knowledge	Review (simple present).	Reports, oral and written theoretical exams	ports, oral and writ theoretical exams
Tenth	2Theoretical	Knowledge	Question words (what, where, wh who, why, how, whom, whose which).	iteboard, powerpo	iteboard, powerpo

Eleventh	2Theoretical	Knowledge	Abbreviation (short form) , adjectives (and their opposite)	slides , hands-on experiments	slides , hands-on experiments
Twelfth	2Theoretical	Knowledge	Plural nouns (regular and irregula	Reports, oral and written theoretical exams	ports, oral and writ theoretical exams
Thirteenth	2Theoretical	Knowledge	Possession (all types).	iteboard, powerpo	iteboard, powerpo
Fourteenth	2Theoretical	Knowledge	Pronunciation (-s at the end of word).	slides , hands-on experiments	slides , hands-on experiments
Fifteenth	2Theoretical	Knowledge	Pronouns (all types).	Reports, oral and written theoretical exams	ports, oral and writ theoretical exams

11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	**Soars, J., & Soars, L. (2020).** ***New Headway Plus: Intermed*** **(4th ed.). Oxford University Press**
Main references (sources)	**Swan, M., & Walter, C. (2014).** ***Oxford English Grammar Course.*** **Oxford University Press**
Recommended books and references (scientific journals, reports…)	**ELT Journal**
Electronic References, Websites	**BBC Learning English**

Course Description/ Level Two

1.Course Name: Foundation of therapeutic exercise
2.Course Code: PTT201
3.Semester / Year: First semester / 2025-2026
4.Description Preparation Date: 1/9/2025
5.Available Attendance Forms: In-person lectures
6.Number of Credit Hours (Total) / Number of Units (Total)
30 Theoretical + 45 Practical hours / 3 Units
7.Course administrator's name (mention all, if more than one name)
Name: Dr. Fawzi Hamadi Mahdi Email:

8. Course Objectives	
Course Objectives	• Understand the basic principles of therapeutic exercise: Learn the scientific basis of exercise and its effects on the musculoskeletal and nervous systems

9. Teaching and Learning Strategies	
Strategy	A. Cognitive objectives A-1- Understanding the scientific foundations : Learning the physiological and anatomical principles related to therapeutic exercises and how they affect the body . A-2- Designing treatment programs : The ability to design treatment programs appropriate for different medical conditions based on the clinical assessment of the patient’s condition

	A-3 Classifying the different types of therapeutic exercises : Identify the different types of therapeutic exercises (such as aerobic exercise, muscle strengthening, flexibility exercises) and determine when and how to use them . A-4- Evaluation and Diagnosis : Learn how to evaluate the patient's condition and use therapeutic exercises as part of a comprehensive treatment plan . A- 5- Understanding the Stages of Recovery : Knowing how each type of exercise affects the stages of healing and injury and providing appropriate care during each stage . A-6- Management of injuries and chronic conditions : The ability to manage injuries and chronic conditions through therapeutic exercises effectively . A-7- Modifying exercises according to individual needs : Learn how to modify therapeutic exercises based on the individual's abilities and needs Course specific skill objectivesB. B1 . Developing empathy for patients: Enhancing the ability to empathize with patients and understand their psychological and emotional needs in addition to their physical needs . B2 - Motivating professional commitment: Encouraging students to adhere to professional standards and ethics, with an emphasis on responsibility and transparency in working with patients . B3 - Enhancing patience and understanding: Developing skills of patience and understanding, especially when working with patients who suffer from chronic pain or significant physical challenges . B4 - Building self-confidence in providing care: Developing confidence in the ability to provide appropriate therapeutic care and use therapeutic exercises effectively . B5 - Encouraging the spirit of cooperation: stimulating teamwork and cooperation among members of the medical team and with patients to achieve treatment goals jointly

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method

The First	2Theoretical +3 Practical's	Knowledge and Application	INTRODUCTION TO EXERCISE THERAPY	whiteboard, powerpoint	whiteboard, powerpoint
The Second	2Theoretical +3 Practical's	Knowledge and Application	BASICS OF EXERCISE:	slides , hands-on periments Reports oral and written heoretical exams	slides , hands-o experiments Reports, oral a written theoreti exams
The Third	2Theoretical +3 Practical's	Knowledge and Application	Disability models	iteboard, powerp	whiteboard, powerpoint
The Fourth	2Theoretical +3 Practical's	Knowledge and Application	Exercise physiology	slides , hands-on xperiments Repor oral and written theoretical exams	slides , hands-o experiments Reports, oral a written theoreti exams
Fifth	2Theoretical +3 Practical's	Knowledge and Application	JOINT MOVEMENTS: - • Terminology. Range of motion. axes and • Planes of movement levers	iteboard, powerp	whiteboard, powerpoint
Sixth	2Theoretical +3 Practical's	Knowledge and Application	Passive movements	slides , hands-on xperiments Repor oral and written theoretical exams	slides , hands-o experiments Reports, oral a written theoreti exams
Seventh	2Theoretical +3 Practical's	Knowledge and Application	Active movements	iteboard, powerp	whiteboard, powerpoint
eighth	2Theoretical +3 Practical's	Knowledge and Application	STARTING POSITIONS: - 1-Fundamental starting positio . 2- Derived positions. 3- Muscle work - effects and us	slides , hands-on experiments	slides , hands-o experiments
ninth	2Theoretical +3 Practical's	Knowledge and Application	MANUAL MUSCLE TEST:	Reports, oral and written theoretica exams	Reports, oral a written theoreti exams
Tenth	2Theoretical +3 Practical's	Knowledge and Application	GONIOMETRY:-	iteboard, powerp	whiteboard, powerpoint
Eleventh	2Theoretical +3 Practical's	Knowledge and Application	CAUSES FOR RESTRICTION RANGE OF MOTION:-	slides , hands-on experiments	slides , hands-o experiments
Twelfth	2Theoretical +3 Practical's	Knowledge and Application	Mobility aids – crutches, canes, walker	Reports, oral and written theoretica exams	Reports, oral a written theoreti exams

Thirteenth	2Theoretical +3 Practical's	Knowledge and Application	Measurement of limb length, girth	iteboard, powerp	whiteboard, powerpoint
Fourteenth	2Theoretical +3 Practical's	Knowledge and Application	Suspension Therapy	slides , hands-on experiments	slides , hands-o experiments
Fifteenth	2Theoretical +3 Practical's	Knowledge and Application	RELAXATION: - • Types & Techniques. • Effects & Uses	Reports, oral and written theoretica exams	Reports, oral a written theoreti exams

11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	**Kisner, C., & Colby, L. A. (2017).** ***Therapeutic Exercise: Foundations and Techniques*** **(7th ed.). F. A. Dav**
Main references (sources)	**Goodman, C. C., & Fuller, K. S. (2020).** ***Pathology for the Physical Therapist Assistant*** **(2nd ed.). Elsevier**
Recommended books and references (scientific journals, reports…)	**Journal of Orthopedic & Sports Physical Therapy (JOSP**
Electronic References, Websites	**American Physical Therapy Association (APTA)**

1.Course Name: Advanced therapeutic exercise

2.Course Code: PTT202

3.Semester / Year: Second semester / 2025-2026

4.Description Preparation Date: 1/9/2025

5.Available Attendance Forms: In-person lecturess

6.Number of Credit Hours (Total) / Number of Units (Total)

30 Theoretical + 45 Practical hours / 3 Units

7.Course administrator's name (mention all, if more than one name)

Name: Dr. Fawzi Hamadi Mahdi
Email:

8. Course Objectives

Course Objectives	• Developing specialized treatment programs: The ability to design advanced • therapeutic exercise programs that suit complex health conditions such as acute

	• injuries, surgeries, and chronic diseases, as well as focusing on restoring and improving patients' functional ability, including natural movement and muscle strength, • while taking into account all health restrictions

9. Teaching and Learning Strategies

Strategy	A. Cognitive objectives A1- Understanding A1- Understanding the basic principles of therapeutic exercises : This includes understanding the motor, physiological and biomechanical systems that influence the body's response to therapeutic exercises A2- Analysis and evaluation of treatment needs : The ability to analyze the individual needs of patients and evaluate their health conditions to design customized therapeutic exercise programs . A3- Design and implement advanced therapeutic exercise programs : Learn how to create therapeutic exercise programs that suit specific conditions such as sports injuries, musculoskeletal diseases, and chronic diseases . A4- Applying advanced rehabilitation strategies : Learn advanced strategies to increase the efficiency of rehabilitation and improve physical performance through the use of therapeutic exercises . A5 - Learn about modern techniques in movement therapy : Knowing how to use modern devices and techniques in the field of therapeutic exercises to enhance the effectiveness of treatment A6- Evaluation of treatment outcomes : The ability to measure and evaluate the impact of therapeutic exercises on patients' progress using scientific and objective measures Course specific skill objectivesB. B1 - Accurate physical assessment : The ability to conduct a comprehensive and accurate assessment of the patient's physical condition using clinical examinations and modern assessment methods to determine treatment needs . B2 - Developing individual therapeutic exercise programs: The skill of designing customized exercise programs based on each patient's condition, taking into account factors such as age, fitness level, and type of injury or health condition . B3 - Performing therapeutic exercises correctly: Mastering the safe and effective implementation of therapeutic exercises using various techniques, while taking into account the correct technique and necessary precautions to avoid injuries . B4 - Use of advanced techniques and equipment: The ability to use modern devices and equipment used in rehabilitation, such as balance devices, strength training equipment, and motor simulation devices

	B5 - Modifying exercises according to the patient's progress: Developing the skill of modifying doses and therapeutic techniques according to the improvement of the patient's condition or the emergence of new problems . B6 - Effective communication with patients and the healthcare team: The ability to provide clear and accurate instructions to patients and healthcare team members, while promoting collaboration among stakeholders in treatment plans

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
The First	2Theoretical +3 Practical's	Knowledge and Application	MAT EXERCISES :-	iteboard, powerpo	whiteboard, powerpoint
The Second	2Theoretical +3 Practical's	Knowledge and Application	FREE EXERCISES	slides , hands-on xperiments Repor oral and written theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams
The Third	2Theoretical +3 Practical's	Knowledge and Application	Resisted exercise :	iteboard, powerpo	whiteboard, powerpoint
The Fourth	2Theoretical +3 Practical's	Knowledge and Application	Progressive Resistance Exercise - de Lormes , Oxford, MacQueen, Circu Weight	slides , hands-on xperiments Repor oral and written theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams
Fifth	2Theoretical +3 Practical's	Knowledge and Application	Stretching :	iteboard, powerpo	whiteboard, powerpoint
Sixth	2Theoretical +3 Practical's	Knowledge and Application	BREATHING EXERCISE	slides , hands-on xperiments Repor oral and written theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams

Seventh	2Theoretical +3 Practical's	Knowledge and Application	Aerobic exercise :	iteboard, powerpo	whiteboard, powerpoint
eighth	2Theoretical +3 Practical's	Knowledge and Application	Coordination	slides , hands-on experiments	slides , hands-on experiments
ninth	2Theoretical +3 Practical's	Knowledge and Application	Posture :	Reports, oral and written theoretica exams	Reports, oral and written theoretical exams
Tenth	2Theoretical +3 Practical's	Knowledge and Application	Gait Training :	iteboard, powerpo	whiteboard, powerpoint
Eleventh	2Theoretical +3 Practical's	Knowledge and Application	SOFT TISSUE LESION:	slides , hands-on experiments	slides , hands-on experiments
Twelfth	2Theoretical +3 Practical's	Knowledge and Application	Massage: Define and descr the various manipulation techniques used in massag	Reports, oral and written theoretica exams	Reports, oral and written theoretical exams
Thirteenth	2Theoretical +3 Practical's	Knowledge and Application	Hydrotherapy :	iteboard, powerpo	whiteboard, powerpoint
Fourteenth	2Theoretical +3 Practical's	Knowledge and Application	Transfers training:- selecti of transfers, levels, amount assist transfer, belt of transfers	slides , hands-on experiments	slides , hands-on experiments
Fifteenth	2Theoretical +3 Practical's	Knowledge and Application	Proprioceptive Neuromuscular Facilitatic	Reports, oral and written theoretica exams	Reports, oral and written theoretical exams

11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Kisner, C., Colby, L. A., & Borstad, J. (2017). Therape Exercise: Foundations and Techniques (7th ed.). F. A. Davis
Main references (sources)	Magee, D. J. (2014). Orthopedic Physical Assessment (6th e Elsevier
Recommended books and references (scientific journals, reports…)	Journal of Orthopedic & Sports Physical Therapy (JOSPT)
Electronic References, Websites	American Physical Therapy Association (APTA)

1.Course Name: Physiotherapy for General Surgery

2.Course Code: PTT 203

3.Semester / Year: First semester / 2025-2026

4.Description Preparation Date: 1/9/2025

5.Available Attendance Forms: In-person lectures

6.Number of Credit Hours (Total) / Number of Units (Total)

30 Theoretical + 60 Practical hours / 4 Units

7.Course administrator's name (mention all, if more than one name)

Name: Dr. Salam Muhannad Salman
Email:

8. Course Objectives

Course Objectives	• **The aim of physical therapy in general surgery are diverse and focus on supporting rapid recovery and improving quality of life after surgery**

9. Teaching and Learning Strategies

Strategy	A. Cognitive objectives A1- Understanding : the physiological foundations of surgery Learn about the effects of surgical procedures on the body, including vital systems such as the respiratory, cardiovascular, and musculoskeletal systems . A2- To learn : about the different types of surgical operations

	Understand the differences between different types of surgeries (such as abdominal, thoracic, and reconstructive surgeries) and their effects on movement and physical function. A3- Knowing : the basic principles of post-surgical physical therapyUnderstand the role of physical therapy in rehabilitating patients after surgery, including techniques to improve movement and flexibility, reduce pain, and speed up the healing process . A4- Understanding : the effect of anesthesia and surgery on breathing Learn about the effects of anesthesia and surgery on the respiratory system and how to perform breathing exercises to improve lung function after surgery . A5- Clinical evaluation: of patients before surgery Know how to perform a comprehensive pre-operative assessment of the patient's condition, including assessment of muscle strength, flexibility, and respiratory function . A6- Designing pre -surgical rehabilitation programs : Learn how to develop rehabilitation programs aimed at improving general fitness and body functions before surgery to enhance post-surgical outcomes. Course specific skill objectives B. B1 - Assessment of the physical condition of patients : Develop the skill of assessing the physical and functional status of patients before and after surgery using objective assessment tools such as measuring muscle strength, range of motion, and respiratory functions . B2 - Designing customized treatment programs : Ability to design and implement individual rehabilitation programs tailored to the needs of patients before and after surgery, taking into account the type of surgery and the patients' medical history . B3 - Performing therapeutic exercises correctly : Master the implementation of therapeutic exercises and clinical techniques required to improve mobility and flexibility and promote recovery after surgery . B4 - Application of pain management techniques : Learn how to use techniques such as electrical stimulation, manual techniques, and breathing exercises to relieve pain and improve comfort for patients after surgery

	B5 - Implementing strategies to prevent complications : Develop the skill of applying preventive strategies such as deep breathing exercises and early movement, to reduce the risk of complications such as pneumonia or blood clots . B6 - Providing advice and psychological support to patients : Improve communication skills to provide psychological support and advice to patients and their families about the stages of recovery and treatment requirements after surgery . B7 - Interaction with health teams : The ability to collaborate and communicate effectively with other members of the healthcare team, such as surgeons and nurses, to ensure comprehensive and integrated care for patients . B8 - Evaluation of treatment results : The skill of measuring and documenting the progress achieved by patients during the treatment stages, and evaluating the effectiveness of the treatment programs that have been implemented

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
The First	2Theoretical +4 Practical's	Knowledge and Application	Introduction: Definition, Indications for surgery	iteboard, powerp	whiteboard, powerpoint
The Second	2Theoretical +4 Practical's	Knowledge and Application	Postoperative complications	slides , hands-on xperiments Repor oral and written theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams
The Third	2Theoretical +4 Practical's	Knowledge and Application	Infection and Inflammatio	iteboard, powerp	whiteboard, powerpoint
The Fourth	2Theoretical +4 Practical's	Knowledge and Application	Wounds / ulcers	slides , hands-on xperiments Repor oral and written theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams
Fifth	2Theoretical +4 Practical's	Knowledge and Application	Complications of immobilizati	iteboard, powerp	whiteboard, powerpoint

Sixth	2Theoretical +4 Practical's	Knowledge and Application	Abdominal surgeries for gastrointestinal tract	slides , hands-on xperiments Repor oral and written theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams
Seventh	2Theoretical +4 Practical's	Knowledge and Application	Genito-urinary system surger	iteboard, powerp	whiteboard, powerpoint
eighth	2Theoretical +4 Practical's	Knowledge and Application	Breast cancer and mastector	slides , hands-on experiments	slides , hands-on experiments
ninth	2Theoretical +4 Practical's	Knowledge and Application	Mastectomy	Reports, oral and written theoretica exams	Reports, oral and written theoretical exams
Tenth	2Theoretical +4 Practical's	Knowledge and Application	Burn: Definition, Types, Classification	iteboard, powerp	whiteboard, powerpoint
Eleventh	2Theoretical +4 Practical's	Knowledge and Application	Burn: Immediate care, physi therapy management	slides , hands-on experiments	slides , hands-on experiments
Twelfth	2Theoretical +4 Practical's	Knowledge and Application	Skin grafting: Indications, Types, Post-operative care of plastic surgery with specific role of physiotherap	Reports, oral and written theoretica exams	Reports, oral and written theoretical exams
Thirteenth	2Theoretical +4 Practical's	Knowledge and Application	Tendon repair: Procedure, Recovery, Complications, Pre-operative and post-operat physical therapy manageme	iteboard, powerp	whiteboard, powerpoint
Fourteenth	2Theoretical +4 Practical's	Knowledge and Application	Reconstructive surgery of peripheral nerves	slides , hands-on experiments	slides , hands-on experiments
Fifteenth	2Theoretical +4 Practical's	Knowledge and Application	Revision.	Reports, oral and written theoretica exams	Reports, oral and written theoretical exams

11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	**Goodman, C. C., & Fuller, K. S. (2020).** ***Pathology for Physical Therapist Assistant*** **(2nd ed.). Elsevier**
Main references (sources)	**Cameron, M. H. (2017).** ***Physical Agents in Rehabilitation From Research to Practice*** **(5th ed.). Elsevier**
Recommended books and references (scientific journals, reports…)	**Archives of Physical Medicine and Rehabilitation**
Electronic References, Websites	**American Physical Therapy Association (APTA)**

1.Course Name: Physical therapy for muscular system diseases
2.Course Code: PTT 204
3.Semester / Year: First semester / 2025-2026
4.Description Preparation Date: 1/9/2025
5.Available Attendance Forms: In-person Lectures
6.Number of Credit Hours (Total) / Number of Units (Total)
30 Theoretical + 60 Practical hours / 4 Units
7.Course administrator's name (mention all, if more than one name)
Name: Dr. Muhannad Emad Majeed Email:

8. Course Objectives	
Course Objectives	• **The aim of physical therapy for musculoskeletal disorders focus improving** • **muscle function, relieving pain, and restoring normal movement**

9. Teaching and Learning Strategies	
Strategy	A. Cognitive objectives A1- Understanding Anatomy Learn about the anatomy of the muscular system, including the muscular and skeletal structure of muscles and their relationship to the nervous system . A2- Knowing muscle functions :

	Understand muscle functions and normal movement patterns, and how diseases and injuries affect these functions . A3- Understanding muscular system diseases : Learn about the different types of muscular diseases, such as muscular dystrophy, inflammation, and genetic disorders, and the causes and causative factors of each . A4 - Diagnosis of muscle diseases : Understand the methods used to diagnose diseases of the musculoskeletal system, including clinical examinations, medical imaging, and laboratory tests . A5 - Knowing the basic principles of physical therapy : Learn the principles of physical therapy and its goals in treating diseases of the muscular system, including the use of exercises and manual therapy . A6 - Understanding evaluation techniques : Knowledge of assessment techniques used to determine the level of muscle weakness, range of motion, and functional ability of patients . A7 - Design of rehabilitation programs : Develop knowledge on how to design individual rehabilitation programs that take into account the type and severity of the muscular disease and the patient's specific needs . A8 - Learn about therapeutic techniques : Knowledge of different physical therapy techniques used to treat muscular disorders, such as strengthening exercises, flexibility exercises, and electrotherapy Course specific skill objectives B. B1 - Assessment of the physical condition of patients : Develop the skill of conducting a comprehensive assessment of patients' condition, including measuring muscle strength, range of motion, and balance. B2 - Designing customized treatment programs : Ability to design and implement individual rehabilitation programs that meet patients' specific needs, taking into account the type and severity of the disease . B3 - Implementation of therapeutic exercises : Mastering the correct and safe implementation of various therapeutic exercises, including muscle strengthening and flexibility exercises . B4 - Application of manual therapy techniques :

	Develop skills in using manual therapy techniques to improve joint and muscle movement and relieve pain . B5 - Application of electrical technologies : Learn how to use electrical techniques such as electrical stimulation to improve muscle function and relieve pain B6 - Providing psychological and emotional support : Improving communication skills to provide psychological and emotional support to patients, enhancing their treatment experience and increasing their commitment to treatment . B7 - Evaluation of treatment results : Ability to evaluate the effectiveness of treatment programs by monitoring patients' progress and documenting improvements in their functional ability . B8 - Implementing prevention strategies : Develop skills to implement preventive strategies to prevent the exacerbation of musculoskeletal conditions, and teach patients how to maintain healthy muscles . B9 - Cooperation with health teams : Enhance the ability to collaborate and communicate effectively with other members of the healthcare team to ensure comprehensive patient care . Skilled in measuring and documenting patient progress throughout treatment and evaluating the effectiveness of implemented treatment programs. Assessment of the physical condition of patients

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
The First	2Theoretical +4 Practical's	Knowledge and Application	Medical terminology	iteboard, powerp	whiteboard, powerpoint
The Second	2Theoretical +4 Practical's	Knowledge and Application	Patient history, Examination	slides , hands-on xperiments Repor oral and written theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams

The Third	2Theoretical +4 Practical's	Knowledge and Application	Musculoskeletal Signs and Symptoms	iteboard, powerpo	whiteboard, powerpoint
The Fourth	2Theoretical +4 Practical's	Knowledge and Application	Rheumatoid Arthritis: Definition, Epidemiology, Pathology, and Pathogenesi Clinical and Laboratory Manifestations	slides , hands-on xperiments Repor oral and written theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams
Fifth	2Theoretical +4 Practical's	Knowledge and Application	Rheumatoid Arthritis: Assessme and Physical Therapy Management	iteboard, powerpo	whiteboard, powerpoint
Sixth	2Theoretical +4 Practical's	Knowledge and Application	Ankylosing Spondylitis	slides , hands-on xperiments Repor oral and written theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams
Seventh	2Theoretical +4 Practical's	Knowledge and Application	Psoriatic arthritis	iteboard, powerpo	whiteboard, powerpoint
eighth	2Theoretical +4 Practical's	Knowledge and Application	Reactive arthritis :	slides , hands-on experiments	slides , hands-on experiments
ninth	2Theoretical +4 Practical's	Knowledge and Application	Systemic lupus Erythematosu	Reports, oral and written theoretica exams	Reports, oral and written theoretical exams
Tenth	2Theoretical +4 Practical's	Knowledge and Application	Systemic Sclerosis :	iteboard, powerpo	whiteboard, powerpoint
Eleventh	2Theoretical +4 Practical's	Knowledge and Application	Polymyositis and dermomyos :	slides , hands-on experiments	slides , hands-on experiments
Twelfth	2Theoretical +4 Practical's	Knowledge and Application	Polymyalgia Rheumatica:	Reports, oral and written theoretica exams	Reports, oral and written theoretical exams
Thirteenth	2Theoretical +4 Practical's	Knowledge and Application	Gout:	iteboard, powerpo	whiteboard, powerpoint
Fourteenth	2Theoretical +4 Practical's	Knowledge and Application	Pseudo gout	slides , hands-on experiments	slides , hands-on experiments
Fifteenth	2Theoretical +4 Practical's	Knowledge and Application	General Revision.	Reports, oral and written theoretica exams	Reports, oral and written theoretical exams

11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	**Magee, D. J. (2014). *Orthopedic Physical Assessment* (6th ed.). Elsevier**
Main references (sources)	**O'Sullivan, S. B., Schmitz, T. J., & Fulk, G. D. (2019). *Physical Rehabilitation* (7th ed.). F. A. Davis.**
Recommended books and references (scientific journals, reports…)	**Journal of Orthopedic & Sports Physical Therapy (JOSP**
Electronic References, Websites	**Physiopedia – Musculoskeletal Physiotherapy**

1.Course Name: Primary Therapeutic equipment

2.Course Code: PTT 205

3.Semester / Year: First semester / 2025-2026

4.Description Preparation Date: 1/9/2025

5.Available Attendance Forms: In-person lectures

6.Number of Credit Hours (Total) / Number of Units (Total)

30 Theoretical + 45 Practical hours / 3 Units

7.Course administrator's name (mention all, if more than one name)

Name: Dr. Mazher Ali Aboud
Email:

8. Course Objectives

Course Objectives	• **The objectives of the course on primary care devices in physical therapy are to teach students and practitioners how to use various devices and techniques to improve patients' condition and speed up the recovery process**

9. Teaching and Learning Strategies

Strategy	A. Cognitive objectives A1-Understanding the different types of primary care devices

Learn about the different types of devices used in primary treatment, such as electrical stimulatio devices, ultrasound devices, and heat therapy devices
A2-Knowledge of physical principles :
Understand the physical principles underlying treatment devices, such as how electrical current a ultrasound work and their effects on tissue .
A3- Understanding how devices work :
Learn how each device used in primary care works, including settings and operational parameter
A4-Evaluation of treatment effectiveness :
Understand how to evaluate the effectiveness of treatment using these devices by measuring patients' response and changes in symptoms .
A5-Knowledge of clinical uses :
Learn about the clinical uses of each device, including the disease conditions that can be treated with specific devices
A6-Understanding precautions and side effects :
Know the necessary precautions when using devices, in addition to the possible side effects and how to deal with them .
A7- Application of ethical and professional standards :
Understanding the ethical and professional principles related to the use of treatment devices, including respecting patients' rights and ensuring their safety .
A8- Understanding technological updates :
Keeping up with technological updates and developments in the field of primary care devices, which helps improve clinical practices .
A9- Conducting the necessary examinations :
Knowing how to perform the necessary tests before using the devices to ensure they are suitable the patient's condition

Course specific skill objectives B.

B1 - Setting up and operating the devices :
Develop skills to set up and operate primary treatment equipment correctly according to technica guidelines .
B2 - Clinical assessment :
Ability to assess the clinical condition of patients and determine appropriate treatment requireme using equipment .
B3 - Implementation of treatment :
Proficiency in implementing treatment using devices safely and effectively, taking into account t needs of each patient .
B4- Monitoring the patient’s response :
Learn how to monitor patients' response during treatment and adjust settings based on their needs and progress
B5 - Applying the necessary precautions :
Develop skills to apply the necessary precautions to ensure patient safety while using devices .
B6 - Evaluation of treatment results :
The ability to evaluate the results of treatment using devices by measuring improvement in symptoms and functional performance. For patients .
B7- Interact with patients :
Improving communication skills with patients, clarifying treatment procedures and goals, and enhancing their commitment to treatment .
B8- Time management :
Develop effective time management skills while providing treatment, ensuring that the necessary care is provided in a timely manner
B9 - Cooperation with health teams :
Enhance collaboration and communication skills with other healthcare team members to ensure comprehensive and effective care

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
The First	2Theoretical +3 Practical's	Knowledge and Application	Electromagnetic Waves: Electromagnetic spectrum, physical properties of Electromagnetic radiations reflection	whiteboard, powerpoint	whiteboard, powerpoint
The Second	2Theoretical +3 Practical's	Knowledge and Application	Managing Pain with Therapeut Modalities	slides , hands-on periments Reports oral and written heoretical exams	slides , hands-on experiments Reports, oral and written theoretical exam
The Third	2Theoretical +3 Practical's	Knowledge and Application	Infrared Radiation	whiteboard, powerpoint	whiteboard, powerpoint
The Fourth	2Theoretical +3 Practical's	Knowledge and Application	Infra-Red Radiation: technic of application, duration an frequency of treatment	slides , hands-on periments Reports oral and written heoretical exams	slides , hands-on experiments Reports, oral and written theoretical exam
Fifth	2Theoretical +3 Practical's	Knowledge and Application	Ioist Heat Therapy: Hydro coll packs – in brief, Therapeuti uses, Indications & Contraindications	whiteboard, powerpoint	whiteboard, powerpoint
Sixth	2Theoretical +3 Practical's	Knowledge and Application	Moist Heat Therapy: Method application, technique of application	slides , hands-on periments Reports oral and written heoretical exams	slides , hands-on experiments Reports, oral and written theoretical exam
Seventh	2Theoretical +3 Practical's	Knowledge and Application	Wax Therapy	whiteboard, powerpoint	whiteboard, powerpoint
eighth	2Theoretical +3 Practical's	Knowledge and Application	Wax Therapy: Methods of application of Wax, technique application	slides , hands-on experiments	slides , hands-on experiments
ninth	2Theoretical +3 Practical's	Knowledge and Application	Contrast Bath	Reports, oral and written theoretical exams	Reports, oral and written theoretical exam
Tenth	2Theoretical +3 Practical's	Knowledge and Application	Fluid therapy: Construction Therapeutic uses, Indications Contraindications. Fluid therapy: Methods of applications	whiteboard, powerpoint	whiteboard, powerpoint
Eleventh	2Theoretical +3 Practical's	Knowledge and Application	Ultra Violet Production of UVR physiological effects of U.VR	slides , hands-on experiments	slides , hands-on experiments
Twelfth	2Theoretical +3 Practical's	Knowledge and Application	Ultra Violet Radiation Calculation of E1, E2, E3, E	Reports, oral and written theoretical exams	Reports, oral and written theoretical exam

			doses., technique to find out test dose and its importance		
Thirteenth	2Theoretical +3 Practical's	Knowledge and Application	LASER: Define, Types, Principles of Production. Production of LASER by various methods	whiteboard, powerpoint	whiteboard, powerpoint
Fourteenth	2Theoretical +3 Practical's	Knowledge and Application	LASER: Methods of applicat technique of application	slides , hands-on experiments	slides , hands-on experiments
Fifteenth	2Theoretical +3 Practical's	Knowledge and Application	General Revision.	Reports, oral and written theoretical exams	Reports, oral and written theoretical exam

11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	**Cameron, M. H. (2017).** ***Physical Agents in Rehabilitat From Research to Practice*** **(5th ed.). Elsevier**
Main references (sources)	**Licht, S. (2002).** ***Therapeutic Heat and Cold*** **(4th ed.). Williams & Wilkins**
Recommended books and references (scientific journals, reports…)	**Physiotherapy Research International**
Electronic References, Websites	**American Physical Therapy Association (APTA).**

1.Course Name: Specialized Treatment Devices
2.Course Code: PTT 206
3.Semester / Year: Second semester / 2025-2026
4.Description Preparation Date: 1/9/2025
5.Available Attendance Forms: In-person lectures
6.Number of Credit Hours (Total) / Number of Units (Total)
30 Theoretical + 45 Practical hours / 3 Units
7.Course administrator's name (mention all, if more than one name)
Name: Dr. Mazher Ali Aboud Email:

8. Course Objectives	
Course Objectives	• The objectives of the Specialized Therapeutic Equipment course in the field of physical therapy focus on the use of advanced techniques and devices in treating complex cases and providing specialized treatments

9. Teaching and Learning Strategies	
Strategy	A. Cognitive objectives A1-Understanding the types of specialized devices Learn about the different types of devices used in specialized treatments, such as ultrasound therapy devices, electrical stimulation devices, and laser devices . A2-Knowledge of scientific principles : Understand the physical and biological principles underlying specialized treatment devices and their effects on tissues . A3-Understanding the mechanism of action Learn how each device works, including the settings and operating parameters necessary to achieve the best treatment results . A4-Knowledge of clinical uses :

	Understand the different clinical uses of specialized devices, and the disease conditions that can be treated with each device . A5-Understanding interactions and side effects : Knowing the potential interactions and side effects of using devices and how to deal with them . A6-Evaluation of treatment effectiveness : The ability to evaluate the effectiveness of treatments using specialized devices by measuring the improvement in patients' condition A7- Understanding ethical standards : Knowledge of ethical and professional standards related to the use of specialized equipment, ensuring patient safety and respect for their rights . A8- Follow-up of technological developments : Learn about the latest developments and innovations in the field of specialized treatment devices and how to apply them in clinical practice . A9- Treatment planning : Understand how to plan treatment using specialized devices based on patient needs and assessment of the clinical condition . A10- Conducting the necessary examinations : Knowing how to perform the necessary tests to determine the suitability of using devices for patients . A11- Documentation and reports : Understand the importance of accurately documenting device use and treatment outcomes to ensure quality Course specific skill objectives B. B1 - Setting up and operating the devices : Develop skills to properly set up and operate specialized treatment equipment according to technical guidelines . B2 - Clinical assessment : Ability to assess the clinical condition of patients and determine appropriate treatment requirements using equipment . B3 - Implementation of treatment :

	Proficiency in implementing treatment using specialized equipment in a safe and effective manner, taking into account the needs of each patient B4 - Monitoring the patient's response : Learn how to monitor patients' response during treatment and adjust settings based on their needs and progress B5 - Applying the necessary precautions : Develop skills to apply the necessary precautions to ensure patient safety while using devices . B6 - Evaluation of treatment results : The ability to evaluate the results of treatment using devices by measuring the improvement in symptoms and functional performance of patients . B7 - Interacting with patients : Improving communication skills with patients, clarifying treatment procedures and goals, and enhancing their commitment to treatment B8 - Time management : Develop effective time management skills while providing treatment, ensuring that the necessary care is provided in a timely manner B9 - Cooperation with health teams : Enhance collaboration and communication skills with other healthcare team members to ensure comprehensive and effective care . B10 - Documentation and reports : Develop skills to accurately document device use and treatment outcomes in medical records

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method

The First	2Theoretical +3 Practical's	Knowledge and Application	Introduction to Physical Therapy Modalities	iteboard, powerpo	whiteboard, powerpoint
The Second	2Theoretical +3 Practical's	Knowledge and Application	Electrotherapy Equipment	slides , hands-on xperiments Repor oral and written theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams
The Third	2Theoretical +3 Practical's	Knowledge and Application	Thermotherapy and cry therapy devices	iteboard, powerpo	whiteboard, powerpoint
The Fourth	2Theoretical +3 Practical's	Knowledge and Application	Therapeutic Exercise Devic	slides , hands-on xperiments Repor oral and written theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams
Fifth	2Theoretical +3 Practical's	Knowledge and Application	Hydrotherapy Devices	iteboard, powerpo	whiteboard, powerpoint
Sixth	2Theoretical +3 Practical's	Knowledge and Application	Laser and Light Therapy Devices	slides , hands-on xperiments Repor oral and written theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams
Seventh	2Theoretical +3 Practical's	Knowledge and Application	Introduction to phototherap	iteboard, powerpo	whiteboard, powerpoint
eighth	2Theoretical +3 Practical's	Knowledge and Application	Prosthetic Devices	slides , hands-on experiments	slides , hands-on experiments
ninth	2Theoretical +3 Practical's	Knowledge and Application	Traction Therapy Devices	Reports, oral and written theoretica exams	Reports, oral and written theoretical exams
Tenth	2Theoretical +3 Practical's	Knowledge and Application	Orthotics and Prosthetics	iteboard, powerpo	whiteboard, powerpoint
Eleventh	2Theoretical +3 Practical's	Knowledge and Application	Robotic and advanced rehabilitation devices	slides , hands-on experiments	slides , hands-on experiments
Twelfth	2Theoretical +3 Practical's	Knowledge and Application	Clinical Practicum	Reports, oral and written theoretica exams	Reports, oral and written theoretical exams

Thirteenth	2Theoretical +3 Practical's	Knowledge and Application	Traction Therapy Devices	iteboard, powerpo	whiteboard, powerpoint
Fourteenth	2Theoretical +3 Practical's	Knowledge and Application	Patient Safety and Equipme Maintenance	slides , hands-on experiments	slides , hands-on experiments
Fifteenth	2Theoretical +3 Practical's	Knowledge and Application	Ethical Considerations in Device use.	Reports, oral and written theoretica exams	Reports, oral and written theoretical exams

11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	**Prentice, W. E. (2015). *Therapeutic Modalities Rehabilitation* (4th ed.). McGraw-Hill.**
Main references (sources)	**Kitchen, S., & Bazin, S. (2015). *Clayton's Electrotherapy* (13th ed.). Elsevier.**
Recommended books and references (scientific journals, reports…)	**Journal of Electromyography and Kinesiology**
Electronic References, Websites	**American Physical Therapy Association (APTA):**

1.Course Name: Pathology
2.Course Code: PTT 207
3.Semester / Year: First semester / 2025-2026
4.Description Preparation Date: 1/9/2025
5.Available Attendance Forms: In-person lectures
6.Number of Credit Hours (Total) / Number of Units (Total)
30 Theoretical hours / 2 Units
7.Course administrator's name (mention all, if more than one name)
Name: Amna Muhannad Abd-rahman Email:

8. Course Objectives	
Course Objectives	• pathology include understanding disease processes and analyzing the causes • and effects of diseases on the human body. This science plays a fundamental • role in diagnosing diseases, directing treatment, and understanding how to • prevent diseases

9. Teaching and Learning Strategies	
Strategy	A. Cognitive objectives A1- Understanding the scientific foundations : Study of the scientific foundations related to pathology, including definitions and basic concepts . A2- Knowing the types of diseases Identify different types of diseases, including infectious diseases, chronic diseases, and tumors .

	A3- Understanding the pathological mechanisms : Study of the biological and physiological mechanisms that lead to the occurrence of diseases and how they affect the vital functions of the body . A4- Knowing the causative factors : Understanding the causative factors of disease, including genetic, environmental, and behavioral factors . A5-Understanding the signs and symptoms : Recognize the various clinical signs and symptoms associated with diseases and how to evaluate them. A6- Study of diagnostic tests : Knowledge of the examinations and tests used to diagnose diseases and evaluate their condition . A7- Understanding tissue changes : Study of tissue changes associated with diseases and how they are used in diagnosis . A8-Learning about the principles of treatment : Understand the basic principles of treatment and management of various diseases . A9- Understanding the impact of diseases on public health : The study of how diseases affect public health, including epidemics and social spread . A10-Application of clinical knowledge : Develop the ability to apply academic knowledge to understand and analyze patients' clinical conditions Course specific skill objectives B. B1 - Clinical data analysis : Develop skills in analyzing patients' clinical data, including signs, symptoms, and medical history . B2 - Conducting laboratory tests : Mastering the skills of conducting laboratory tests and analyzing their results to diagnose diseases . B3 - Interpretation of diagnostic tests :

	Develop the ability to interpret the results of medical examinations and reports, such as x-rays and laboratory tests . B4 - Identifying pathological signs : Improve skills in recognizing pathological signs in clinical presentations and how to evaluate them . B5 - Application of textile techniques : Acquire skills in applying histological techniques such as microscopy and histological imaging B6 - Management of medical cases : Developing the ability to manage medical conditions and determine the best treatment options . B7- Effective communication : Enhance communication skills with patients and colleagues, including explaining results and treatment recommendations . B8 - Cooperation with health teams : Developing skills to cooperate with various health teams in diagnosing and treating diseases . B9 - Developing research skills : Enhance the ability to conduct research and analyze studies related to pathology . B10 - Accurate documentation : Learn how to accurately document clinical data and notes in medical records.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
The First	2Theoretical	Knowledge	Introduction: Aims and objects study of pathology. Definitions health, disease, causes of disea	iteboard, powerpo	whiteboard, powerpoint

The Second	2Theoretical	Knowledge	Inflammation & Repair (Acute inflammation)	slides , hands-on xperiments Repor oral and written theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams
The Third	2Theoretical	Knowledge	Inflammation & Repair (Acute inflammation)	hiteboard, powerpo	whiteboard, powerpoint
The Fourth	2Theoretical	Knowledge	Wound healing by primary & secondary union promotin factors	slides , hands-on xperiments Repor oral and written theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams
Fifth	2Theoretical	Knowledge	Circulatory disturbances Edema - pathogenesis – types - transudates /exudates	hiteboard, powerpo	whiteboard, powerpoint
Sixth	2Theoretical	Knowledge	Neoplastic	slides , hands-on xperiments Repor oral and written theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams
Seventh	2Theoretical	Knowledge	Bone & Joints	hiteboard, powerpo	whiteboard, powerpoint
eighth	2Theoretical	Knowledge	Bone & Joints PID- Scoliosis - Hemarthrosis - Gout – TB Arthritis - degenerative - inflammatory - RA	slides , hands-on experiments	slides , hands-on experiments
Ninth	2Theoretical	Knowledge	Muscle diseases	ports, oral and wri theoretical exams	Reports, oral and written theoretical exams
Tenth	2Theoretical	Knowledge	Neuro-muscular junction	hiteboard, powerpo	whiteboard, powerpoint
Eleventh	2Theoretical	Knowledge	GIT System	slides , hands-on experiments	slides , hands-on experiments
Twelfth	2Theoretical	Knowledge	Urinary	ports, oral and wri theoretical exams	Reports, oral and written theoretical exams
Thirteenth	2Theoretical	Knowledge	Deficiency disorders - Vitami A, B, C, D.	hiteboard, powerpo	whiteboard, powerpoint
Fourteenth	2Theoretical	Knowledge	Growth Disturbance	slides , hands-on experiments	slides , hands-on experiments

Fifteenth	2Theoretical	Knowledge	Endocrine - Hyperthyroidism Diabetes. Infections - cutaneo TB, leprosy, alopecia	ports, oral and wri theoretical exams	Reports, oral and written theoretical exams

11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	**Kumar, V., Abbas, A. K., & Aster, J. C. (2018). *Robbins B Pathology* (10th ed.). Elsevier.**
Main references (sources)	**Underwood, J., & Cross, S. (2018). General and Systematic Pathology (6th ed.). Elsevier**
Recommended books and references (scientific journals, reports…)	**Journal of Pathology**
Electronic References, Websites	**World Health Organization (WHO) – Pathology & Disease**

1.Course Name: Pharmacology

2.Course Code: PTT 208

3.Semester / Year: Second semester / 2025-2026

4.Description Preparation Date: 1/9/2025

5.Available Attendance Forms: person lectures-In

6.Number of Credit Hours (Total) / Number of Units (Total)

30 Theoretical hours / 2 Units

7.Course administrator's name (mention all, if more than one name)

Name: Dr.Ahmed Mousa Khalaf
Email:

8. Course Objectives

Course Objectives	• **Pharmacology course is to study the effects of medications on the body and how** • **they are used to treat diseases. This course aims to develop a comprehensive understanding of how medications work, appropriate dosages, and their side effects**

9. Teaching and Learning Strategies

Strategy	A. Cognitive objectives A1-Understanding the basic principles of pharmacology : Introduce students to the fundamentals of pharmacology, including key terms such as drug, drug toxicity, dosage, and efficacy . Understand the biological processes that affect the absorption, distribution, metabolism, and excretion of drugs (ADME). A2- Understanding the mechanism of action of drugs :

	Study of the mechanism of action of drugs at the level of cells, tissues and organs . Learn about the different types of drug receptors and how drugs affect these receptors to modify physiological activity A3-Interaction between drugs and biological systems : Understand how drugs affect different biological systems (such as the central nervous system, cardiovascular system, and immune system) . Learn about the potential side effects of medications and how to control them . A4- Developing the ability to use medications safely and effectively : Study the clinical use of medications and how to select the appropriate dosage for each patient based on their health condition . Identify drug interactions and how to avoid them to ensure safe and effective medication use A5- Understanding the principles of toxicology : Study of how drug overdoses or exposure to toxic substances affect the body and how to treat poisoning . Understanding the risk factors associated with long-term exposure to medications and chemicals . A6- Clinical application : Develop clinical skills that enable students to apply knowledge in clinical situations, such as selecting appropriate medications for a particular patient's condition, and adjusting dosages based on individual needs Course specific skill objectives B. B1 - Developing skills in choosing appropriate medications : The ability to assess the patient's condition and choose the most appropriate medication based on the medical diagnosis . Skill in determining the appropriate dose based on patient characteristics (such as age, weight, health condition) and safety criteria . B2 - Drug Interaction Analysis : Gain the ability to analyze potential interactions between different drugs to avoid harmful interactions Skill in identifying interactions between medications and health conditions (such as liver or kidney disease) and their impact on the required dose . B3 - Evaluation of side effects of medications : Develop the skill of recognizing the side effects of medications and identifying potential side effects The ability to modify treatment based on the patient's response to medications and avoid complications .

	B4 - Performing dose calculations : Gain the ability to calculate doses based on various criteria such as weight, age, and vital functions . Skill in adjusting doses according to changes in patient response or the appearance of side effects . B 5 Communication with the medical team and the patient : Develop communication skills with medical team members to clearly convey pharmaceutical information

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
The First	2Theoretical	Knowledge	Pharmacology – general princip of pharmacology	whiteboard, powerpoint	whiteboard, powerpoint
The Second	2Theoretical	Knowledge	Drugs acting on cardiovascula system	lides , hands-on experiments eports, oral and ritten theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams
The Third	2Theoretical	Knowledge	Drugs Affecting the Autonom Nervous system	whiteboard, powerpoint	whiteboard, powerpoint
The Fourth	2Theoretical	Knowledge	Drugs Affecting the central Nervous system - Anxiolytic a hypnotic analgesic	lides , hands-on experiments eports, oral and ritten theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams
Fifth	2Theoretical	Knowledge	General anesthetics: (inhaled) nd (intravenous) - local anesthe	whiteboard, powerpoint	whiteboard, powerpoint
Sixth	2Theoretical	Knowledge	Drugs affecting the endocrin system, hormones	lides , hands-on experiments eports, oral and ritten theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams
Seventh	2Theoretical	Knowledge	Drugs acting on digestive syste antacids – gastric	whiteboard, powerpoint	whiteboard, powerpoint

eighth	2Theoretical	Knowledge	peptic ulcer treatment – laxatives purgatives – antidiarrheal agents digestives – antiemetic – antiflatulents	lides , hands-on experiments	slides , hands-on experiments
Ninth	2Theoretical	Knowledge	Drugs acting on respiratory system	eports, oral and ritten theoretical exams	Reports, oral and written theoretical exams
Tenth	2Theoretical	Knowledge	Analgesics (non-opioids) – anti-inflammatory drugs – SA and NSAIDs	whiteboard, powerpoint	whiteboard, powerpoint
Eleventh	2Theoretical	Knowledge	Antibiotics and antibacterial agents	lides , hands-on experiments	slides , hands-on experiments
Twelfth	2Theoretical	Knowledge	Antibiotics and antibacterial agents – classification – spectrum – therapeutic uses side effects. Antiseptic and disinfectants: types and uses	eports, oral and ritten theoretical exams	Reports, oral and written theoretical exams
Thirteenth	2Theoretical	Knowledge	Antiviral Agents - Antifungal Antiparasitic Agents: Cancer Chemotherapy and immunopharmacology	whiteboard, powerpoint	whiteboard, powerpoint
Fourteenth	2Theoretical	Knowledge	Toxicology: toxic doses – lethal doses – therapeutic ind	lides , hands-on experiments	slides , hands-on experiments
Fifteenth	2Theoretical	Knowledge	Revision	eports, oral and ritten theoretical exams	Reports, oral and written theoretical exams

11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	**Katzung, B. G., Vanderah , T. W. (2020). *Basic and Clin Pharmacology* (15th ed.). McGraw-Hill**
Main references (sources)	**Benowitz, N. L. (2018). *Clinical Pharmacology.* McGraw-H**
Recommended books and references (scientific journals, reports…)	**European Journal of Pharmacology**
Electronic References, Websites	**PubMed - Pharmacology Research**

1.Course Name: Orthopedic Physical therapy
2.Course Code: PTT209
3.Semester / Year: Second semester / 2025-2026
4.Description Preparation Date: 1/9/2025
5.Available Attendance Forms: In-person lectures
6.Number of Credit Hours (Total) / Number of Units (Total)
30 Theoretical + 45 Practical hours / 3 Units
7.Course administrator's name (mention all, if more than one name)
Name: Dr. Salam Muhanned Salman Email:

8. Course Objectives	
Course Objectives	• The aim of physical therapy in orthopedics are to promote healing and • improve the function of muscles, bones, and joints after injuries or surgeries

9. Teaching and Learning Strategies	
Strategy	A. Cognitive objectives A1- Understanding the scientific foundations of physical therapy : Introducing students to the basic concepts of physical therapy and its role in treating bone and musculoskeletal problems Understand the physiological and anatomical principles related to the musculoskeletal system and how it is affected by injuries and diseases A2Understanding Injuries and Diseases Bones : Study common bone injuries such as fractures, sprains, and ligament injuries, and learn how they affect movement and physical function . Learn about chronic bone diseases such as arthritis and osteoporosis and how to treat them using physical therapy techniques . A3- Identifying the methods and techniques used in physical therapy : Understand a variety of physical therapy techniques such as therapeutic exercises, therapeutic massage, and manual techniques to treat orthopedic diseases and injuries .

	Learn how to use modern electrical and technological devices to enhance physical therapy for orthopedic patients . - Understanding the assessment of musculoskeletal condition : A4 Gain knowledge related to the assessment of musculoskeletal condition through motor tests and clinical diagnosis . Learn how to use diagnostic tests to determine how an injury or disease affects movement and function of muscles and joints A5- Understanding the principles of rehabilitation : Study the principles of rehabilitation after orthopedic injuries and surgery, and how to develop appropriate rehabilitation programs to restore strength, flexibility, and motor function . Learn how to monitor the development of the condition and modify physical therapy plans based on the patient's progress Course specific skill objectives B. Musculoskeletal assessment - B1 Ability to perform a complete clinical assessment of patients, including assessment of muscle strength, joint range of motion, and functional balance . Use of motor and diagnostic tests such as gait testing, mobility assessment, and flexibility tests to identify musculoskeletal problems . B2 - Designing individual treatment plans Gain the skill to develop a personalized physical therapy plan for each patient based on their health condition and diagnostic assessments . Determine realistic short- and long-term treatment goals, taking into account the patient's individual needs and health conditions B3 - Application of physical therapy techniques : Mastering physical therapy techniques used in orthopedics, such as therapeutic exercises, therapeutic massage, manual therapy, and stretching techniques . Ability to use modern devices and techniques, such as electrotherapy, ultrasound, and laser therapy to improve treatment results . B4 - Pain management and control : Develop skills in using physical therapy techniques to control pain caused by orthopedic injuries or diseases, including therapeutic exercises and heat or cold therapy . Gaining the ability to assess the severity of pain and its impact on the patient's movement and functional ability, and choosing appropriate methods to relieve it . B5 - Providing motor support and rehabilitation :

	Skilled in providing rehabilitation programs after surgery or musculoskeletal injuries, with a focus on improving strength, flexibility, and balance . The ability to modify treatment programs based on the patient's response and the evolution of his condition, to achieve the best possible results B6 - Patient education and provision of preventive advice : Develop communication skills with patients to educate them about their health condition and how to improve their lifestyle to avoid future injuries . Providing advice on injury prevention techniques and how to maintain bone and joint health in daily or sports activities . B7 - Handling medical tools and equipment : Ability to use physical therapy medical tools and equipment, such as braces and walking aids . Skill in directing patients to use medical devices appropriate to their condition . B8 - Performing manual therapeutic interventions : Gain skill in performing manual interventions such as joint manipulation, mobilization techniques, and deep tissue massage to improve movement and relieve pain . Using manual techniques to improve soft tissue flexibility and reduce muscle spasms B9 - Monitoring and evaluating the progress of the case : The ability to monitor the patient's progress through periodic assessment and recording changes in motor ability and physical functions . Modify treatment plans based on improvement or changes in the patient's condition to ensure that treatment goals are achieved . B10 - Teamwork skills : Develop the skill of working within a multidisciplinary medical team to ensure the provision of comprehensive and integrated care to patients . Ability to coordinate with physicians, surgeons, and pharmacists to ensure optimal physical therapy outcomes
10. Course Structure	

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
The First	2Theoretical +3 Practical's	Knowledge and Application	Anatomy of bone	iteboard, powerpo	whiteboard, powerpoint
The Second	2Theoretical +3 Practical's	Knowledge and Application	Fractures: Definition, Types of Bo Fracture, Pathophysiology of Bo Healing	slides , hands-on xperiments Repor oral and written theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams
The Third	2Theoretical +3 Practical's	Knowledge and Application	Fractures: Clinical Features, Factors affecting healing, Radiological features	iteboard, powerpo	whiteboard, powerpoint
The Fourth	2Theoretical +3 Practical's	Knowledge and Application	Fractures: Outlines of treatme and prognosis	slides , hands-on xperiments Repor oral and written theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams
Fifth	2Theoretical +3 Practical's	Knowledge and Application	Fractures: Assessment, Physiotherapy	iteboard, powerpo	whiteboard, powerpoint
Sixth	2Theoretical +3 Practical's	Knowledge and Application	Fractures: Complications, Rehabilitation	slides , hands-on xperiments Repor oral and written theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams
Seventh	2Theoretical +3 Practical's	Knowledge and Application	Specific fractures and dislocati	iteboard, powerpo	whiteboard, powerpoint
eighth	2Theoretical +3 Practical's	Knowledge and Application	Total knee replacement: Definition, Indications, Complications, Pre-operative assessment, Pre-surgical Physiotherapy	slides , hands-on experiments	slides , hands-on experiments
ninth	2Theoretical +3 Practical's	Knowledge and Application	Total knee replacement: Post-surgical Physiotherapy, Outcome Measures	Reports, oral and written theoretica exams	Reports, oral and written theoretical exams
Tenth	2Theoretical +3 Practical's	Knowledge and Application	Total hip replacement: Definition, Indications, Complications, Surgical Approaches	iteboard, powerpo	whiteboard, powerpoint
Eleventh	2Theoretical +3 Practical's	Knowledge and Application	Total hip replacement: Post-surg Physiotherapy, Outcome Measu	slides , hands-on experiments	slides , hands-on experiments

Twelfth	2Theoretical +3 Practical's	Knowledge and Application	Shoulder instabilities	Reports, oral and written theoretica exams	Reports, oral and written theoretical exams
Thirteenth	2Theoretical +3 Practical's	Knowledge and Application	Shoulder joint	iteboard, powerpo	whiteboard, powerpoint
Fourteenth	2Theoretical +3 Practical's	Knowledge and Application	Deformities of lower limb	slides , hands-on experiments	slides , hands-on experiments
Fifteenth	2Theoretical +3 Practical's	Knowledge and Application	Benign and malignant bone tun	Reports, oral and written theoretica exams	Reports, oral and written theoretical exams

11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	**Magee, D. J. (2014).** ***Orthopedic Physical Assessment*** **(6th ed.). Elsevier**
Main references (sources)	**Brukner, P., & Khan, K. (2016).** ***Brukner & Khan's Clini*** ***Sports Medicine: Injuries, Volume 1*** **(5th ed.). McGraw-H**
Recommended books and references (scientific journals, reports…)	**Journal of Orthopedic & Sports Physical Therapy (JOSPT)**
Electronic References, Websites	**American Physical Therapy Association (APTA)**

1.Course Name: Human Anatomy
2.Course Code: PTT210
3.Semester / Year: First semester / 2025-2026
4.Description Preparation Date: 1/9/2025
5.Available Attendance Forms: In-person lectures
6.Number of Credit Hours (Total) / Number of Units (Total)
30 Theoretical + 45 Practical hours / 3 Units
7.Course administrator's name (mention all, if more than one name)
Name: Dr. Muhanned Emad Majeed Email:

8. Course Objectives	
Course Objectives	• **The objectives of the Human Anatomy course focus on understand the structure of the human body, how it is organized, and its functi**

9. Teaching and Learning Strategies	
Strategy	A. Cognitive objectives A1- Understanding the anatomical foundations of the human body Gain basic knowledge of the anatomical structures of the human body, including bones, muscles, blood vessels, nerves, and internal organs . Identify the anatomical organization of the human body and divide it into systems (such as the muscular, skeletal, circulatory, and nervous systems) - Identify the main organs and their functions -A2 Understand the location and function of vital organs such as the heart, lungs, liver, kidneys, and brain Learn how these organs interact with each other to maintain the body's vital functions A3- Study of the anatomical structures in the musculoskeletal system : Study of the major bones, joints, and muscles that make up the human skeleton, and understand

	their role in movement and support . Learn about the relationships between bones and muscles and how they work together to provide movement . A4- Identifying superficial anatomy : Recognize the surface anatomy of the body and identify prominent anatomical structures that can be felt or seen through the skin . Understand how to use surface landmarks in clinical examinations . A5- Understanding the central and peripheral nervous system : Study of the components of the central nervous system (brain and spinal cord) and the peripheral nervous system (peripheral nerves) . Understanding how nerve signals are transmitted and control different body functions A6- Study of the circulatory system and cardiovascular anatomy : Understand the detailed anatomy of the heart and blood vessels (arteries and veins) and how blood is distributed in the body . Identify the relationship between the structure of the heart and its function in pumping blood and maintaining blood circulation . A7-Understanding the respiratory system : Study of the detailed anatomy of the respiratory system including the nose, trachea, lungs, and diaphragm . Learn how the respiratory system is organized to complete gas exchange and supply the body with oxygen . A8- Study of the digestive system : Study of the main components of the digestive system such as the stomach, small and large intestines, liver, and pancreas . Understand how this system regulates food digestion and nutrient absorption A9- Understanding the urinary and reproductive system : Learn about the urinary system, including the kidneys, ureters, bladder, and urethra, and their functions in eliminating waste . Study of the male and female reproductive organs and understanding their role in reproduction . A10- Understanding the lymphatic system and the immune system : Identify the main components of the lymphatic system, including lymph vessels and lymph nodes, and understand its role in the body's defense . Study the role of the immune system in protecting the body from diseases .

	A11- Acquiring the ability to read anatomical drawings : Learn how to interpret anatomical drawings and images, including diagrams and cross-sectional anatomy . The ability to link theoretical information with practical images of human anatomy . A12- Identifying individual anatomical differences : Understand that there are normal anatomical differences between individuals and that these differences may affect diagnosis and treatment . Learn how anatomical differences can impact medical and clinical practice Course specific skill objectivesB. B1 - Ability to identify anatomical structures : Acquire the ability to identify the various anatomical structures of the human body through practical examination of cadavers or anatomical models . Develop the skill of distinguishing between bones, muscles, internal organs, and blood vessels in humans . B2 - Use of anatomical tools : Learn how to use anatomical tools safely and accurately in anatomy studies . Gain the skill to perform simple dissections of tissues and structures to demonstrate the anatomical details of different organs and systems B3 - Analysis of anatomical medical images : Ability to read and interpret anatomical images such as X-rays, magnetic resonance imaging (MRI) , and computed tomography (CT). Learn how to link theoretical information to practical applications by analyzing clinical images of real patients . B4 - Identify the basic anatomical sites : Gain skill in identifying surface anatomical landmarks and locating important internal structures in the human body . The ability to use this knowledge in clinical examination to locate organs and bones during physical examination . B5 - Application of anatomy in clinical contexts : Learn how to use anatomical knowledge to understand clinical conditions, such as fractures, muscle tears, nerve injuries, and other conditions . The ability to interpret the relationship between human anatomy and disease symptoms in patients, which helps in providing appropriate medical care . B6 - Practical anatomical assessment skill :

	Ability to perform a practical assessment of anatomical structures through physical examination or medical imaging techniques . Develop skills in applying clinical examination to evaluate injuries or anatomical abnormalities in patients . B7 - Communication using anatomical terms : Acquire the ability to use anatomical terminology accurately in communication with colleagues and healthcare professionals Improve the ability to clearly describe anatomical structures while preparing medical reports or clinical discussions B8 - Virtual and technological anatomy : Using technology such as 3D applications and virtual reality to study and dissect the human body virtually . The ability to analyze anatomical dimensions and structures in innovative ways using modern technological tools . B9 - Cooperation within anatomical working teams : Develop teamwork skills while performing dissections or analyzing clinical cases related to dissection .Ability to share knowledge and contribute effectively to medical teams to provide accurate anatomical analyses

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
The First	2Theoretical +3 Practical's	Knowledge and Application	Nervous system: Central Nervous System: Disposition	iteboard, powerpo	whiteboard, powerpoint
The Second	2Theoretical +3 Practical's	Knowledge and Application	Nervous system: Cerebrum, erebellum, Thalamus, Hypothalar Internal Capsule, Blood Supply Brain	slides , hands-on xperiments Repor oral and written theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams
The Third	2Theoretical +3 Practical's	Knowledge and Application	Cardio-Vascular system: Comprehend the external and internal features of the structure the heart and their implicatior	iteboard, powerpo	whiteboard, powerpoint

The Fourth	2Theoretical +3 Practical's	Knowledge and Application	Cardio-Vascular system: Mention the Internal features of the chambers of the heart, St the basic features of the bloo	slides , hands-on xperiments Repor oral and written theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams
Fifth	2Theoretical +3 Practical's	Knowledge and Application	Cardio-Vascular system: Identify the coronary arteries an coronary sinus, Name the parts the conducting system of hea	iteboard, powerpo	whiteboard, powerpoint
Sixth	2Theoretical +3 Practical's	Knowledge and Application	Nervous system, Autonomic nervous system, its componen Nerve receptors	slides , hands-on xperiments Repor oral and written theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams
Seventh	2Theoretical +3 Practical's	Knowledge and Application	Spinal cord	iteboard, powerpo	whiteboard, powerpoint
eighth	2Theoretical +3 Practical's	Knowledge and Application	Lymphatic system	slides , hands-on experiments	slides , hands-on experiments
ninth	2Theoretical +3 Practical's	Knowledge and Application	Respiratory system	Reports, oral and written theoretica exams	Reports, oral and written theoretical exams
Tenth	2Theoretical +3 Practical's	Knowledge and Application	Endocrine System	iteboard, powerpo	whiteboard, powerpoint
Eleventh	2Theoretical +3 Practical's	Knowledge and Application	Genito-urinary system	slides , hands-on experiments	slides , hands-on experiments
Twelfth	2Theoretical +3 Practical's	Knowledge and Application	Digestive system	Reports, oral and written theoretica exams	Reports, oral and written theoretical exams
Thirteenth	2Theoretical +3 Practical's	Knowledge and Application	Embryology: Development o bones, axial and appendicula skeleton and muscles, skeleton muscles	iteboard, powerpo	whiteboard, powerpoint
Fourteenth	2Theoretical +3 Practical's	Knowledge and Application	Embryology: Ovum, Spermatozoa, fertilization an formation of the Germ layers a their derivations	slides , hands-on experiments	slides , hands-on experiments
Fifteenth	2Theoretical +3 Practical's	Knowledge and Application	Revision	Reports, oral and written theoretica exams	Reports, oral and written theoretical exams

11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	**Drake, R. L., Vogl, W., & Mitchell, A. W. M. (2019). *Gray Anatomy for Students* (4th ed.). Elsevier**
Main references (sources)	**Snell, R. S. (2011). *Clinical Anatomy by Systems.* Lippinc Williams & Wilkins.**
Recommended books and references (scientific journals, reports…)	**Journal of Anatomy**
Electronic References, Websites	**Visible Body – Anatomy Learning Tools**

1.Course Name: Medical psychology

2.Course Code: MTCD201

3.Semester / Year: First semester / 2025-2026

4.Description Preparation Date: 1/9/2025

5.Available Attendance Forms: In-person lectures

6.Number of Credit Hours (Total) / Number of Units (Total)

30 Theoretical / 2 Units

7.Course administrator's name (mention all, if more than one name)

Name: Taha Akram Shabeeb
Email:

8. Course Objectives

Course Objectives	• **The objectives of the Medical Psychology course focus on studying relationship between psychological and health aspects, and the imp of psychological factors on health and illness**

9. Teaching and Learning Strategies

Strategy	A. Cognitive objectives A1- Understanding the psychological factors associated with health : Studying how emotions and behaviors influence patients' health and improve physical therapy outcomes. A2- Developing psychological assessment skills: Enabling students to assess the psychological state of patients and how it affects their physical treatment A3- Teaching coping strategies: Providing techniques to help patients cope with pain and anxiety, and enhancing their ability to cope with their health conditions.

A4- Enhancing interaction between practitioners and patients: Understanding the importance of effective communication and how it can impact treatment outcomes .

A5- Exploring the psychological effects of illness and injury: Studying how injuries or chronic diseases affect the psychological state of patients .

A6- Improving cultural awareness: Enhancing understanding of how cultural and social factors influence mental health and therapeutic behaviors .

A7- Application of psychological theories in physical therapy: Study of how to use psychological principles to improve therapeutic techniques .

A8- Guiding patients towards a healthy lifestyle: Providing the necessary knowledge to help patients make healthy decisions that enhance their recovery

Course specific skill objectivesB.

B1 - Effective communication skills : Enhancing the ability to communicate effectively with patients, including active listening, expressing empathy, and asking appropriate questions to understand their needs .

B2 - Psychological assessment : Developing skills to assess patients' psychological status through psychological assessment tools and observation, and identifying factors that may affect their therapeutic progress .

B3 - Apply coping strategies: Learn how to use techniques such as relaxation, mental imagery, and breathing techniques to help manage anxiety and pain in patients .

B4 - Develop comprehensive treatment plans: Learn how to integrate psychological knowledge with physical therapy plans, so that they include both psychological and physical aspects of treatment

B5 - Dealing with stressful situations : Acquiring skills to deal with patients suffering from stress or depression and the impact of this on the recovery process .

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
The First	2Theoretical	Knowledge	Introduction to the science of psychology	iteboard, powerpo	whiteboard, powerpoint
The Second	2Theoretical	Knowledge	Schools of thoughts in psychology Gestalt psychology – psychoanal	slides , hands-on xperiments Repor oral and written theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams

The Third	2Theoretical	Knowledge	Humanistic psychology – Behaviorism	iteboard, powerpo	whiteboard, powerpoint
The Fourth	2Theoretical	Knowledge	Mental process: Memory – Forgetting – Thinking – Langua	slides , hands-on xperiments Repor oral and written theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams
Fifth	2Theoretical	Knowledge	Senses - Attention - Imagination	iteboard, powerpo	whiteboard, powerpoint
Sixth	2Theoretical	Knowledge	The Structural Model of Personal	slides , hands-on xperiments Repor oral and written theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams
Seventh	2Theoretical	Knowledge	Psychological Defense Mechani	iteboard, powerpo	whiteboard, powerpoint
eighth	2Theoretical	Knowledge	Methods of Study in Psycholo	slides , hands-on experiments	slides , hands-on experiments
ninth	2Theoretical	Knowledge	The psychological causes for the appearance of disorder	Reports, oral and written theoretica exams	Reports, oral and written theoretical exams
Tenth	2Theoretical	Knowledge	The psychosomatic disorder: Hypochondriasis - Somatizatic disorder	iteboard, powerpo	whiteboard, powerpoint
Eleventh	2Theoretical	Knowledge	The doctor – patients relationsh medical consultation	slides , hands-on experiments	slides , hands-on experiments
Twelfth	2Theoretical	Knowledge	Psychotherapy – Medical applications of psychotherapy	Reports, oral and written theoretica exams	Reports, oral and written theoretical exams
Thirteenth	2Theoretical	Knowledge	Biological base of behavior	iteboard, powerpo	whiteboard, powerpoint
Fourteenth	2Theoretical	Knowledge	Suicide: The etiology of suicic	slides , hands-on experiments	slides , hands-on experiments
Fifteenth	2Theoretical	Knowledge	Revision	Reports, oral and written theoretica exams	Reports, oral and written theoretical exams

11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	**Taylor, S. E. (2017). *Health Psychology* (10th ed.). McGra Hill.**
Main references (sources)	**Lloyd, G. G., & Bor , R. (2009). *Practical Medical Psychology.* Springer.**
Recommended books and references (scientific journals, reports…)	**Psychosomatic Medicine**
Electronic References, Websites	**PubMed – Medical & Health Psychology Research**

1.Course Name: Metabolism

2.Course Code: MTCD202

3.Semester / Year: First semester / 2025-2026

4.Description Preparation Date: 1/9/2025

5.Available Attendance Forms: In-person lectures

6.Number of Credit Hours (Total) / Number of Units (Total)

30 Theoretical + 30 Practical hours / 3 Units

7.Course administrator's name (mention all, if more than one name)

Name: Dr. Ghiath Muhanned Salman
Email:

8. Course Objectives

Course Objectives	• Focuses on the study of how the body processes food and uses it to produce energy and support various body functions

9. Teaching and Learning Strategies

Strategy	A. Cognitive objectives A1- Understanding metabolic processes: Enabling students to understand how metabolism occurs in the body, including the metabolism of fats, carbohydrates, and proteins . A2- Application of nutritional knowledge: Teaching students how to apply nutritional knowledge to improve athletic performance and the overall health of patients . A3- Nutritional status assessment: Training students on how to assess the nutritional status of patients and use the necessary tools for this .

	A4- Dietary planning: Enabling students to design appropriate dietary plans that meet the needs of patients in different treatment conditions A5- Understanding the effect of nutrition on healing: Studying how proper nutrition affects the healing process and recovery from injuries . A6- Nutrition education: Enhancing the ability to educate patients about the importance of proper nutrition and how to achieve it in their daily lives Course specific skill objectivesB. B1 - Nutritional Data Analysis: Develop students' skills in analyzing nutritional information, including reading food labels and understanding the contents of foods . B2 - Nutritional Status Assessment: Acquire the ability to conduct a comprehensive assessment of patients' nutritional status using tools such as questionnaires and physical scales . B3 - Meal Planning: Learn how to design customized meal plans that fit patients' needs, including calculating calories and nutrients . B4 - Patient Guidance: Improve communication skills to guide patients on choosing healthy foods and how to improve their eating habits . B5 - Implementing nutritional programs: Acquiring the ability to implement various nutritional programs that suit different patient conditions B6 - Use of technology: Develop skills in using technological programs and applications that help in tracking diet and planning meals . B7 - Research Analysis: Acquire skills to analyze research and studies related to nutrition and understand their impact on clinical practice . B8 - Evaluating Effects: Learn how to evaluate the impact of dietary changes on physical performance and injury recovery

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
The First	2Theoretical +2 Practical's	Knowledge and Application	Metabolism	whiteboard, powerpoint	whiteboard, powerpoint

The Second	2Theoretical +2 Practical's	Knowledge and Application	Enzymes	slides , hands-on periments Reports oral and written heoretical exams	slides , hands-on experiments Reports, oral and written theoretical exam
The Third	2Theoretical +2 Practical's	Knowledge and Application	Michaels – Menten theory	whiteboard, powerpoint	whiteboard, powerpoint
The Fourth	2Theoretical +2 Practical's	Knowledge and Application	Carbohydrates Metabolism	slides , hands-on periments Reports oral and written heoretical exams	slides , hands-on experiments Reports, oral and written theoretical exam
Fifth	2Theoretical +3 Practical's	Knowledge and Application	Lactic Acid Fermentation	whiteboard, powerpoint	whiteboard, powerpoint
Sixth	2Theoretical +2 Practical's	Knowledge and Application	Citric and cycle /TCA cycle Krebs cycle	slides , hands-on periments Reports oral and written heoretical exams	slides , hands-on experiments Reports, oral and written theoretical exam
Seventh	2Theoretical +2 Practical's	Knowledge and Application	The electron transport chai	whiteboard, powerpoint	whiteboard, powerpoint
eighth	2Theoretical +2 Practical's	Knowledge and Application	Fructose Metabolism	slides , hands-on experiments	slides , hands-on experiments
ninth	2Theoretical +2 Practical's	Knowledge and Application	Galactose Metabolism	Reports, oral and written theoretical exams	Reports, oral and written theoretical exam
Tenth	2Theoretical +2 Practical's	Knowledge and Application	Glycogen metabolism	whiteboard, powerpoint	whiteboard, powerpoint
Eleventh	2Theoretical +2 Practical's	Knowledge and Application	Protein metabolism	slides , hands-on experiments	slides , hands-on experiments
Twelfth	2Theoretical +2 Practical's	Knowledge and Application	Protein Synthesis	Reports, oral and written theoretical exams	Reports, oral and written theoretical exam
Thirteenth	2Theoretical +2 Practical's	Knowledge and Application	Lipid Metabolism	whiteboard, powerpoint	whiteboard, powerpoint
Fourteenth	2Theoretical +2 Practical's	Knowledge and Application	Cholesterol metabolism	slides , hands-on experiments	slides , hands-on experiments
Fifteenth	2Theoretical +2 Practical's	Knowledge and Application	Nucleotide metabolism	Reports, oral and written theoretical exams	Reports, oral and written theoretical exam

11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	**Nelson, D. L., & Cox, M. M. (2017). *Lehninger Principles of Biochemistry* (7th ed.). WH Freeman**
Main references (sources)	**Brody, T. (1999). *Nutritional Biochemistry* (2nd ed.). AcademicPress.**
Recommended books and references (scientific journals, reports…)	**American Journal of Clinical Nutrition (AJCN)**
Electronic References, Websites	**World Health Organization (WHO) – Nutrition**

1.Course Name: Baath regime crimes in Iraq

2.Course Code: NTU203

3.Semester / Year: First semester / 2025-2026

4.Description Preparation Date: 1/9/2025

5.Available Attendance Forms: In-person lectures

6.Number of Credit Hours (Total) / Number of Units (Total)

30 Theoretical / 2 Units

7.Course administrator's name (mention all, if more than one name)

Name: Taha Akram Shabeeb
Email:

8. Course Objectives

Course Objectives	• Focuses on studying the crimes and practices committed by the Ba'ath regime in • Iraq during its rule

9. Teaching and Learning Strategies

Strategy	A. Cognitive objectives A1- Understanding the historical context: Identifying the political and social conditions that led to the emergence of the Baath regime in Iraq and how this affected the country . A2- Analysis of violations : Studying the crimes committed by the regime, such as genocide, torture, and arbitrary arrests, and their effects on Iraqi society . A3- Impact assessment: Assessment of the psychological, social and economic impacts of the crimes committed by the Baath regime on individuals and society . A4- Promoting awareness of rights: Enhancing understanding of human rights and relevant international laws, and how they can be used to hold accountable those responsible for these crimes .

A5- Study of transitional justice: Identifying the transitional justice initiatives and compensations that were taken after the fall of the regime and how they impacted national reconciliation .

A6- Evidence Analysis: Learn how to analyze documents and testimonies related to crimes, and understand the importance of archiving and historical documentation

Course specific skill objectivesB.

B1 - Enhancing empathy: Developing the ability to empathize with victims and their families, and to understand their suffering resulting from violations committed by the regime .

B2 - Raising awareness of human values: promoting the values of justice, equality and respect for human rights, and recognizing the importance of protecting these values in societies

B3 - Appreciating Cultural Diversity: Promoting appreciation of cultural and religious diversity in Iraq, and understanding how violations affect relations between different communities .

B4 - Stimulating critical moral thinking: Encouraging students to think critically about moral issues related to crimes, such as individual and collective responsibility .

B5 - Developing a sense of responsibility: Enhancing the sense of responsibility towards social change and contributing to building a more just society .

B6 - Enhancing the capacity for effective participation : Encouraging students to participate in activities that support human rights and reconciliation, such as awareness-raising and community education .

B7 - Dealing with pain and loss: Providing spaces to talk about the pain and loss resulting from violations, which contributes to individual and collective healing processes

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
The First	2Theoretical	Knowledge	Violations of rights and freedoms	iteboard, powerpo	iteboard, powerpo
The Second	2Theoretical	Knowledge	A descriptive overview of the politic systems in Iraq (1921-2003)	slides , hands-on xperiments Repor oral and written theoretical exams	slides , hands-on periments Reports, nd written theoretic exams

The Third	2Theoretical	Knowledge	he Baath regime's violations of pub rights and freedoms	hiteboard, powerpo	hiteboard, powerpo
The Fourth	2Theoretical	Knowledge	e impact of the Baath regime's beha on society	slides , hands-on xperiments Repor oral and written theoretical exams	slides , hands-on periments Reports, nd written theoretic exams
Fifth	2Theoretical	Knowledge	he impact of the transitional phase combating authoritarian politics	hiteboard, powerpo	hiteboard, powerpo
Sixth	2Theoretical	Knowledge	Psychological field	slides , hands-on xperiments Repor oral and written theoretical exams	slides , hands-on periments Reports, nd written theoretic exams
Seventh	2Theoretical	Knowledge	social field	hiteboard, powerpo	hiteboard, powerpo
eighth	2Theoretical	Knowledge	Religion and State	slides , hands-on experiments	slides , hands-on experiments
ninth	2Theoretical	Knowledge	ulture, media and the militarization society	ports, oral and wri theoretical exams	ports, oral and writ theoretical exams
Tenth	2Theoretical	Knowledge	e impact of oppression and wars on environment and population	hiteboard, powerpo	hiteboard, powerpo
Eleventh	2Theoretical	Knowledge	The use of internationally prohibite weapons and environmental pollutio	slides , hands-on experiments	slides , hands-on experiments
Twelfth	2Theoretical	Knowledge	scorched earth policy	ports, oral and wri theoretical exams	ports, oral and writ theoretical exams
Thirteenth	2Theoretical	Knowledge	Draining the marshes and forced migration	hiteboard, powerpo	hiteboard, powerpo
Fourteenth	2Theoretical	Knowledge	struction of the agricultural and ani environment and radioactive contamination	slides , hands-on experiments	slides , hands-on experiments
Fifteenth	2Theoretical	Knowledge	Mass graves and bombing of places worship	werpoint ،whitebo on -slides , hands experiments	ports, oral and writ theoretical exams

11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	**Rubaie, Hassan-Al(2009). *Baath Crimes: Testimonies and Documents*. .Jamal-Dar Al**
Main references (sources)	**Tripp, C. (2007). *A History of Iraq* (3rd ed.). Cambridge University Press.**
Recommended books and references (scientific journals, reports…)	**Human Rights Watch Reports on Iraq**
Electronic References, Websites	**United Nations - Archive of Crimes Against Humanity**

1.Course Name: Professional Ethics
2.Course Code: NTU203
3.Semester / Year: Second semester / 2025-2026
4.Description Preparation Date: 1/9/2025
5.Available Attendance Forms: In-person lectures
6.Number of Credit Hours (Total) / Number of Units (Total)
30 Theoretical / 2 Units
7.Course administrator's name (mention all, if more than one name)
Name: Taha Akram Shabeeb Email:

8. Course Objectives

Course Objectives	• **It focuses on promoting a deep understanding of the ethical values principles** • **that individuals should adopt in their fields of work**

9. Teaching and Learning Strategies

Strategy	A. Cognitive objectives A1- Understanding basic ethical principles :

	Learn about key ethical values and principles such as integrity, confidentiality, and respect, and how to apply them in the field of physical therapy . Understanding the therapist's responsibility to patients, colleagues, and the community . A2- Identifying professional laws and standards : Understanding the laws and regulations relevant to the practice of physical therapy, including regulations governing the profession and patient care . Learn about the approved professional regulations and standards that define how to practice the profession safely and responsibly . A3- Analysis of ethical issues in health care : The ability to analyze ethical problems and issues that may arise in daily work situations, such as challenges related to patient privacy, informed consent, and conflicts of interest . Learn how to handle difficult situations ethically by using an ethical framework . A4- Distinguishing between rights and duties : Learn about patients' rights and therapist responsibilities, including the right to privacy, information, and access to appropriate treatment A5- Enhancing critical thinking : Develop critical thinking skills to analyze ethical situations and make professional decisions based on sound ethical foundations . The ability to recognize the ethical consequences of decisions and actions taken in physical therapy practice . A6- Understanding professional relationships Recognizing the importance of building professional relationships based on mutual respect and trust between therapists, patients, and colleagues . Study how ethical values can influence the quality of health care and professional relationships . A7- Identifying the ethics of scientific research : Understand the ethical principles associated with scientific research in the field of physical therapy, including how to respect the rights of research participants and ensure transparency and integrity in the presentation of results . A8- Promoting responsible professional practices : Understand the importance of responsible professional practices and how to ensure compliance with ethical standards in all aspects of work. Study how to handle ethical violations and report them when necessary Course specific skill objectivesB. B1 - Ethical decision-making skills : Develop the ability to make sound ethical decisions when dealing with complex professional situations .

	The ability to use an ethical framework to analyze and evaluate options in situations that require an ethical solution . B2 - Effective communication skills : Enhance oral and written communication skills with patients and colleagues, while observing ethical values such as honesty and respect . Ability to explain complex ethical decisions to patients in a clear and understandable manner, and respect the patient's right to participate in making decisions about their care . B3 - Conflict resolution skills : Learn how to handle ethical and professional conflicts in an effective and constructive manner . The ability to negotiate and reach solutions that satisfy all parties involved, while maintaining a commitment to ethical values B4 - Confidentiality and information protection skills : Develop the ability to handle personal and sensitive patient information in a manner that respects privacy and confidentiality . Learn how to store and process medical information in a secure manner that complies with legal and ethical standards . B5 - Skills for dealing with complex cases : The ability to identify complex ethical situations that may arise in clinical practice, such as providing care in situations of conflict of interest or special patient circumstances . Learn how to provide optimal care, taking into account ethical and humane considerations when dealing with different patients, especially sensitive or vulnerable cases

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
The First	2Theoretical	Knowledge	Principles of professional ethics in the stages of civilizational developments	whiteboard, powerpoint	whiteboard, powerpoint
The Second	2Theoretical	Knowledge	Principles of Professional Ethics in Arab and Islamic Civilization	slides , hands-on periments Reports oral and written theoretical exams	slides , hands-on experiments Reports, oral and written theoretica exams
The Third	2Theoretical	Knowledge	Professional behavior: definition, concept, practical applications, and the relationshi between employees and their supervisors	whiteboard, powerpoint	whiteboard, powerpoint

The Fourth	2Theoretical	Knowledge	Basic professional ethics	slides , hands-on periments Reports oral and written theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams
Fifth	2Theoretical	Knowledge	Characteristics of professional ethics as a guide and guide to behavior	whiteboard, powerpoint	whiteboard, powerpoint
Sixth	2Theoretical	Knowledge	Characteristics and attributes of health workers: appearance, behavior, and commitment	slides , hands-on periments Reports oral and written theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams
Seventh	2Theoretical	Knowledge	The moral and legal rights of the patient and dealing with and dealing with the behavior of patient and his companions	whiteboard, powerpoint	whiteboard, powerpoint
eighth	2Theoretical	Knowledge	Patterns Behavioral/Humanitarian Definition, nature, motives, and interpretations	slides , hands-on experiments	slides , hands-on experiments
ninth	2Theoretical	Knowledge	Communication Styles/Linguistic Non-Linguistic Definition, types and effects Designing successful communicat methods	Reports, oral and written theoretical exams	Reports, oral and written theoretical exams
Tenth	2Theoretical	Knowledge	How communication styles affect behavior, listening and hear	whiteboard, powerpoint	whiteboard, powerpoint
Eleventh	2Theoretical	Knowledge	Behavioral trends and tendencies Definition, classification, factors affecting it, methods of measuring it	slides , hands-on experiments	slides , hands-on experiments
Twelfth	2Theoretical	Knowledge	Personality types and how to deal with them	Reports, oral and written theoretical exams	Reports, oral and written theoretical exams
Thirteenth	2Theoretical	Knowledge	Definition of personality, its types, and its relationship to profession Technician personality and its manifestations	whiteboard, powerpoint	whiteboard, powerpoint
Fourteenth	2Theoretical	Knowledge	Conditions of professional compatibility and the associated work relationship, its concept, conditions, and poor professional availability	slides , hands-on experiments	slides , hands-on experiments
Fifteenth	2Theoretical	Knowledge	Behavioral treatment of patients receiving the patient, dealing with him, gaining his trust, and maintaining professional secr	Reports, oral and written theoretical exams	Reports, oral and written theoretical exams

11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	**Beauchamp, T. L., & Childress, J. F. (2019). *Principles of Biomedical Ethics* (8th ed.). Oxford University Press**
Main references (sources)	**Banks, S. (2016). *Ethics and Values in Social Work* (4th ed.). Palgrave**
Recommended books and references (scientific journals, reports…)	**Journal of Medical Ethics**
Electronic References, Websites	**American Medical Association (AMA) – Code of Ethics**

Course Description / Level Three

1.Course Name: Physical Therapy of internal diseases
2.Course Code: PTT301
3.Semester / Year: First semester / 2025-2026
4.Description Preparation Date: 1/9/2025
5.Available Attendance Forms: In-person lectures
6.Number of Credit Hours (Total) / Number of Units (Total)
30 Theoretical + 45 Practical hours / 3 Units
7.Course administrator's name (mention all, if more than one name)
Name: Dr. Ibrahim Ihsaan Fadhil Email:

8. Course Objectives

Course Objectives	• **Knowing the types of diseases that affect some human body systems** • **Learn medical terms related to internal medicine** • **Identifying the causes of internal diseases, signs and symptoms** • **Knowledge of the field of medical rehabilitation and its role in treating internal diseases**

9. Teaching and Learning Strategies

Strategy	A. Cognitive objectives Identify the concept of common internal diseases (diseases of the respiratory, cardiovascular, digestive, urinary, and endocrine systems) . • Understanding the physiological and pathological foundations associated with these diseases and their impact on the various body systems . • Distinguishing the basic clinical signs and symptoms that accompany internal diseases and their impact on the patient's physical and functional activity . • Knowledge of the general principles of medical diagnosis, laboratory and radiological examinations related to internal diseases Explain the role of physical therapy in prevention, treatment, and rehabilitation of patients with internal diseases .

	• Analysis of methods of assessment and clinical examination of patients with internal diseases from a physical therapy perspective . • Recognize the importance of using therapeutic exercises, respiratory therapy techniques, and rehabilitation programs in improving patients' quality of life . • Explain the potential complications of internal diseases and how to deal with them within the physical therapy plan . • Comparison between different therapeutic intervention methods according to the type of disease and the patient's condition . • Applying scientific foundations in developing evidence-based treatment plans (Evidence-Based Practice). Course specific skill objectivesB. B1- Conducting a thorough clinical examination of internal medicine patients (measuring vital signs, assessing respiration, examining functional capacity) . B2- Applying respiratory physiotherapy techniques such as: deep breathing exercises, postural drainage , and manual methods to help improve ventilation B3 - Implement safe and effective treatment programs for patients with cardiovascular diseases (such as progressive endurance exercises and prevention of complications) . B4- Proficiency in the use of assistive devices (such as the Incentive Spirometer , lung capacity measuring devices, and the effort monitor). B5 - Patient training on energy conservation techniques and shortness of breath management . B6 - Designing individual practical treatment plans that suit the patient's internal condition, taking into account individual differences and functional capacity . B7 - Implementing rehabilitation programs after internal surgeries (such as heart or chest surgery) according to physical therapy protocols . B8 - Applying manual therapy techniques appropriate to some cases to improve movement and functions . B9 - Monitoring the development of the disease through continuous re-evaluation and modification of the treatment plan . B10 - Employing practical communication skills with the patient and his family to teach them the exercises and precautions to follow after leaving the hospital

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
The First	2Theoretical +3 Practical's	Knowledge and Application	History taking	iteboard, powerpo	whiteboard, powerpoint
The Second	2Theoretical +3 Practical's	Knowledge and Application	Hypertension: Definition, Etiolog Pathophysiology, Signs & Symptoms, Prevention, Effects exercises on blood pressure	slides , hands-on xperiments Repor oral and written theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams
The Third	2Theoretical +3 Practical's	Knowledge and Application	Diabetes mellitus: Definition Etiology, Classification, Pathophysiology, Signs & Symptoms, Prevention, Complications, Role of physiotherapy	iteboard, powerpo	whiteboard, powerpoint
The Fourth	2Theoretical +3 Practical's	Knowledge and Application	Human deficiency syndrome Definition, Epidemiology, Etiology, Pathophysiology, Staging, Signs & Symptoms, Prevention, Complications, Role of physiotherapy	slides , hands-on xperiments Repor oral and written theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams
Fifth	2Theoretical +3 Practical's	Knowledge and Application	Hepatitis: Definition, Etiology, Classification, Pathophysiolog Signs & Symptoms, Preventio Complications	iteboard, powerpo	whiteboard, powerpoint
Sixth	2Theoretical +3 Practical's	Knowledge and Application	Anemia: Definition, Epidemiolo Etiology, Signs & Symptoms Prevention, Complications	slides , hands-on xperiments Repor oral and written theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams
Seventh	2Theoretical +3 Practical's	Knowledge and Application	Leukemia: Definition, Etiolog Classification, Staging, Signs & Symptoms, Complicati Role of physiotherapy	iteboard, powerpo	whiteboard, powerpoint
eighth	2Theoretical +3 Practical's	Knowledge and Application	Multiple myeloma and lymphoma: Definition, Etiology, Pathophysiology, Signs & Symptoms, Complications, Role of physiotherapy	slides , hands-on experiments	slides , hands-on experiments
ninth	2Theoretical +3 Practical's	Knowledge and Application	Deep venous thrombosis: Definition, Etiology, Pathophysiology, Signs & Symptoms, Preventio Physiotherapy	Reports, oral and written theoretica exams	Reports, oral and written theoretical exams

Tenth	2Theoretical +3 Practical's	Knowledge and Application	Renal failure: Definition, Etiology, Classification, Signs & symptoms, Complications, Physiotherapy	iteboard, powerpo	whiteboard, powerpoint
Eleventh	2Theoretical +3 Practical's	Knowledge and Application	Gastroesophageal reflux, irritat bowel syndrome: Definition, Etiology, Signs & Symptoms Prevention, Physiotherapy	slides , hands-on experiments	slides , hands-on experiments
Twelfth	2Theoretical +3 Practical's	Knowledge and Application	Liver cirrhosis: Definition, Etiology, Pathophysiology, Sign Symptoms, Complications, Physiotherapy	Reports, oral and written theoretica exams	Reports, oral and written theoretical exams
Thirteenth	2Theoretical +3 Practical's	Knowledge and Application	Hypo and hyperthyroidism: Definition, Etiology, Signs & Symptoms, Complications Physiotherapy.	iteboard, powerpo	whiteboard, powerpoint
Fourteenth	2Theoretical +3 Practical's	Knowledge and Application	Adrenal gland disorders: Definition, Etiology, Signs & Symptoms, Complicati Physiotherapy	slides , hands-on experiments	slides , hands-on experiments
Fifteenth	2Theoretical +3 Practical's	Knowledge and Application	Revision	Reports, oral and written theoretica exams	Reports, oral and written theoretical exams

11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	**Hillegass, E. (2016).** ***Essentials of Cardiopulmonary Physical Therapy*** **(4th ed.). Elsevier**
Main references (sources)	**Frownfelter, D., & Dean, E. (2012).** ***Cardiovascular a Pulmonary Physical Therapy: Evidence and Practice*** **(5th ed.). Elsevier**
Recommended books and references (scientific journals, reports…)	**Journal of Cardiopulmonary Rehabilitation and Prevention**
Electronic References, Websites	**Physiopedia – Cardiopulmonary Physiotherapy**

1.Course Name: Physiotherapy for advanced surgery

2.Course Code: PTT302

3.Semester / Year: Second semester / 2025-2026

4.Description Preparation Date: 1/9/2025

5.Available Attendance Forms: In-person lectures

6.Number of Credit Hours (Total) / Number of Units (Total)

30 Theoretical + 45 Practical hours / 3 Units

7.Course administrator's name (mention all, if more than one name)

Name: Dr. Ibrahim Ihsaan Fadhil
Email:

8. Course Objectives

Course Objectives	• **1.Enabling the student to apply appropriate rehabilitation programs for different surgical cases.** • **2 .Introducing the student to the role of physical therapy in pre- and post-operative care .** • **3.Providing the student with skills to evaluate patients after surgical operations.** • **4. Preparing the student to deal with common complications after surgery (such as clots, shortness of breath, adhesions**

9. Teaching and Learning Strategies

Strategy	A. Cognitive objectives Learn the general principles of advanced surgery and its types (cardiac and thoracic surgery, brain and nerves, complex orthopedics, tumor surgery, etc.) . • Understanding the physiological and pathological basis of changes that occur after major surgery and their impact on the body's systems . • Knowing the potential complications after surgery (such as: clots, infection, decreased mobility syndrome) and the role of physical therapy in preventing them . • Explaining the different stages of rehabilitation after advanced surgeries and the steps of physical therapy at each stage .

	• Identify the indications and precautions for each type of surgery before starting physical therapy . • Analysis of rehabilitation protocols used in advanced surgeries (such as cardiopulmonary rehabilitation, neurological rehabilitation) . • Interpreting the results of medical, radiological, and laboratory examinations and linking them to the physical therapy plan Course specific skill objectivesB. B1- Conducting a thorough clinical assessment of advanced post-surgical patients (measuring vital signs, assessing respiration, muscle strength, and functional movement) . B2- Applying physical therapy protocols for various surgical cases such as: heart and thoracic surgeries, complex orthopedic surgeries, and neurological surgeries . B 3 - Mastering respiratory therapy techniques (deep breathing exercises, postural drainage, effective coughing techniques) for patients after thoracic or abdominal surgeries . B 4 - Implementing early rehabilitation programs within the hospital to reduce complications and improve recovery speed . B 5 - Use assistive devices (such as electrotherapy devices, respiratory exercise machines, and walking aids) correctly and safely . B 6 - Designing individual treatment plans tailored to the patient's condition, type of surgery, and stage of recovery . B 7 - Training patients in gradual therapeutic exercises to improve physical ability and restore daily functions . B8 - Modifying the treatment plan according to the patient’s response and clinical changes during the rehabilitation stages .

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
The First	2Theoretical +3 Practical's	Knowledge and Application	Introduction: Role of physiotherapy in advanced surgery, principles of pre- and post-operative rehabilitation	whiteboard, powerpoint	whiteboard, powerpoint

The Second	2Theoretical +3 Practical's	Knowledge and Application	Thoracic surgeries: definitions indications, surgical incision complications	slides , hands-on periments Reports oral and written heoretical exams	slides , hands-on experiments Reports, oral and written theoretical exam
The Third	2Theoretical +3 Practical's	Knowledge and Application	Physiotherapy managemen after thoracic surgeries.	whiteboard, powerpoint	whiteboard, powerpoint
The Fourth	2Theoretical +3 Practical's	Knowledge and Application	Cardiac surgeries: open and closed heart surgery – indications, complications, physiotherapy management	slides , hands-on periments Reports oral and written heoretical exams	slides , hands-on experiments Reports, oral and written theoretical exam
Fifth	2Theoretical +3 Practical's	Knowledge and Application	Pulmonary and chest injuries etiology, clinical presentation complications	whiteboard, powerpoint	whiteboard, powerpoint
Sixth	2Theoretical +3 Practical's	Knowledge and Application	Traumatic Brain Injury (TB Causes, mechanism, Glasgow Coma Scale, surgic interventions	slides , hands-on periments Reports oral and written heoretical exams	slides , hands-on experiments Reports, oral and written theoretical exam
Seventh	2Theoretical +3 Practical's	Knowledge and Application	Physiotherapy in moderate to severe TBI.	whiteboard, powerpoint	whiteboard, powerpoint
eighth	2Theoretical +3 Practical's	Knowledge and Application	Brain tumor surgery: indications, complications, physiotherapy management.	slides , hands-on experiments	slides , hands-on experiments
ninth	2Theoretical +3 Practical's	Knowledge and Application	Spinal surgeries (Cervical & Lumbar): Indications, complications, physiotherapy rehabilitation	Reports, oral and written theoretical exams	Reports, oral and written theoretical exam
Tenth	2Theoretical +3 Practical's	Knowledge and Application	Pelvic surgeries: indications, complications, physiotherapy management	whiteboard, powerpoint	whiteboard, powerpoint
Eleventh	2Theoretical +3 Practical's	Knowledge and Application	Peripheral vascular surgerie varicose veins, bypass graftin physiotherapy role	slides , hands-on experiments	slides , hands-on experiments
Twelfth	2Theoretical +3 Practical's	Knowledge and Application	Abdominal and bariatric surgeries: post-operative complications and rehabilitation	Reports, oral and written theoretical exams	Reports, oral and written theoretical exam
Thirteenth	2Theoretical +3 Practical's	Knowledge and Application	Gynecological surgeries: Cesarean section, hysterecto – physiotherapy manageme	whiteboard, powerpoint	whiteboard, powerpoint
Fourteenth	2Theoretical +3 Practical's	Knowledge and Application	Organ transplantation: liver, kidney, lung – physiotherapy role in early recovery	slides , hands-on experiments	slides , hands-on experiments
Fifteenth	2Theoretical +3 Practical's	Knowledge and Application	Burns and reconstructive surgeries, ICU physiotherapy, revision of course	Reports, oral and written theoretical exams	Reports, oral and written theoretical exam

11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	**Payne, W. K., & Jan, Y. K. (2018).** ***Surgical Conditions and Physical Therapy Management.*** **F. A. Davis.**
Main references (sources)	**Hertling, D., & Kessler, R. M. (2018).** ***Management of Common Musculoskeletal Disorders: Physical Therapy Principles and Methods*** **(5th ed.). Wolters Kluwer**
Recommended books and references (scientific journals, reports…)	**Journal of Rehabilitation Medicine**
Electronic References, Websites	**American Physical Therapy Association (APTA)**

1.Course Name: Basic Physiotherapy for Neurological Diseases
2.Course Code: PTT303
3.Semester / Year: First semester / 2025-2026
4.Description Preparation Date: 1/9/2025
5.Available Attendance Forms: In-person lectures
6.Number of Credit Hours (Total) / Number of Units (Total)
30 Theoretical + 45 Practical hours / 3 Units
7.Course administrator's name (mention all, if more than one name)
Name: Dr. Fawzi Hammadi Mahdi Email:

8. Course Objectives

Course Objectives	**Identify diseases affecting the central nervous system and the peripheral nervous system.** **.1-To learn the basic sciences to provide knowledge about aspects related to neuroscience and neurological diseases.** **2 -Identify various acquired neurological diseases and problems in adults** **3-Identify medical topics and terminology, pathophysiological causes, clinical examination and evaluation, compare contemporary and traditional interventions, and the impact of advanced technology in this field.** **4. Determine appropriate rehabilitation programs for each medical case using available therapeutic methods and exercises.**

9. Teaching and Learning Strategies

Strategy	A. Cognitive objectives A1- Introduction to the basic principles of neuroanatomy physical therapy and neurophysiology related to . A2- Understanding the pathophysiology of common neurological diseases such as: stroke, spinal cord injuries, multiple sclerosis, cerebral palsy, Parkinson's disease , etc. A3- Distinguish between different neurological signs and symptoms such as: muscle weakness, balance disorders, loss of sensation, and convulsions . A4- Familiarity with the basics of neurological assessment used in physical therapy: assessment of muscle strength, muscle tone , reflexes, balance, and gait . A5- Learn the principles of basic therapeutic interventions in neurological conditions (e.g., therapeutic exercises, sensorimotor stimulation, functional movement training) . A6- Understand the role of the integrated medical team in the rehabilitation of neurological patients, and how physical therapy integrates with other specialties. A7- Understanding the relationship between the type of neurological injury and appropriate rehabilitation in terms of short- and long-term. A8- Gain knowledge about assistive devices and therapeutic aids used in neurological rehabilitation . A9- Understand the principles of prevention of secondary complications of neurological diseases such as bed sores, joint stiffness, and poor physical fitness . A10- The ability to link theoretical knowledge with practical application in developing initial plans for physical therapy for various neurological conditions . Course specific skill objectivesB. B1- Conduct a thorough clinical neurological assessment (e.g., checking muscle strength, muscle tone, reflexes, balance, and motor coordination) . B2- Application of functional neurological assessment tests to determine the patient's ability to perform daily life activities . B3 - Design and implement initial physical therapy programs for neurological conditions in line with each patient's individual rehabilitation goals . B4 - Use of basic therapeutic methods (such as therapeutic exercises, neuromuscular facilitation techniques (PNF) , gait training, and balance exercises). B5 - Proper use of assistive devices and tools in rehabilitation (crutches, splints, gait trainers) .

	B6 - Implementing strategies to prevent complications such as pressure ulcers, joint stiffness, and muscle atrophy . B7 - Training the patient and his family on self -care techniques and strategies to improve quality of life . B8 - Ability to monitor patient response to treatment and modify the treatment plan according to clinical changes . B9 - Demonstrate effective clinical communication skills with the patient, his family, and members of the medical team . B10 - Integrating theoretical knowledge with practical aspects through clinical simulation and virtual/realistic cases

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
The First	2Theoretical +3 Practical's	Knowledge and Application	Medical terminology regarding neurological system, Anatomy and Physiology of the nervous system (Brain, CNS Support Structures, Neurons, PNS, Spinal Level Reflexes).	whiteboard, powerpoint	whiteboard, powerpoint
The Second	2Theoretical +3 Practical's	Knowledge and Application	Neurological assessment Higher mental function, assessmer brain, evaluation of cranial nerves and evaluation of autonomic nervous system)	slides , hands-on experiments Reports, oral and written theoretica exams	slides , hands-on experiments Reports, oral and written theoretical exams
The Third	2Theoretical +3 Practical's	Knowledge and Application	Investigations (principles, methods, views, normal/abnorm values/features of following investigative procedures in brie skull x-ray, CT, MRI, evoked potentials, lumbar puncture, EM NCV).	whiteboard, powerpoint	whiteboard, powerpoint
The Fourth	2Theoretical +3 Practical's	Knowledge and Application	Cerebro-vascular diseases: Define stroke, TIA, stroke in evolution, Lacunar infarct, Classification of stroke – Ischemic, hemorrhagic, venous infarcts	slides , hands-on experiments Reports, oral and written theoretica exams	slides , hands-on experiments Reports, oral and written theoretical exams
Fifth	2Theoretical +3 Practical's	Knowledge and Application	Cerebro-vascular diseases: Early warning Sign & Prevention. Risk factors, causes of ischemic stroke, causes of hemorrhagic stroke, Classification of hemorrhagic stroke, classification of stroke, stroke syndrome, investigations	whiteboard, powerpoint	whiteboard, powerpoint
Sixth	2Theoretical +3 Practical's	Knowledge and Application	Cerebro-vascular diseases: complications, medical and surgical management, physi therapy management	slides , hands-on experiments Reports, oral and	slides , hands-on experiments Reports, oral and

				written theoretica exams	written theoretical exams
Seventh	2Theoretical +3 Practical's	Knowledge and Application	Facial palsy, Bell's palsy: Causes, clinical features, physical therapy managemen	whiteboard, powerpoint	whiteboard, powerpoint
eighth	2Theoretical +3 Practical's	Knowledge and Application	Multiple sclerosis: pathophysiology, causes, clinical presentation, physical therapy management	slides , hands-on experiments	slides , hands-on experiments
ninth	2Theoretical +3 Practical's	Knowledge and Application	Parkinson's disease: pathophysiology, causes, clinica presentation, physical therapy management.	Reports, oral and written theoretica exams	Reports, oral and written theoretical exams
Tenth	2Theoretical +3 Practical's	Knowledge and Application	Trigeminal neuralgia: pathophysiology, causes, clinical presentation, physical therapy management	whiteboard, powerpoint	whiteboard, powerpoint
Eleventh	2Theoretical +3 Practical's	Knowledge and Application	Higher cortical, neuropsycholog and neurobehavioral disorders Causes of blackouts, Neural basis of consciousness, causes and investigations of Coma. Perceptual disorders and Speech disorders	slides , hands-on experiments	slides , hands-on experiments
Twelfth	2Theoretical +3 Practical's	Knowledge and Application	Movement disorders: Definition etiology, risk factors, pathophysiology, classification, clinical signs & symptoms, investigations, medical management	Reports, oral and written theoretica exams	Reports, oral and written theoretical exams
Thirteenth	2Theoretical +3 Practical's	Knowledge and Application	Movement disorders: Definition, etiology, risk factors, pathophysiology, classification, clinical signs & symptoms, investigations, medical management, surgical management and complications of following disorders –, Myoclonus and Wilson's disease	whiteboard, powerpoint	whiteboard, powerpoint
Fourteenth	2Theoretical +3 Practical's	Knowledge and Application	Cerebellar and coordination disorders: Etiology, Pathophysiology, classification, clinical signs and symptoms, investigations, differential diagnosis, management of Congenital ataxia, Friedreich's ataxia, Tabes dorsalis and Syphilis .	slides , hands-on experiments	slides , hands-on experiments
Fifteenth	2Theoretical +3 Practical's	Knowledge and Application	General Revision	Reports, oral and written theoretica exams	Reports, oral and written theoretical exams

11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	**Umphred , D. A., Lazaro, R. T., Roller, M., & Burton,**

	G. U. (2013). ***Umphred's Neurological Rehabilitation*** **(ed.). Elsevier**
Main references (sources)	**Lundy-Ekman, L. (2020).** ***Neuroscience: Fundament for Rehabilitation*** **(6th ed.). Elsevier**
Recommended books and references (scientific journals, reports…)	**Journal of Neurologic Physical Therapy (JNPT)**
Electronic References, Websites	**Physiopedia – Neurological Physiotherapy:**

1.Course Name: Physiotherapy for Spinal Cord Injuries

2.Course Code: PTT304

3.Semester / Year: Second semester / 2025-2026

4.Description Preparation Date: 1/9/2025

5.Available Attendance Forms: In-person lectures

6.Number of Credit Hours (Total) / Number of Units (Total)

30 Theoretical + 45 Practical hours / 3 Units

7.Course administrator's name (mention all, if more than one name)

Name: Dr. Ibrahim Ihsaan Fadhil
Email:

8. Course Objectives

Course Objectives	• **1-Learn about the anatomy , physiology and function of the spinal cord and the most important injuries it is exposed to.** • **2 -Identify spinal cord injuries and diseases.** • **3 -Identify the most important pathological causes of diseases and disorders affecting the spinal cord.** • **4 -Identify medical treatments and surgical interventions to treat these injuries.** • **5- Identify clinical symptoms, differential diagnosis, and evaluation of spinal cord disorders**

9. Teaching and Learning Strategies

Strategy	A. Cognitive objectives A1 - Definition of neuroanatomy and neurophysiology of the spinal cord and its relationship to motor and sensory functions . A2 - Understanding the pathophysiology of spinal cord injuries of all types (complete/incomplete) and their impact on neurological functions . A3 - Distinguish the different clinical signs and symptoms associated with levels of spinal cord injury, such as: paralysis, loss of sensation, convulsions, and bladder and bowel control disorders

	A4 - Familiarity with the basics of neurological assessment in cases of spinal cord injuries, including the ASIA classification , assessment of muscle strength, muscle tone , balance, and reflexes . A5 - Identify the principles of basic therapeutic interventions used in cases of spinal cord injury, such as: therapeutic exercises, training in sitting, standing and walking, and electrical stimulation . A6 - Understanding the role of the multidisciplinary medical team in the rehabilitation of patients with spinal cord injuries, and how physical therapy integrates with medical, nursing, psychological and social treatment . A7 - Understanding the relationship between the level of spinal cord injury and appropriate rehabilitation plans in terms of short- and long-term goals . A8 - Gaining knowledge about assistive devices such as wheelchairs, orthopedic devices, and gait training devices A9-Understanding the principles of prevention of secondary complications of spinal cord injuries such as: bedsores, joint stiffness, osteoporosis, and poor physical fitness . A10 - The ability to link theoretical knowledge with practical application by developing initial and integrated physical therapy plans for patients with spinal cord injuries Course specific skill objectivesB. B1 - Developing the skill of taking a medical history related to spinal cord injuries accurately and comprehensively . B2 - Providing the student with the ability to conduct a clinical examination and neurological assessment of injured patients, including assessment of muscle strength, balance, reflexes, and patient position . B3 - Training the student to use and classify spinal cord injuries according to the ASIA Scale and interpret its results in a practical manner . B4 - Enabling the student to design individual physical therapy plans that suit the level of injury and the treatment goals of each patient . B5 - Mastery of applying appropriate therapeutic exercises (movement therapy, balance exercises, gait exercises, breathing exercises) according to the patient’s needs . B6 - Providing the student with the ability to use therapeutic devices and equipment (such as electrical stimulation devices, orthopedic devices, wheelchairs) efficiently and safely . B7 - Developing the skill of monitoring and evaluating the patient’s progress periodically, and modifying the treatment plan according to the clinical response . B8 - Training the student to educate the patient and his family on daily care methods, prevention of complications, and promotion of functional independence .

	B9 - Enhancing the skill of working in a team spirit with the rest of the members of the multidisciplinary medical team to ensure the provision of comprehensive care to the patient . B10 - Develop clinical problem-solving skills and deal with emergency cases or sudden complications during treatment sessions

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
The First	2Theoretical +3 Practical's	Knowledge and Application	Introduction to the rehabilitation of SCI, effective system of SCI care, types of paralysis in SCI, etiology, complications, causes of death, aim of rehabilitation, rehabilitation team work, team work members, functions of team member	iteboard, powerpo	whiteboard, powerpoint
The Second	2Theoretical +3 Practical's	Knowledge and Application	natomy and physiology of spinal column and spinal cord: the spinal curvature functions, the ligaments & disks functions, spinal column functions, spinal cord functions, spinal circulation & meninges functions, spinal cord vascular anatomy, relationship of vertebrae to the spinal cord.	slides , hands-on xperiments Repor oral and written theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams
The Third	2Theoretical +3 Practical's	Knowledge and Application	ASIA classification and definitio ASIA classification system, basic definitions of completene with sacral sparing, sensory exam, motor exam, neurologic level of injury, ASIA impairme scale	iteboard, powerpo	whiteboard, powerpoint
The Fourth	2Theoretical +3 Practical's	Knowledge and Application	ASIA motor index score and guide: manual muscle testing, purposes of muscle test, factors affecting 'strength, preparation and information, assessment, contraindication and precautions, grading system in SCI, 10 key muscles	slides , hands-on xperiments Repor oral and written theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams
Fifth	2Theoretical +3 Practical's	Knowledge and Application	ASIA sensory index score and gui types of sensory receptors, sens nerves pathways, dermatome sensory level, dermatomes distribution	iteboard, powerpo	whiteboard, powerpoint
Sixth	2Theoretical +3 Practical's	Knowledge and Application	SCI management at the scene of accident: general rules, the unconscious patient: position & alignment correction, respiratory care, basic examination, 2/the conscious patient, evacuation	slides , hands-on xperiments Repor oral and written theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams
Seventh	2Theoretical +3 Practical's	Knowledge and Application	Initial management of acute traumatic SCI: spinal shock, ac manifestations of spinal injur	iteboard, powerpo	whiteboard, powerpoint

			the primary medical procedures of the acute or unstable SCI, unstable SCI stages duration determining, medical procedures of the unstable SCI, the stable (acute) injuries		
eighth	2Theoretical +3 Practical's	Knowledge and Application	Respiratory rehabilitation functions for SCI: chest physical therapy definition, process of respiration, respiratory muscle's function, respiratory system changes in SCI, respiratory complications, respiratory tests	slides , hands-on experiments	slides , hands-on experiments
ninth	2Theoretical +3 Practical's	Knowledge and Application	Respiratory rehabilitation plans the goals: exercises of respirator muscles according to the level o injury, bronchial hygiene, treatment of spasticity effects o respiratory functions, use of the resistance in breathing, respiratory exercises, postural drainage: procedures and complications	Reports, oral and written theoretica exams	Reports, oral and written theoretical exams
Tenth	2Theoretical +3 Practical's	Knowledge and Application	Respiratory rehabilitation functions for pressure ulcer: definition, stages and classification pressure ulcer causes locations, skin care and early treatment and prevention	iteboard, powerpo	whiteboard, powerpoint
Eleventh	2Theoretical +3 Practical's	Knowledge and Application	Rehabilitation of the spasticity: definition, types of SCI according to reflexes, patterns of spasticity, stretch reflex, classification of spasticity, spasticity physiology, clinical features, increasing factors, advantages and disadvantages, goal of all treatment, plan of treatment	slides , hands-on experiments	slides , hands-on experiments
Twelfth	2Theoretical +3 Practical's	Knowledge and Application	Deep vein thrombosis: anatomy, physiology, definition, physiological factors affected clots formation, etiology, locations, signs and symptoms, diagnosing, complications, prevention, treatment	Reports, oral and written theoretica exams	Reports, oral and written theoretical exams
Thirteenth	2Theoretical +3 Practical's	Knowledge and Application	Contractures: definition, causes, common contractures and shortening, prevention and treatment	iteboard, powerpo	whiteboard, powerpoint
Fourteenth	2Theoretical +3 Practical's	Knowledge and Application	Heterotopic ossification, definition, classification, causes, diagnosis, clinical presentation, prevention and treatment, surgical intervention and physiotherapy.	slides , hands-on experiments	slides , hands-on experiments
Fifteenth	2Theoretical +3 Practical's	Knowledge and Application	Revision	Reports, oral and written theoretica exams	Reports, oral and written theoretical exams

11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	**Kirshblum , S. C., & Lin, V. W. (2019). *Spinal Cord Medicine* (3rd ed.). Demos Medical**
Main references (sources)	**1. Handbook of Physical Medicine and Rehabilitation Hardcover – October, 1982** **2. Neurological Rehabilitation, 6e (Umphreds Neurological Rehabilitation) 6th Edition**
Recommended books and references (scientific journals, reports...)	**Journal of Spinal Cord Medicine**
Electronic References, Websites	**American Spinal Injury Association (ASIA):**

1.Course Name: Physical therapy for diseases of the skeletal system

2.Course Code: PTT305

3.Semester / Year: First semester / 2025-2026

4.Description Preparation Date: 1/9/2025

5.Available Attendance Forms: In-person lectures

6.Number of Credit Hours (Total) / Number of Units (Total)

30 Theoretical + 45 Practical hours / 3 Units

7.Course administrator's name (mention all, if more than one name)

Name: Dr. Ibrahim Ihsaan Fadhil
Email:

8. Course Objectives

Course Objectives	• **1-Knowing the types of diseases that affect the musculoskeletal system.** • **2 -Identify medical terms related to the musculoskeletal system.** • **3 -Identify the causes of diseases affecting the musculoskeletal system, signs and symptoms.**

	• **4 −Knowledge of the field of medical rehabilitation and its role in treating diseases of the peripheral musculoskeletal system.** • **5−Learn about treatment methods and rehabilitation programs for muscular system**

9. Teaching and Learning Strategies

Strategy	A. Cognitive objectives A1- Identify the anatomical and physiological structure of the skeletal system (bones, joints, muscles, and ligaments) and their relationship to movement and function common diseases and injuries of the skeletal system A2- Understand the pathophysiology such as fractures, dislocations, arthritis, osteoporosis, spinal deformities, and sports injuries A3- Identify the clinical signs and symptoms of musculoskeletal diseases (e.g., pain, swelling, limited mobility, decreased muscle strength, and postural abnormalities) . A4- Familiarize yourself with the principles of clinical assessment and examination of patients with skeletal system diseases: assessment of range of motion (ROM) , muscle strength, joint stability, gait, and motor functions . A5- Identify the foundations and principles of physical therapy interventions used in skeletal system diseases, such as therapeutic exercises, manual therapy, electrotherapy, and heat and cold therapy A6- Understand the relationship between risk factors (age, gender, lifestyle, nutrition) and the occurrence of skeletal system diseases . A7- Understanding the importance of prevention, rehabilitation, and the role of physical therapy in improving quality of life and reducing complications in patients with musculoskeletal disorders Course specific skill objectivesB. B1 - Apply clinical examination and functional assessment skills for patients with musculoskeletal diseases and injuries . B2 - Design appropriate treatment and rehabilitation programs for each disease case based on the assessment results . B3 - Implement therapeutic interventions such as therapeutic exercises, manual therapy, and physical methods efficiently and safely . B4 - Use measuring devices (such as goniometer , manual muscle testing) to estimate therapeutic progress . B5 - Document clinical data and prepare treatment reports systematically and accurately

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
The First	2Theoretical +3 Practical's	Knowledge and Application	Cervical pain: Definition, Acute and Chronic, Etiology, Clinical presentation, Physiotherapy	iteboard, powerpo	whiteboard, powerpoint
The Second	2Theoretical +3 Practical's	Knowledge and Application	Adhesive capsulitis: Definition, Etiology, Pathology, Clinical presentation, Physiotherapy	slides , hands-on xperiments Repor oral and written theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams
The Third	2Theoretical +3 Practical's	Knowledge and Application	Rotator cuff tendonitis and tear: Definition, Etiology, Pathology, Clinical presentatio Physiotherapy	iteboard, powerpo	whiteboard, powerpoint
The Fourth	2Theoretical +3 Practical's	Knowledge and Application	Lateral and medial epicondylitis: Definition, Etiology, Pathology, Clinical presentation, Physiotherapy	slides , hands-on xperiments Repor oral and written theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams
Fifth	2Theoretical +3 Practical's	Knowledge and Application	Carpal tunnel syndrome: Definitio etiology, pathology, clinical presentation, Physiotherapy	iteboard, powerpo	whiteboard, powerpoint
Sixth	2Theoretical +3 Practical's	Knowledge and Application	De Quervains tenosynovitis, Trigger finger, Dupuytren's contracture: Definition, Etiology, Clinical presentation, Physiotherapy	slides , hands-on xperiments Repor oral and written theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams
Seventh	2Theoretical +3 Practical's	Knowledge and Application	Low back pain: Definition, Etiology, Pathology, Clinical presentation, Physiotherapy	iteboard, powerpo	whiteboard, powerpoint
eighth	2Theoretical +3 Practical's	Knowledge and Application	Scoliosis: Definition, Etiology, Pathology, Clinical presentation, Physiotherapy	slides , hands-on experiments	slides , hands-on experiments
ninth	2Theoretical +3 Practical's	Knowledge and Application	Coccydynia: Definition, Etiolog Pathology, Clinical presentation Physiotherapy	Reports, oral and written theoretica exams	Reports, oral and written theoretical exams
Tenth	2Theoretical +3 Practical's	Knowledge and Application	Diffuse Idiopathic Skeletal Hyperostosis: Definition, Etiology, Pathology, Clinical Presentation, Physiotherapy.	iteboard, powerpo	whiteboard, powerpoint
Eleventh	2Theoretical +3 Practical's	Knowledge and Application	Plantar fasciitis: Definition, Etiology, Pathology, Clinical presentation, Physiotherapy	slides , hands-on experiments	slides , hands-on experiments

Twelfth	2Theoretical +3 Practical's	Knowledge and Application	Patellofemoral pain syndrome: Definition, etiology, pathology, clinical presentation, Physiotherapy	Reports, oral and written theoretica exams	Reports, oral and written theoretical exams
Thirteenth	2Theoretical +3 Practical's	Knowledge and Application	Meralgia Paresthetica: Definition, Etiology, Pathology, Clinical presentation, Physiotherapy	iteboard, powerpo	whiteboard, powerpoint
Fourteenth	2Theoretical +3 Practical's	Knowledge and Application	Bursitis and anserine bursitis: Definition, Etiology, Pathology, Clinical presentation, Physiotherapy.	slides , hands-on experiments	slides , hands-on experiments
Fifteenth	2Theoretical +3 Practical's	Knowledge and Application	Metatarsalgia: Definition, Etiology, Pathology, Clinical presentation, Physiotherapy.	Reports, oral and written theoretica exams	Reports, oral and written theoretical exams

11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	**Magee, D. J. (2014).** ***Orthopedic Physical Assessment*** **(ed.). Elsevier**
Main references (sources)	**Hertling, D., & Kessler, R. M. (2018).** ***Management o Common Musculoskeletal Disorders: Physical Therap Principles and Methods*** **(5th ed.). Wolters Kluwer**
Recommended books and references (scientific journals, reports...)	**Journal of Orthopedic & Sports Physical Therapy (JOSPT)**
Electronic References, Websites	**Physiopedia – Musculoskeletal Physiotherapy:**

1.Course Name: Physiotherapy for Sport Injuries

2.Course Code: PTT306

3.Semester / Year: Second semester / 2025-2026

4.Description Preparation Date: 1/9/2025

5.Available Attendance Forms: In-person lectures

6.Number of Credit Hours (Total) / Number of Units (Total)

30 Theoretical + 45 Practical hours / 3 Units

7.Course administrator's name (mention all, if more than one name)

Name: Dr. Fawzi Hammadi Mahdi
Email:

8. Course Objectives

Course Objectives	• **1-Recognizing sports injuries** • **2-Learn basic sciences to provide knowledge about aspects related to sports injuries.** • **3 -Identifying various sports injuries that affect joints, muscles and ligaments.** • **4- Identify medical topics and terminology, physiological variables of sports injuries, clinical examination and evaluation, comparison of contemporary and traditional interventions, and the impact of advanced technology in this field** • **5- Determine appropriate rehabilitation programs for each medical case using available therapeutic methods and exercises**

9. Teaching and Learning Strategies

Strategy	A. Cognitive objectives A1- Define the concept of sports injuries, their types (acute and chronic), and their causative factors of the musculoskeletal system and its relationship A2- Understand the functional anatomy to types of sports injuries common sports injuries such as: muscle A3- Understand the pathophysiology syndromes. sprains, fractures, ligament and cartilage injuries, and overuse

A4- Distinguish the clinical signs and symptoms associated with various sports injuries such as: pain, swelling, limited mobility, loss of strength, and instability .

A5- Familiarize yourself with the basics of clinical assessment and examination methods used in diagnosing sports injuries : (ROM assessment , muscle strength, joint stability, injury-specific tests).

A6- Identify the basic principles of physical therapy interventions directed at treating and rehabilitating sports injuries (such as exercise therapy, manual therapy, physical methods, motor rehabilitation) .

A7- Understand the different stages of sports rehabilitation (from first aid to return to sports) and the objectives of each stage

A8- Recognize the importance of sports injury prevention programs and their relationship to biomechanics and proper physical training.

A9- Understand the role of physical therapy in improving athletic performance, accelerating a safe return to the field, and reducing long-term complications

Course specific skill objectivesB.

B1 - Apply clinical examination and functional assessment skills for sports-related injuries .

B2 - Design integrated treatment and rehabilitation programs that take into account the type and severity of the injury and the athlete's level .

B3 - Implement therapeutic interventions such as therapeutic exercises, manual therapy, and

the efficient and safe use of physical means

B4 - Apply first aid skills directed at field sports injuries.

B5 - Use measuring tools and methods to assess therapeutic improvement and document clinical progress

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
The First	2Theoretical +3 Practical's	Knowledge and Application	Introduction to sport injury management, physiological effects of exercise	whiteboard, powerpoint	whiteboard, powerpoint
The Second	2Theoretical +3 Practical's	Knowledge and Application	houlder injuries in sport, Shoulder Separation, Shoulder Dislocation	slides , hands-on periments Reports oral and written heoretical exams	slides , hands-on experiments Reports, oral and written theoretical exam

The Third	2Theoretical +3 Practical's	Knowledge and Application	Shoulder injuries in sports, rotator cuff tendonitis and supraspinatus tendonitis	whiteboard, powerpoint	whiteboard, powerpoint
The Fourth	2Theoretical +3 Practical's	Knowledge and Application	The elbow and forearm, tennis and golfer elbow (medial and lateral epicondylitis), Olecranon Bursitis (Draftsman's Elbow)	slides , hands-on periments Reports oral and written heoretical exams	slides , hands-on experiments Reports, oral and written theoretical exam
Fifth	2Theoretical +3 Practical's	Knowledge and Application	The elbow and forearm, Little League Elbow, Anterior Interosseous Nerve Syndrome (Kiloh Nevin Syndrome), Triceps Tendinitis	whiteboard, powerpoint	whiteboard, powerpoint
Sixth	2Theoretical +3 Practical's	Knowledge and Application	Hand and Wrist Injuries, De Quervain's Tenosynovitis, Wrist Sprain	slides , hands-on periments Reports oral and written heoretical exams	slides , hands-on experiments Reports, oral and written theoretical exam
Seventh	2Theoretical +3 Practical's	Knowledge and Application	Hand and Wrist Injuries, Trigger Finger (Flexor Tenosynovitis), Jersey Finger	whiteboard, powerpoint	whiteboard, powerpoint
eighth	2Theoretical +3 Practical's	Knowledge and Application	Lower Back Injuries, Lumbar Sprain and Strain	slides , hands-on experiments	slides , hands-on experiments
ninth	2Theoretical +3 Practical's	Knowledge and Application	Hip Injuries, Acetabular Labral Tears, Groin Strain or Hip Adductor Strain	Reports, oral and written theoretical exams	Reports, oral and written theoretical exam
Tenth	2Theoretical +3 Practical's	Knowledge and Application	Hip Injuries Piriformis Syndrome, Hamstring Strain, Greater Trochanter Bursitis	whiteboard, powerpoint	whiteboard, powerpoint
Eleventh	2Theoretical +3 Practical's	Knowledge and Application	Knee injuries, Anterior and posterior Cruciate Ligaments injuries	slides , hands-on experiments	slides , hands-on experiments
Twelfth	2Theoretical +3 Practical's	Knowledge and Application	Knee injuries, medial and lateral collateral injuries	Reports, oral and written theoretical exams	Reports, oral and written theoretical exam
Thirteenth	2Theoretical +3 Practical's	Knowledge and Application	Knee injuries Medial and Lateral Meniscus, Osgood-Schlatter Disease	whiteboard, powerpoint	whiteboard, powerpoint
Fourteenth	2Theoretical +3 Practical's	Knowledge and Application	Ankle and foot injuries, Ankle Sprains, Achilles Tendon Rupture Plantar Fasciitis	slides , hands-on experiments	slides , hands-on experiments
Fifteenth	2Theoretical +3 Practical's	Knowledge and Application	Ankle and foot injuries, Tibialis Anterior Tendinopathy, Tibialis Posterior Tendon Injuries, Sprai of the First Metatarsophalangea Joint	Reports, oral and written theoretical exams	Reports, oral and written theoretical exam

11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	**Houglum, P. A., & Bertoti, D. B. (2018).** ***Therapeutic Exercise for Musculoskeletal Injuries*** **(4th ed.). Human**
Main references (sources)	**Starkey, C. (2013).** ***Evaluation of Orthopedic and Athletic Injuries*** **(3rd ed.). F. A. Davis.**
Recommended books and references (scientific journals, reports...)	**Journal of Orthopedic & Sports Physical Therapy (JOS**
Electronic References, Websites	**Physiopedia – Sports Injuries & Rehabilitation**

1.Course Name: Prostheses and Orthotics

2.Course Code: PTT307

3.Semester / Year: First semester / 2025-2026

4.Description Preparation Date: 1/9/2025

5.Available Attendance Forms: In-person lectures

6.Number of Credit Hours (Total) / Number of Units (Total)

15 Theoretical + 45 Practical hours / 2 Units

7.Course administrator's name (mention all, if more than one name)

Name: Dr. Fawzi Hammadi Mahdi
Email:

8. Course Objectives

Course Objectives	• **1-Providing students of the Department of Physical Therapy Technology with basic knowledge and skills in the field of prosthetics and orthotics, enabling them to understand the medical and engineering principles associated with them, and to deal with patients in need of these means, with the aim of improving motor functions and quality of life, and enhancing their role as an integrated rehabilitation team.** • **2 -Introducing the student to the principles of designing and manufacturing prosthetic limbs and supports.** • **3 -Explaining the types of prosthetic limbs (lower - upper) and their therapeutic uses.** • **4 -Explaining the role of supports and prosthetic devices in rehabilitation processes.** • **5- Distinguish different clinical conditions that benefit from limbs or supports**

9. Teaching and Learning Strategies

Strategy	A. Cognitive objectives A1- Introduction to the basic concepts of prosthetics and orthotics and their role in physical

	therapy plans for motor rehabilitation. A2- Understanding the anatomy and biomechanics of the upper and lower extremities and their relationship to therapeutic exercises and functional rehabilitation . A3- Understanding the basic principles of prosthetic and orthotic design in accordance with physical therapy goals . A4- Identifying the different types of prosthetics (upper and lower) and orthotics (such as splints and braces) and their impact on facilitating physical therapy programs . A5- Understanding the different stages of prosthetic limb fitting and early intervention by the physical therapist through preparatory exercises . A6- Identifying clinical cases that require physical therapy intervention in conjunction with the use of prosthetics (such as amputations, muscle weakness, and joint deformities) . A7- Familiarity with the principles of functional and motor assessment of the patient from a physical therapy perspective before and after prosthetic limb fitting . A8- Identifying the problems and complications resulting from the use of prosthetics and orthotics and the role of physical therapy in prevention and treatment (such as skin training, improving muscle strength, and correcting gait) . A9- Understanding the importance of integrating prosthetic limbs and supports into comprehensive motor rehabilitation programs supervised by the Physical Therapy department Course specific skill objectivesB. B1 - Implementing an integrated clinical and motor assessment that links the prosthesis to the needs of the physical therapy program. B2 - Participating in determining the most appropriate prosthesis or support that achieves the best response to physical therapy . B3 - Training patients on the functional use of prostheses within physical therapy sessions (e.g., gait training, balance training, motor performance) . B4 - Designing integrated treatment programs that include therapeutic exercises and support with assistive devices B5 - Documenting the development of the treatment condition and measuring functional improvement using physical therapy assessment tools

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
The First	1Theoretical +3 Practical's	Knowledge and Application	Introduction, Rehabilitation, the handicap, concept, taking care, psychological effect of the handicap	whiteboard, powerpoint	whiteboard, powerpoint
The Second	1Theoretical +3 Practical's	Knowledge and Application	Psychological effect of the handicap, the amputee, causes of amputation, level of amputation in the lower limbs	slides , hands-on xperiments Report oral and written theoretical exams	slides , hands-o experiments Reports, oral an written theoretic exams
The Third	1Theoretical +3 Practical's	Knowledge and Application	Training program for amputee, nursing after operation, nursing before prosthesis	whiteboard, powerpoint	whiteboard, powerpoint
The Fourth	1Theoretical +3 Practical's	Knowledge and Application	Importance of stump, muscular exercise, nursing during prosthesis, temporary prosthesis & management	slides , hands-on xperiments Report oral and written theoretical exams	slides , hands-o experiments Reports, oral an written theoretic exams
Fifth	1Theoretical +3 Practical's	Knowledge and Application	Normal gait & its analysis, gait deviation & its treatment	whiteboard, powerpoint	whiteboard, powerpoint
Sixth	1Theoretical +3 Practical's	Knowledge and Application	Early management (Clinic Team Approach to Rehabilitation, Computational Surgery: Osteomyoplastic Reconstructive Technique, Postoperative Management	slides , hands-on xperiments Report oral and written theoretical exams	slides , hands-o experiments Reports, oral an written theoretic exams
Seventh	1Theoretical +3 Practical's	Knowledge and Application	Early management (Pain Management, Skin Disorders and Their Management, Psychological Consequences of Computation	whiteboard, powerpoint	whiteboard, powerpoint
eighth	1Theoretical +3 Practical's	Knowledge and Application	Rehabilitation of adults with lower limb amputation (Partial Foot and Syme's Amputations and Prosthetic Designs	slides , hands-on experiments	slides , hands-o experiments
ninth	1Theoretical +3 Practical's	Knowledge and Application	Rehabilitation of adults with lower limb amputation (Transtibial Prosthetic Designs	Reports, oral and written theoretical exams	Reports, oral an written theoretic exams
Tenth	1Theoretical +3 Practical's	Knowledge and Application	Rehabilitation of adults with lower limb amputation (Transfemoral Prosthetic Designs	whiteboard, powerpoint	whiteboard, powerpoint
Eleventh	1Theoretical +3 Practical's	Knowledge and Application	Rehabilitation of adults with lower limb amputation (Hip Disarticulations and Trans pelvic Prosthetic Designs, Basic Lower-Limb Prosthetic Training	slides , hands-on experiments	slides , hands-o experiments
Twelfth	1Theoretical +3 Practical's	Knowledge and Application	Rehabilitation of adults with upper limb amputation (Body-	Reports, oral and written theoretical exams	Reports, oral an written theoretic exams

			Powered Upper-Limb Prosthetic Designs		
Thirteenth	1Theoretical +3 Practical's	Knowledge and Application	Rehabilitation of adults with upper limb amputation (Upper-Limb Externally Powered Prosthetic Designs)	whiteboard, powerpoint	whiteboard, powerpoint
Fourteenth	1Theoretical +3 Practical's	Knowledge and Application	Rehabilitation of adults with upper limb amputation (Training Patients with Upper-Limb Amputations).	slides , hands-on experiments	slides , hands-o experiments
Fifteenth	1Theoretical +3 Practical's	Knowledge and Application	Revision	Reports, oral and written theoretical exams	Reports, oral an written theoretic exams

11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Kahle, J. T., Highsmith, M. J., & Hubbard, S. L. (2018). Prosthetics and Orthotics (2nd ed.). Wolters Kluwe
Main references (sources)	Moore, K. L., Dalley, A. F., & Agur, A. M. R. (2018). Clinica Oriented Anatomy (8th ed.). Wolters Kluwe
Recommended books and references (scientific journals, reports...)	American Academy of Orthotists and Prosthetists
Electronic References, Websites	American Academy of Orthotists and Prosthetists (AAOP)

1.Course Name: Amputee rehabilitation
2.Course Code: PTT308
3.Semester / Year: First semester / 2025-2026
4.Description Preparation Date: 1/9/2025
5.Available Attendance Forms: In-person lectures
6.Number of Credit Hours (Total) / Number of Units (Total)
15 Theoretical + 45 Practical hours / 2 Units
7.Course administrator's name (mention all, if more than one name)
Name: Dr. Fawzi Hammadi Mahdi Email:

8. Course Objectives	
Course Objectives	• **1-Providing the student with the theoretical knowledge and practical skills necessary to evaluate and diagnose amputation cases at various levels, and to design and implement physical therapy and functional rehabilitation programs that contribute to improving the motor, psychological and social abilities of amputees, and enabling them to integrate into daily life and society** • **2 -Learn about the types of amputation, their medical causes, and their immediate and long-term complications.** • **3-Understanding the physiological and mechanical changes that occur in the musculoskeletal system after amputation** • **4 -Conducting a clinical and functional assessment of the patient after amputation, including assessment of muscle strength, range of motion, and functional abilities.** • **5 -Applying the principles of physical therapy in the different stages of rehabilitation (post-operative stage, pre-fitting stage, post-fitting stage)** .. • **6-Teaching the patient how to care for the residual limb to prevent complications such as skin ulcers and muscle contractures.**

	• **7- Training the patient to use the prosthetic limb effectively, and achieve motor and functional integration in daily activities**

9. Teaching and Learning Strategies

Strategy	A. Cognitive objectives A1- Identify the anatomical and physiological foundations of the upper and lower extremities and their relationship to amputation . A2- Understand the medical and surgical causes of amputation (e.g., injuries, tumors, diabetic complications, and vascular diseases) . A3- Be familiar with the different types of amputation (partial, total, above the knee, below the knee, above the elbow, below the elbow) and their complications. A4- Distinguish the post-amputation stages: wound care, deformity prevention, and pain management (especially phantom pain) A5- Identify the principles of clinical and functional assessment of the amputee patient, including assessment of muscle strength, range of motion, and balance. A6- Understand physical rehabilitation strategies for amputees, including: A7- Know the theoretical foundations for the use of prosthetics and orthoses, and how they fit into the rehabilitation program . A8- Understand the psychological and social aspects associated with amputation and their impact on the treatment plan . A9- Understanding the role of the multidisciplinary rehabilitation team (surgeon, physiotherapist, prosthetist, psychologist, nurse) . A10- Identifying the latest scientific and technical trends in the field of amputee rehabilitation (smart, robotic, and computerized limbs) Course specific skill objectivesB. B1- Mastering clinical and functional amputee assessment methods (range of motion, muscle strength, balance, gait) . B2- Implementing therapeutic exercise programs specific to amputees (strengthening, stretching, balance, breathing, and general fitness exercises) . B3- Training the patient on correct postures and contracture prevention . B4- Using practical strategies to reduce pain and manage phantom pain. B5- Developing patient training skills to gradually load the amputated limb in preparation for using a prosthesis.

	B6- The ability to teach the patient how to care for the residual limb (stump care) and preserve the skin and surgical scar . B7- Providing the patient with walking skills using prosthetic devices (prostheses) or supports (crutches, walkers). B8- Designing individualized rehabilitation programs that take into account each patient's needs based on the type of amputation, their age, and their level of activity

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
The First	1Theoretical +3 Practical's	Knowledge and Application	Introduction to amputation: definition, history, epidemiology. Classification of calculation: by level (upper, lower) and by cause (traumatic, pathological, congenital).	iteboard, powerpo	whiteboard, powerpoint
The Second	1Theoretical +3 Practical's	Knowledge and Application	Medical and surgical causes of amputation (diabetes, gangrene, tumors, trauma). Immediate postoperative complications	slides , hands-on xperiments Repor oral and written theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams
The Third	1Theoretical +3 Practical's	Knowledge and Application	Physiological changes after calculation: circulation, muscle imbalance, loss of balance. Biomechanical and functional consequences	iteboard, powerpo	whiteboard, powerpoint
The Fourth	1Theoretical +3 Practical's	Knowledge and Application	Principles of postoperative care. Wound care and residual limb management	slides , hands-on xperiments Repor oral and written theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams
Fifth	1Theoretical +3 Practical's	Knowledge and Application	Common complications: phantom pain, contractures, skin breakdown. Prevention and management strategies	iteboard, powerpo	whiteboard, powerpoint
Sixth	1Theoretical +3 Practical's	Knowledge and Application	Post-amputation assessment: - Clinical examination.- Range of motion and muscle strength evaluation.- Functional assessments.	slides , hands-on xperiments Repor oral and written theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams
Seventh	1Theoretical +3 Practical's	Knowledge and Application	Early physiotherapy interventions: breathing exercises, strengthening, balance training. Psychological and social preparation of the patient	iteboard, powerpo	whiteboard, powerpoint
eighth	1Theoretical +3 Practical's	Knowledge and Application	Pre-prosthetic rehabilitation:	slides , hands-on experiments	slides , hands-on experiments

			- Preparation of the residual limb. - Bandaging and shaping techniques		
ninth	1Theoretical +3 Practical's	Knowledge and Application	Prosthetics introduction: types of prostheses (upper and lower limbs). Main components of prosthetic devices	Reports, oral and written theoretica exams	Reports, oral and written theoretical exams
Tenth	1Theoretical +3 Practical's	Knowledge and Application	Training in prosthetic use: - Donning and doffing. - Balance and posture control	iteboard, powerp	whiteboard, powerpoint
Eleventh	1Theoretical +3 Practical's	Knowledge and Application	Gait training with lower limb prosthesis. Progression from parallel bars → walker → crutches → independent walking.	slides , hands-on experiments	slides , hands-on experiments
Twelfth	1Theoretical +3 Practical's	Knowledge and Application	Functional training with upper limb prosthesis: - Grasping and releasing objects. - Activities of daily living (ADLs).	Reports, oral and written theoretica exams	Reports, oral and written theoretical exams
Thirteenth	1Theoretical +3 Practical's	Knowledge and Application	Designing individualized rehabilitation programs. Integration of physical, psychological, and social aspects	iteboard, powerp	whiteboard, powerpoint
Fourteenth	1Theoretical +3 Practical's	Knowledge and Application	Role of the multidisciplinary team: physician, physiotherapist, prosthetist, psychologist, social worker	slides , hands-on experiments	slides , hands-on experiments
Fifteenth	1Theoretical +3 Practical's	Knowledge and Application	Comprehensive review. Case-based clinical applications and practical examination	Reports, oral and written theoretica exams	Reports, oral and written theoretical exams

11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	**Esquenazi, A., & DiGiacomo, R. (2013). *Rehabilitatio* *After Limb Amputation.* Springer**
Main references (sources)	**Kahle, J. T., Highsmith, M. J., & Hubbard, S. L. (2018). *Prosthetics and Orthotics* (2nd ed.). Wolters Kluwer**
Recommended books and references (scientific journals, reports...)	**Prosthetics and Orthotics International (POI Jour**
Electronic References, Websites	**International Society for Prosthetics and Orthotics (ISPO**

1.Course Name: Therapeutic exercises

2.Course Code: PTT309

3.Semester / Year: First semester / 2025-2026

4.Description Preparation Date: 1/9/2025

5.Available Attendance Forms: In-person lectures

6.Number of Credit Hours (Total) / Number of Units (Total)

30 Theoretical + 45 Practical hours / 3 Units

7.Course administrator's name (mention all, if more than one name)

Name: Dr. Mezher Ali Aboud
Email:

8. Course Objectives

Course Objectives	• **1 –Identify all traditional and modern physical therapy exercise techniques used in the specialty.** • **2 –Knowledge of manual manipulation techniques for all joints of the body.** • **3–Knowledge of Maitland principles Molkan in manual joint manipulation technique** • **4– Knowing the stages of injury and therapeutic exercises to treat soft tissue injuries**

9. Teaching and Learning Strategies

Strategy	A. Cognitive objectives A1- Define the basic principles of therapeutic exercises and their role in physical therapy plans . A2- Understand the anatomical and physiological basis associated with the application of therapeutic exercises . A3- Understand the effects of therapeutic exercises on the musculoskeletal and nervous systems . A4- Distinguish between the different types of therapeutic exercises (ROM exercises , strengthening exercises, resistance exercises, aerobic exercises, and balance exercises). A5- Understand the principles of exercise prescription such as intensity, repetition, and duration,

	and how to adapt them to the patient's condition . A6- Familiarize yourself with the mechanisms of preventing complications resulting from lack of movement such as joint stiffness, muscle weakness, and atrophy . A7- Identify the role of therapeutic exercises in rehabilitation after motor injuries and surgeries . A8- Understanding the special considerations in therapeutic exercises for different patient groups: children, the elderly, and chronic patients . A9- Identifying methods for evaluating the response to exercise (Evaluation of Exercise Outcomes). A10- Understanding the scientific principles for selecting and matching the appropriate exercise with the diagnosis and physical therapy plan Course specific skill objectivesB. B1- The ability to conduct a clinical examination to determine range of motion and muscle strength before prescribing exercises . B2- Apply various therapeutic exercises (ROM , strengthening exercises, resistance exercises, aerobic exercises, balance exercises) in a practical and safe manner . B3- The skill of designing an individual therapeutic exercise program that suits the patient's condition (Exercise Program Design). B4- Mastering exercise progression techniques according to the patient's response . B5- The ability to use simple tools and devices that support therapeutic exercises (e.g. , Theraband , Ball, Weights). B6- Developing the skill of observing and evaluating the patient's response to exercises and modifying the program when necessary. B7- Practicing the skill of teaching and guiding the patient or their family on how to perform home exercises correctly. B8- The ability to integrate therapeutic exercises into the comprehensive physical therapy treatment plan B9- Developing professional documentation skills to record prescribed exercises and patient responses. B10- Commitment to applying occupational safety rules while performing therapeutic exercises to avoid injuries

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
The First	2Theoretical +3 Practical's	Knowledge and Application	Joint mobilization: Definitions of terms, Mobilization, Manipulation, Self Mobilization (Auto-mobilization), Mobilization with Movement, Physiological Movements, Accessory Movements, Component motions, Joint play, Manipulation Under Anaesthesia , basic concepts of joint motion: arthrokinematics	iteboard, powerpo	whiteboard, powerpoint
The Second	2Theoretical +3 Practical's	Knowledge and Application	Joint mobilization: indications, contraindications and precautions, procedures for applying passive joint mobilization technique: - Examination and Evaluation to various joints, Quality of pain, Capsular Restriction, Grades or Dosages of • Movement, Principles of Maitland, Mulligan and Meckzi joint Manipulation techniques	slides , hands-on xperiments Repor oral and written theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams
The Third	2Theoretical +3 Practical's	Knowledge and Application	Joint mobilization peripheral joint, Principles, Manipulation techniques MWM define, principle, indication, contraindication	iteboard, powerpo	whiteboard, powerpoint
The Fourth	2Theoretical +3 Practical's	Knowledge and Application	Joint mobilization of shoulder joint complex:- the mechanical movement of joint, accessory joint (AC joint, CS joint, SUB scapular joint, methods of application to increase all physiological movement of shoulder joint:- flexion, extension, hyperextension, abduction ...extra	slides , hands-on xperiments Repor oral and written theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams
Fifth	2Theoretical +3 Practical's	Knowledge and Application	Joint mobilization of elbow joint complex, mechanical movement of joint, methods of applying joint mobilization to increase all physiological movement of the elbow joint, flexion, extension, accessory joint radioulnar joint fo supination and pronation movements	iteboard, powerpo	whiteboard, powerpoint
Sixth	2Theoretical +3 Practical's	Knowledge and Application	Joint mobilization of wrist joint and hand complex, mechanical movement of joint, methods of applying mechanical movement of the joint, wrist joint, phalangeal joints	slides , hands-on xperiments Repor oral and written theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams

Seventh	2Theoretical +3 Practical's	Knowledge and Application	Joint mobilization of knee joint complex, mechanical movement of the joint, methods of applying mechanical movement of the joint	iteboard, powerpo	whiteboard, powerpoint
eighth	2Theoretical +3 Practical's	Knowledge and Application	Joint mobilization of the ankle joint complex & foot, mechanical movement of the joint methods of applying mechanical movement of the joint	slides , hands-on experiments	slides , hands-on experiments
ninth	2Theoretical +3 Practical's	Knowledge and Application	Joint mobilization for an axial part, define, Mulligan Principles Manipulation techniques MWM NAGs, SNAGs, indication, contraindication	Reports, oral and written theoretica exams	Reports, oral and written theoretical exams
Tenth	2Theoretical +3 Practical's	Knowledge and Application	Joint mobilization of the cervical spine, MWM& NAGs, SNAGs • Joint mobilization of the lumbar spine, MWM& NAGs, SNAGs	iteboard, powerpo	whiteboard, powerpoint
Eleventh	2Theoretical +3 Practical's	Knowledge and Application	Positional Release Technique: Introduction Keywords, three further PRT related modalities – each with a different fascial connection – are outlined: • Strain– counters train (SCS), • •Facilitated positional release (FPR) • •Functional positional release (FPR).	slides , hands-on experiments	slides , hands-on experiments
Twelfth	2Theoretical +3 Practical's	Knowledge and Application	Mechanisms that may explain SCS effects Neurological changes • General SCS guidelines for achieving tender-point ease	Reports, oral and written theoretica exams	Reports, oral and written theoretical exams
Thirteenth	2Theoretical +3 Practical's	Knowledge and Application	Myofascial Release technique: define, properties of soft tissue, mechanical and neurophysiologic properties of connective tissue	iteboard, powerpo	whiteboard, powerpoint
Fourteenth	2Theoretical +3 Practical's	Knowledge and Application	Myofascial release technique for trigger points. • Myofascial release technique for axial part	slides , hands-on experiments	slides , hands-on experiments
Fifteenth	2Theoretical +3 Practical's	Knowledge and Application	Revision	Reports, oral and written theoretica exams	Reports, oral and written theoretical exams

11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	**Houglum, P. A., & Bertoti, D. B. (2018). *Brunnstrom's Clinical Kinesiology* (6th ed.). F. A. Davis.**
Main references (sources)	**O'Sullivan, S. B., Schmitz, T. J., & Fulk, G. D. (2019 *Physical Rehabilitation* (7th ed.). F. A. Davis**
Recommended books and references (scientific journals, reports...)	**Journal of Orthopedic & Sports Physical Therapy (JOSPT**

Electronic References, Websites	**Physiopedia – Therapeutic Exercise**

1.Course Name: Therapeutic equipment

2.Course Code: PTT310

3.Semester / Year: Second semester / 2025-2026

4.Description Preparation Date: 1/9/2025

5.Available Attendance Forms: In-person lectures

6.Number of Credit Hours (Total) / Number of Units (Total)

30 Theoretical + 45 Practical hours / 3 Units

7.Course administrator's name (mention all, if more than one name)

Name: Mazin Nadheer Farhan
Email: mazin.nadheer@ntu.edu.iq

8. Course Objectives

Course Objectives	• **1 –Knowledge of the devices used in physical therapy in general.** • **2 –Introducing the student to every electrical device used in physical therapy.** • **3 –Introducing the student to the principles of operation of each device.** • **4 –Knowing the effects Physiology The therapeutic effects of each device** • **5 –Knowing the methods and techniques of application for each physical therapy device.** • **6– Knowing the standards of the doses used, the intensity, and the frequency of treatment with physical therapy devices**

9. Teaching and Learning Strategies

Strategy	A. Cognitive objectives A1- Identify the physical and biological foundations of physiotherapy devices . A2- Understand the operating principle of various therapeutic devices such as: hot packs, infrared , cryotherapy , ultrasound therapy , electrotherapy , and laser devices .

	A3- Understand the physiological effects of therapeutic devices on tissues and vital organs . A4- Distinguish between types of therapeutic devices in terms of therapeutic uses, precautions, and contraindications . A5- Understand safety standards when using therapeutic devices in clinical practice. A6- Familiarity with the principles of calibrating and examining devices to ensure their safety and efficiency . A7- Identify the role of therapeutic devices in rehabilitation programs for patients with various conditions . A8- Understand the relationship between the choice of therapeutic device and the type of injury or disease (clinical indications). A9- Understand the scientific principles for documenting the use of therapeutic devices in the patient's medical file A10- Understanding the latest developments and future trends in the field of therapeutic devices. Cognitive objectives Course specific skill objectivesB. B1- Proficiency in operating various therapeutic devices according to approved protocols . B2- Ability to calibrate and adjust device settings (e.g., current intensity, frequency, time) to suit the patient's condition . B3- Skill in determining the appropriate location for applying the device on the patient's body to ensure effectiveness and safety . B4- Practice initial inspection and maintenance procedures for devices to ensure their safety before use . B5- Develop the ability to apply therapeutic devices in practical treatment plans for various clinical cases . B6- Skill in monitoring the patient's response during and after the device therapy session and documenting observations . B7- Ability to early identify any side effects or complications resulting from device use and take appropriate action . B8- Mastery of the skills of integrating therapeutic devices with other therapeutic methods (e.g., therapeutic exercises or manual therapy) . B9- Practice the skill of educating and raising awareness among patients about the benefits of the device, the session procedure, and what to avoid afterward .

	B10- Commitment to occupational safety rules and protecting the patient and medical team from any electrical or thermal hazards

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
The First	2Theoretical +3 Practical's	Knowledge and Application	Traction: definition, the physiological effects of traction	whiteboard, powerpoint	whiteboard, powerpoint
The Second	2Theoretical +3 Practical's	Knowledge and Application	Traction: Clinical indication for the use of spinal traction, Contraindications and Precautions for the use of Spinal Traction	slides , hands-on periments Reports oral and written heoretical exams	slides , hands-on experiments Reports, oral and written theoretica exams
The Third	2Theoretical +3 Practical's	Knowledge and Application	Adverse Effects of Spinal Traction, Application Techniques (Mechanical Lumbar Traction)	whiteboard, powerpoint	whiteboard, powerpoint
The Fourth	2Theoretical +3 Practical's	Knowledge and Application	Application Techniques (Mechanical cervical traction) intermittent versus sustained traction	slides , hands-on periments Reports oral and written heoretical exams	slides , hands-on experiments Reports, oral and written theoretica exams
Fifth	2Theoretical +3 Practical's	Knowledge and Application	Cryotherapy, physiological effects of cold, Indication and contra indication and precaution of cold therapy	whiteboard, powerpoint	whiteboard, powerpoint
Sixth	2Theoretical +3 Practical's	Knowledge and Application	Application technique cold packs or ice packs, Application technique ice massage	slides , hands-on periments Reports oral and written heoretical exams	slides , hands-on experiments Reports, oral and written theoretica exams
Seventh	2Theoretical +3 Practical's	Knowledge and Application	Application technique cold compression unit and Vapocoolant Sprays and brief Icing	whiteboard, powerpoint	whiteboard, powerpoint
eighth	2Theoretical +3 Practical's	Knowledge and Application	Application technique Cold Whirlpool. Application technique ice immersion	slides , hands-on experiments	slides , hands-on experiments
ninth	2Theoretical +3 Practical's	Knowledge and Application	Hydrotherapy: Physical Principles and Properties of Water,	Reports, oral and written theoretical exams	Reports, oral and written theoretica exams
Tenth	2Theoretical +3 Practical's	Knowledge and Application	Hydrotherapy: Physiological Effects of Hydrotherapy, uses of Hydrotherapy, Contraindications and Precautions for Hydrotherapy	whiteboard, powerpoint	whiteboard, powerpoint
Eleventh	2Theoretical +3 Practical's	Knowledge and Application	Hydrotherapy: application general technique hydrotherapy	slides , hands-on experiments	slides , hands-on experiments
Twelfth	2Theoretical +3 Practical's	Knowledge and Application	Hydrotherapy: apply Whirlpool technique	Reports, oral and written theoretical exams	Reports, oral and written theoretica exams

Thirteenth	2Theoretical +3 Practical's	Knowledge and Application	Hydrotherapy: method of applying Hubbard tank	whiteboard, powerpoint	whiteboard, powerpoint
Fourteenth	2Theoretical +3 Practical's	Knowledge and Application	Hydrotherapy: method of applying pool exercise	slides , hands-on experiments	slides , hands-on experiments
Fifteenth	2Theoretical +3 Practical's	Knowledge and Application	Revision	Reports, oral and written theoretical exams	Reports, oral and written theoretical exams

11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	**Knight, K. L., & Draper, D. O. (2013).** ***Therapeutic Modalities: The Art and Science*** **(2nd ed.). Lippincott Williams & Wilkin**
Main references (sources)	**Kitchen, S., & Bazin, S. (2015).** ***Clayton's Electrother*** **(13th ed.). Elsevie**
Recommended books and references (scientific journals, reports...)	**Journal of Electromyography and Kinesiology**
Electronic References, Websites	**Physiopedia – Physical Agents & Modalities**

1.Course Name: Medical Research

2.Course Code: MTCD303

3.Semester / Year: First semester / 2025-2026

4.Description Preparation Date: 1/9/2025

5.Available Attendance Forms: In-person lectures

6.Number of Credit Hours (Total) / Number of Units (Total)

30 Theoretical / 2 Units

7.Course administrator's name (mention all, if more than one name)

Name: Sulaiman Musarra Kareem
Email:

8. Course Objectives

Course Objectives	• **Providing students with basic knowledge about the principles and foundations of scientific research in the medical field.** • **Developing skills in designing and implementing medical research related to physical therapy.** • **Enabling students to use appropriate statistical methods to analyze medical data.** • **Enhance the ability to critically evaluate published research and benefit from it in developing professional practice.** • **Instilling academic values and scientific research ethics in students**

9. Teaching and Learning Strategies

Strategy	A. Cognitive objectives A1- Understand the concept of scientific research and its importance in developing medical knowledge and practicing physical therapy . A2- Understand the types of medical research (quantitative, qualitative, and mixed methods) and the characteristics of each type . A3- Understand the steps of scientific research methodology: defining the problem, formulating hypotheses, designing the research, collecting data, analyzing the results, and drawing recommendations . A4- Understand the principles of measurement tools (validity - reliability) in medical research and how to choose the appropriate tool .

	A5- Familiarity with the basics of medical statistics used in analyzing data and interpreting results . A6- Understand the mechanisms of literature review and how to search medical sources and databases . A7- Know the basics of writing a report or research paper according to academic principles and scientific documentation style (APA or Vancouver). A8- Distinguish between quality standards and ethics of scientific research, such as confidentiality, informed consent, and avoiding scientific plagiarism Course specific skill objectivesB. Providing students with the skills to formulate a medical research problem in a precise scientific manner, and to define the research objectives and hypotheses. Developing skills in designing research studies (descriptive, experimental, comparative, cross-sectional, etc.) in a manner that is consistent with the nature of health and medical problems. Mastering the steps of data collection through scientific research tools (questionnaires, interviews, medical records, laboratory/clinical measurements) . Apply statistical analysis skills using computer programs (such as SPSS or Excel) to accurately interpret research results. Developing medical report/research writing skills according to academic templates and principles (summary, introduction, methodology, results, discussion, conclusions, references) . Providing students with the skill of criticizing and evaluating published scientific research in terms of methodology, tools, and the validity of results Employing scientific presentation and communication skills to present medical research results through lectures, posters, or scientific seminars. Developing the ability to work in a team when conducting joint research and distributing tasks among team members

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
The First	2Theoretical	Knowledge	Introduction to Research methodology: Meaning of research, objectives of research, Motivation in research, Types of research & research approaches, Research methods vs methodology, Criteria for good research	iteboard, powerpo	whiteboard, powerpoint

The Second	2Theoretical	Knowledge	Research problem: Statement of research problem., Statement of purpose and objectives of research problem, Necessity of defining the problem	slides , hands-on xperiments Report oral and written theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams
The Third	2Theoretical	Knowledge	Research design: Meaning of research design, Need for research design, Features for good design, Different research designs, Basic principles of research design	iteboard, powerpo	whiteboard, powerpoint
The Fourth	2Theoretical	Knowledge	Sampling Design: Criteria for selecting sampling procedure, Implications for sample design, steps in sampling design, characteristics of good sample design, Different types of samples design	slides , hands-on xperiments Report oral and written theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams
Fifth	2Theoretical	Knowledge	the same lecture as the last week	iteboard, powerpo	whiteboard, powerpoint
Sixth	2Theoretical	Knowledge	Measurement and scaling techniques: Measurement in research- Measurement scales, sources of error in measurement, Technique of developing measurement tools, Meaning of scaling, its classification., Important scaling techniques	slides , hands-on xperiments Report oral and written theoretical exams	slides , hands-on experiments Reports, oral and written theoretical exams
Seventh	2Theoretical	Knowledge	the same lecture as the last wee	iteboard, powerpo	whiteboard, powerpoint
eighth	2Theoretical	Knowledge	Methods of data collection: collection of primary data, collection of data through questionnaires & schedules, difference between questionnaires & schedules	slides , hands-on experiments	slides , hands-on experiments
ninth	2Theoretical	Knowledge	Sampling fundamentals, need for sampling & some fundamental definitions, Important sampling distributions	ports, oral and wri theoretical exams	Reports, oral and written theoretical exams
Tenth	2Theoretical	Knowledge	Processing & analysis of data: Processing operations, problems in processing, Types of analysis, Statistics in research, Measures of central tendency, Dispersion, Asymmetry, relationship	iteboard, powerpo	whiteboard, powerpoint
Eleventh	2Theoretical	Knowledge	the same lecture as the last wee	slides , hands-on experiments	slides , hands-on experiments
Twelfth	2Theoretical	Knowledge	Testing of hypothesis: What is hypothesis? Basic concepts concerning testing of hypothesis Procedure of hypothesis testing measuring the power of hypothes test, Tests of hypothesis, limitatic of the tests of hypothesis	ports, oral and wri theoretical exams	Reports, oral and written theoretical exams

Thirteenth	2Theoretical	Knowledge	the same lecture as the last week	hiteboard, powerpo	whiteboard, powerpoint
Fourteenth	2Theoretical	Knowledge	Computer technology: Introduction to Computers, computer application in resear computers & researcher	slides , hands-on experiments	slides , hands-on experiments
Fifteenth	2Theoretical	Knowledge	General Revision	ports, oral and wri theoretical exams	Reports, oral and written theoretical exams

11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	**An introduction of Biostatistics: Sunder Rao.PSS .**
Main references (sources)	**Methods in Bio-Statistics 6th Edn . 1997: BK Mahajan** **4. Biostatistics: A manual of statistical methods: K. Visweswara Rao**
Recommended books and references (scientific journals, reports…)	***The Lancet* - Journal of Clinical and Medical Research.**
Electronic References, Websites	**National Institutes of Health (https://www.nih.gov**