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

Academic Program for Department of Medical Rehabilitation and Physical Therapy

University Name: University of Al-Furat Al –Awsat Technical University

College / Institute: College of Health and Medical Technique \Kufa

Department: Medical Rehabilitation and Physiotherapy

Academic or Professional Program Name: Medical Rehabilitation and Physiotherapy Technique

Final Certificate Name: Bachelor's degree in Medical Rehabilitation and Physiotherapy Technique

Academic System: Course

Date of Description Preparation: 1\9\2025

Date of Form Completion: 1/09/2025

Signature:

Name of Head of Department: Assist. Prof. Dr. Murtadha Mohammed Jawad

Date: / /2025

Signature:

Name of Scientific Assistant: Assist. Prof. Dr. Ahmed Fadhel Awda

Date: / / 2025

Reviewed by:

Department of Quality Assurance and University Performance

Name of Division Director: Assist. lecturer Enas Kadim Abd Al-amir

Signature:

Date: / / 2025

قسم التاهيل الطبي
و العلاج الطبيعي

Approval of Dean

Prof.Dr Angham Jasim Mohammed Ali

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1. Program Vision

Training students on how to diagnose the injury and the type of disease, and to develop a special rehabilitative treatment program in collaboration with the specialist doctor to aid recovery. Using all electrical and mechanical devices and therapeutic exercises to treat the injured person.

2. Program Mission

Graduating qualified and specialized female and male students in the field of physical rehabilitation and physiotherapy who contribute to conducting tests, carrying out research in this specialty, and implementing community awareness programs.

3. Program Objectives

1. Equipping graduates with cognitive skills based on scientific foundations and practical experience necessary to achieve desired outcomes in the physiotherapy profession and gain patient satisfaction.
2. Equipping graduates and enabling them to apply critical analysis skills to solve clinical problems by developing appropriate treatment plans based on patient needs.
3. Developing students' abilities to conduct clinical assessments and provide suitable evidence-based therapeutic interventions.
4. Enabling graduates to make scientific contributions in the field of physiotherapy through participating in scientific research and publishing it.
5. Full knowledge of internal, neurological, surgical, and pediatric diseases where physiotherapy is an essential part of their rehabilitation.
6. Encouraging graduates to adhere to professional conduct regulations and legal and ethical responsibilities when practicing physiotherapy.
7. Developing physiotherapy courses and programs in alignment with international standards of global physiotherapy.
8. Enhancing the knowledge and skills of faculty members through postgraduate studies and training courses both locally and abroad.

4. Program Accreditation

A detailed study was submitted to obtain accreditation, including a self-evaluation report, improvement plan, and conformity report.

5. Other external influences

- Al-Furat Al-Awsat Technical University
- Ministry of Health

6. Program Structure

Program Structure	Number of Courses	Credit hours	Percentage	Reviews*
Institution Requirements	7	15	12.2%	
College Requirements				
Department Requirements	50	165	87.2%	
Summer Training	The second, third and fourth stage	Satisfied		
Other				

* This can include notes on whether the course is basic or optional.

7. Program Description

Year/Level	Course Code	Course Name	Credit Hours	
FIRST Stage			**Theoretical**	**Practical**
	PT111	Biomechanics	2	-
	PT112	Human Anatomy 1	2	4
	PT113	Human Physiology 1	2	3
	PT114	Medical Microbiology	2	4
	PT115	Clinical Biochemistry	2	4
	PT116	Computer Applications	1	2
	ATU13	Democracy and Human rights	2	-
	PT118	Medical Terminology	3	-
	PT121	Kinesiology	2	
	PT122	Human Anatomy 2	2	4
	PT123	Human Physiology2	1	3
	PT124	Introduction to Physiotherapy	2	4

	PT125	Basic nursing and First aids	2	4
	PT126	Medical Physics	1	2
	ATU11	Arabic 1	2	-
Second Stage				
	PT211	Therapeutic Exercises 1	2	4
	PT212	Therapeutic Equipment 1	2	4
	PT213	Physiotherapy for Musculoskeletal Diseases 1	2	4
	PT214	Physiotherapy for Orthopedics	2	4
	PT215	Human Anatomy 3	2	4
	PT216	Pathology	1	2
	ATU24	Crimes of Baath Regime in Iraq	2	-
	PT221	Therapeutic Exercises 2	2	4
	PT222	Therapeutic Equipment 2	2	4
	PT223	Physiotherapy for Musculoskeletal Diseases 2	2	4
	PT224	Physiotherapy for General Surgery 1	2	4
	PT225	Human Anatomy 4	2	4
	PT226	Pharmacology	1	-
	ATU12	Computer and Artificial Intelligent	1	2
	ATU21	Arabic 2	2	-
Third Stage				
	PT311	Physiotherapy for Musculoskeletal Diseases 3	1	4
	PT312	Physiotherapy for Sport Injuries	1	2
	PT313	Physiotherapy for Spinal Cord Injuries	1	4
	PT314	Therapeutic Exercises 3	1	4
	PT315	Therapeutic Equipment 3	2	4
	PT316	Prostheses and Orthotics	1	4
	PT317	Medical Statistics	2	-

	PT321	Physiotherapy for Medical Diseases	1	3
	PT322	Physiotherapy for General Surgery 2	1	3
	PT323	Physiotherapy for Neurological Diseases 1	1	4
	PT324	Therapeutic Exercises 4	1	4
	PT325	Therapeutic Equipment 4	2	3
	PT326	Amputee Rehabilitation	1	3
	PT327	Methodology	2	-
Fourth Stage				
	PT411	Physiotherapy for Cardiopulmonary Diseases	2	4
	PT412	Physiotherapy for Neurological Diseases 2	2	4
	PT413	Physiotherapy for Growth and Development of Pediatric	2	4
	PT414	Therapeutic Exercises 5	-	6
	PT415	Hearing and Speech Rehabilitation	2	3
	PT416	Health Psychology	1	2
	PT421	Radiology and Diagnostic Imaging for physiotherapy	2	-
	PT422	Physiotherapy for Neurological Diseases 3	2	4
	PT423	Physiotherapy for Pediatric Diseases	2	4
	PT424	Therapeutic exercises 6	-	6
	PT425	Psychiatry	1	3
	PT426	Professional Ethics	2	-
	PT427	Graduation Project	-	6

8. Expected learning outcomes of the program

Knowledge

1. Enabling students to acquire knowledge and understanding of human anatomy and physiology.
2. Enabling students to acquire knowledge and understanding of internal, neurological, and surgical diseases.
3. Enabling students to acquire knowledge and understanding of pediatric diseases, psychiatric disorders, and conditions related to hearing and speech impairment.
4. Enabling students to acquire knowledge of physiotherapy methods and therapeutic devices.

Skills

1 - The student uses physiotherapy methods to treat internal, neurological, and surgical diseases.
2 - The student uses physiotherapy methods to treat paralysis cases associated with cerebral injuries, cerebral palsy, and spinal cord injuries.
3 - The student uses skills to rehabilitate psychological and mental disorders.
4 - The student assists in the rehabilitation of individuals with hearing and speech impairments.

Ethics

1. Behave with integrity, honesty and ethical responsibility, adhering to codes of conduct, legal regulations and professional standards applicable to physiotherapy and rehabilitation.
2. Recognize and respond appropriately to ethical dilemmas in practice (e.g., issues of autonomy, beneficence, justice, confidentiality, resource allocation) and act in the best interest of the patient while balancing system constraints.
3. Promote equity, diversity and inclusion in rehabilitation care: respect cultural, social and individual differences, support access to services for disadvantaged groups, and advocate for patients' rights.
4. Assume professional responsibility: take appropriate decisions, manage one's own workload, recognize limits of one's competence and refer appropriately, maintain documentation and follow ethical/legal obligations.

9. Teaching and Learning Strategies

1- Applying the materials that were taught theoretically at the practical level for all medical cases.
2- Training students to use physical therapy and medical rehabilitation methods in treating medical cases.
3- Clinical application of physical therapy methods and techniques in hospitals and rehabilitation centers.
4- Using modern learning tools such as learning with laboratory devices related to physical therapy.
5- Conducting workshops, study sessions, and training courses.
6- Interactive learning methods, such as brainstorming.
7- Watching illustrative images and video clips.

10. Evaluation methods

-Daily and monthly exams.

-Semester and final exams.
-Grades for homework.

11.Faculty

Faculty Members

Academic Rank	Specialization		Special Requirements /Skills (if applicable)		Number of the teaching staff	
	General	Special			Staff	Lecturer
Assist. Prof. Dr Murtadha Muhammad Jawad	Biology	Physiology	Head of Department		yes	
Lec.Dr.Ali Hassen	Sports Sciences	Sports injuries and rehabilitation			yes	
Lec.Dr. Sajjad muiead abd al hussein	Pathological analyses	Medical Microbiology			yes	

Assist.Lec. Muhammad abd alhussien jabar	Medical rehabilitation, physiotherapy	Physical therapy for sports injuries			yes	
Assist. Lec. Salam Khalif Jaber	Medical rehabilitation, physiotherapy	Physical therapy for neurological disorders			yes	
Assist.Lec.Hawraa Hussien Muhammad	Chemistry	Clinical Chemistry			yes	
Assist. Lec. Khamail Muhsen Obaid	Biology	Microbiology			yes	
Lec.Dr.Zainb Abdul Sada	Sports Sciences	Sports training and basketball			yes	

Professional Development

Mentoring new faculty members

- Adherence to the work schedule
- Commitment to the timings of exams and lectures
- Encouragement of scientific research achievement
- Encouragement to complete the scientific plan through seminars, workshops, discussion sessions, and courses

Professional development of faculty members

Courses - Discussion Sessions - Workshops

12. Acceptance Criterion

Central according to the approval of the Ministry of Higher Education and Scientific Research.

13. The most important sources of information about the program

1- College Registration Unit
2- Department Administration
3- Official College Website on the Internet

14. Program Development Plan

- Organizing local and international courses and conferences in the field of physical therapy
- Keeping up with developments and technology by acquiring the latest equipment in the field of physical therapy
- Sending specialized faculty members to international conferences to stay updated with the latest research in physical therapy

Program Skills Outline															
				Required program Learning outcomes											
Year/Level	Course Name	Course Code	Basic	Knowledge				Skills				Ethics			
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
First	Biomechanics	PT111	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	Human Anatomy 1	PT112	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	Human Physiology 1	PT113	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	Medical Microbiology	PT114	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	Clinical Biochemistry	PT115	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	Computer Applications	PT116	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	Democracy and Human rights	ATU13	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	Medical Terminology	PT118	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	Kinesiology	PT121	Basic	√	√	√	√	√	√	√	√	√	√	√	√

	Human Anatomy 2	PT122	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	Human Physiology2	PT123	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	Introduction to Physiotherapy	PT124	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	Basic nursing and First aids	PT125	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	Medical Physics	PT126	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	Arabic 1	ATU11	Basic	√	√	√	√	√	√	√	√	√	√	√	√
Second	Therapeutic Exercises 1	PT211	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	Therapeutic Equipment 1	PT212	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	Physiotherapy for Musculoskeletal Diseases 1	PT213	Basic	√	√	√	√	√	√	√	√	√	√	√	√

	Physiotherapy for Orthopedics	PT214	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	Human Anatomy 3	PT215	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	Pathology	PT216	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	Crimes of Baath Regime in Iraq	ATU24	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	Therapeutic Exercises 2	PT221	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	Therapeutic Equipment 2	PT222	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	Physiotherapy for Musculoskeletal Diseases 2	PT223	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	Physiotherapy for General Surgery 1	PT224	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	Human Anatomy 4	PT225	Basic	√	√	√	√	√	√	√	√	√	√	√	√

	Pharmacology	PT226	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	Computer and Artificial Intelligent	ATU12	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	Arabic 2	ATU21	Basic	√	√	√	√	√	√	√	√	√	√	√	√
Third	Physiotherapy for Musculoskeletal Diseases 3	PT311	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	Physiotherapy for Sport Injuries	PT312	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	Physiotherapy for Spinal Cord Injuries	PT313	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	Therapeutic Exercises 3	PT314	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	Therapeutic Equipment 3	PT315	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	Prostheses and Orthotics	PT316	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	Medical Statistics	PT317	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	Physiotherapy for Medical Diseases	PT321	Basic	√	√	√	√	√	√	√	√	√	√	√	√

	Physiotherapy for General Surgery 2	PT322	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	Physiotherapy for Neurological Diseases 1	PT323	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	Therapeutic Exercises 4	PT324	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	Therapeutic Equipment 4	PT325	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	Amputee Rehabilitation	PT326	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	Methodology	PT327	Basic	√	√	√	√	√	√	√	√	√	√	√	√
Fourth	Physiotherapy for Cardiopulmonary Diseases	PT411	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	Physiotherapy for Neurological Diseases 2	PT412	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	Physiotherapy for Growth and Development of Pediatric	PT413	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	Therapeutic Exercises 5	PT414	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	Hearing and Speech Rehabilitation	PT415	Basic	√	√	√	√	√	√	√	√	√	√	√	√

	Health Psychology	PT416	Basic	√	√	√	√	√	√	√	√	√	√	√	√	√
	Radiology and Diagnostic Imaging for physiotherapy	PT421	Basic	√	√	√	√	√	√	√	√	√	√	√	√	√
	Physiotherapy for Neurological Diseases 3	PT422	Basic	√	√	√	√	√	√	√	√	√	√	√	√	√
	Physiotherapy for Pediatric Diseases	PT423	Basic	√	√	√	√	√	√	√	√	√	√	√	√	√
	Therapeutic exercises 6	PT424	Basic	√	√	√	√	√	√	√	√	√	√	√	√	√
	Psychiatry	PT425	Basic	√	√	√	√	√	√	√	√	√	√	√	√	√
	Professional Ethics	PT426	Basic	√	√	√	√	√	√	√	√	√	√	√	√	√
	Graduation Project	PT427	Basic	√	√	√	√	√	√	√	√	√	√	√	√	√

Course Description of Biomechanics

❖ Course Name

Biomechanics

❖ Course Code

ATU.CHM. PT111

❖ Semester / Year

First Semester / First Year

❖ The history of preparation of this description

2025\9\15

❖ Available Attendance Forms

Came

❖ Number of Credit Hours (Total) / Number of Units (Total)

2/2

❖ Course administrator's name (if more than one name)

Name: Assist.Lec. Salam Khalif Jaber

Email :

❖ Course Objectives

General Objective : To know the types and analysis of movement in the human body.

Special Objective:

1 – Definition of natural laws affecting the movement of the human body.

2 – Definition of factors that help to analyze the movement of the human body.

3 – Determine the deficiency or defect in the movement of the body and how to return it to the normal state.

❖ Teaching and Learning Strategies

✓ Cooperative education strategy. ✓ Brainstorming education strategy. ✓ Education strategy collaborative concept planning. ✓ Real-time feedback education strategy ✓ Education Strategy Notes Series. ✓ The strategy of education by exchanging views and discussing. ✓ Education strategy by presenting information. ✓ Education strategy by training and presentation of scientific developments.	**Strategy**

❖ Course Structure					
Evaluation method	**Learning method**	**Unit or subject name**	**Required Learning Outcomes**	**Hours**	**The week**
Daily, oral and written exams, reports, discussions.	Theoretical	**Basic Concepts in Biomechanics: Kinematics and Kinetics (**Types of Motion, Location of Motion, Direction of Motion, Magnitude of Motion, Definition of Forces, Force of Gravity)		2	1
Daily, oral and written exams, reports, discussions.	Theoretical	**Basic Concepts in Biomechanics: Kinematics and Kinetics (**Reaction forces, Equilibrium, Objects in Motion, Force of friction, Concurrent force systems, Parallel force systems, Work)		2	2
Daily, oral and written exams, reports, discussions.	Theoretical	**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)		2	3
Daily, oral and written exams, reports, discussions.	Theoretical	**Muscle structure and function:** Mobility and stability functions of muscles, Elements of muscle structure, Muscle function, Effects of immobilization, and aging		2	4
Daily, oral and written exams, reports, discussions.	Theoretical	**Levers -** Definition, function, classification and application of levers in physiotherapy & order of levers with example of lever in human body		2	5
Daily, oral and written exams, reports, discussions.	Theoretical	**Elasticity** - Definition, stress, strain, HOOKE'S Law		2	6

Daily, oral and written exams, reports, discussions.	Theoretical	**Muscular System**: Definition, properties of muscle, muscular contraction, structural classification, action of muscle in moving bone, direction of pull, angle of pull, functional classification, coordination of muscular system.		2	7
Daily, oral and written exams, reports, discussions.	Theoretical	**Muscular System**: Definition, properties of muscle, muscular contraction, structural classification, action of muscle in moving bone, direction of pull, angle of pull, functional classification, coordination of muscular system.		2	8
Daily, oral and written exams, reports, discussions.	Theoretical	**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, cartilage and connective tissues.		2	9
Daily, oral and written exams, reports, discussions.	Theoretical	**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, cartilage and connective tissues.	**17**	2	10

Daily, oral and written exams, reports, discussions.	Theoretical	**Joint Structure and Function:** Classify joints: Synarthrosis, amphiarthrosis, diarthrosis, sub classification of synovial joints.		2	11
Daily, oral and written exams, reports, discussions.	Theoretical	**Joint Structure and Function:** Describe joint functions, kinematics, range of motion, Describe the general effects of injury and disease.		2	12
Daily, oral and written exams, reports, discussions.	Theoretical	**Posture** – dynamic and static posture, kinetic and kinematics of posture, analysis of posture, effect of age, pregnancy, occupation on posture.		2	13
Daily, oral and written exams, reports, discussions.	Theoretical	**Gait** – kinematics and kinetics of gait, gait in running and stair climbing.		2	14
Daily, oral and written exams, reports, discussions.	Theoretical	REVISION		2	15

❖ Course Evaluation

Endeavor: 30/ Final: 70

❖ Learning and Teaching Resources

	Required Textbooks (methodology)
1. 1. 2Clinical Kinesiology for Physical Therapist Assistants by Lippert 2. 2. Applied Kinesiology: A Training Manual and Reference Book of Basic Principles and Practices by Robert Frost (Mar 28, 2002) 3. 3. Kinesiology: The Mechanics and Pathomechanics of Human Movement by Carol A. Oatis 4. 4. Kinesiology by K. Wells; Sauder's Publications.	Main references (sources)

5. 5. Basic Biomechanics of the Musculoskeletal System by Margareta Nordin and Victor H. Frankel	
	Recommended supporting books references (Scientific journals, reports...)
	Electronic References, Websites

Course Description of Clinical Chemistry

❖ Course Name
Clinical Chemistry
❖ Course Code
ATU.CHM. PT115
❖ Semester / Year
First Semester / First Year
❖ The history of preparation of this description
2025\9\15
❖ Available Attendance Forms
Came
❖ Number of Credit Hours (Total) / Number of Units (Total)
6\4
❖ Course administrator's name (if more than one name)
Name: Dr. Ithmar Hameed Blowa / Assist.Lec. Haneen Tahseen Ali Email :
❖ Course Objectives

General Objective:

Study the basic concepts of biological interactions within the body and show their relationship to the field of physical therapy.

Special Objective:

- ✓ Introduction to health and disease biochemistry that forms the basis of modern medical practice with a focus on the molecular level
- ✓ Study the molecular structure of basic components in the human body such as protein, carbohydrates and fats. With an indication of the importance of balance between these components and their relationship to various diseases such as obesity, thinness and endocrine dysfunction.
- ✓ Study the different types of vitamins and explain their role in health and disease.
- ✓ describe the main pathways of biosynthesis, the steps involved in these pathways, and their enzymatic regulation,
- ✓ Study of the imbalance that occurs in the main metabolic pathways and its relationship to atherosclerosis, thrombosis and diabetes

❖ Teaching and Learning Strategies

✓ Cooperative education strategy. ✓ Brainstorming education strategy. ✓ Education strategy collaborative concept planning. ✓ Real-time feedback education strategy ✓ Education Strategy Notes Series. ✓ The strategy of education by exchanging views and discussing. ✓ Education strategy by presenting information. ✓ Education strategy by training and presentation of scientific developments.	**Strategy**

❖ Course Structure

Evaluation method	Learning method	Unit or subject name	Required Learning Outcomes	Hours	The week
Daily, oral and written exams, reports, discussions	Theoretical and practical	**CELL:** Introduction to Biochemistry**,** Cell: (Biochemical Aspects)**,** Cell Membrane Structure**,** Membrane Proteins**,** Receptors & Signal Molecules		6	1
Daily, oral and written exams, reports, discussions	Theoretical and practical	**BODY FLUIDS:** Structure and properties of Water, Weak Acids & Bases, Concept of pH & pK, Buffers, their mechanism of action, Body buffers		6	2
Daily, oral and written exams, reports, discussions	Theoretical and practical	**BIOMOLECULES:** **AMINO ACIDS, PEPTIDES & PROTEINS** Amino acids: Classification, Acid-Base Properties, Functions & Significance., Protein Structure, Primary, Secondary & Super secondary. &Structural Motifs, Tertiary & Quaternary Structures of Proteins, Protein Domains, Classification of Proteins ,	**21**	6	3

		Fibrous proteins (collagens and elastins) & Globular proteins			
Daily, oral and written exams, reports, discussions	Theoretical and practical	**BIOMOLECULES:** **AMINO ACIDS, PEPTIDES & PROTEINS** Amino acids: Classification, Acid-Base Properties, Functions & Significance., Protein Structure, Primary, Secondary & Super secondary. &Structural Motifs, Tertiary & Quaternary Structures of Proteins, Protein Domains, Classification of Proteins , Fibrous proteins (collagens and elastins) & Globular proteins		6	4
Daily, oral and written exams, reports, discussions	Theoretical and practical	**ENZYMES:** Introduction**,** Classification & Properties of Enzymes**,** Coenzymes**,** Isozymes & Proenzymes **,**Regulation & Inhibition of Enzyme activity & enzymes inhibitors **,** Clinical Diagnostic Enzymology		6	5
Daily, oral and written exams, reports, discussions	Theoretical and practical	**CARBOHYDRATES:** Definition, Classification, Biochemical Functions & Significance of Carbohydrates, Structure & Properties of Monosaccharides & Oligosaccharides, Structure & Properties of Polysaccharides, Bacterial cell Wall, Heteropolysaccharides , GAGS.	**22**	6	6
Daily, oral and written exams, reports, discussions	Theoretical and practical	**LIPIDS:** Classification of Lipids, Fatty Acids: Chemistry, Classification occurrence & Functions, Structure & Properties of Triacylglycerols		6	7

		and Complex Lipids, Classification & Functions of Eicosanoids, Cholesterol: Chemistry, Functions & Clinical Significance, Bile acids/salts.			
Daily, oral and written exams, reports, discussions	Theoretical and practical	**LIPIDS:** Classification of Lipids, Fatty Acids: Chemistry, Classification occurrence & Functions, Structure & Properties of Triacylglycerols and Complex Lipids, Classification & Functions of Eicosanoids, Cholesterol: Chemistry, Functions & Clinical Significance, Bile acids/salts.		6	8
Daily, oral and written exams, reports, discussions	Theoretical and practical	**NUCLEIC ACIDS:** Structure, Functions & Biochemical Role of Nucleotides, Structure & Functions of DNA, Structure & Functions of RNA.		6	9
Daily, oral and written exams, reports, discussions	Theoretical and practical	**NUTRITIONAL BIOCHEMISTRY:** **MINERALS & TRACE ELEMENTS** Sources, RDA, Biochemical Functions & Clinical Significance of Calcium & Phosphorus, Sources,	**23**	6	10
Daily, oral and written exams, reports, discussions	Theoretical and practical	**NUTRITIONAL BIOCHEMISTRY:** **MINERALS & TRACE ELEMENTS** RDA, Biochemical Functions & Clinical Significance of Sodium Potassium&		6	11

		Chloride, Metabolism of Iron, Cu, Zn, Mg, Mn, Se, I,F.			
Daily, oral and written exams, reports, discussions	Theoretical and practical	**VITAMINS:** Sources**,** RDA**,** Biochemical Functions & Clinical Significance of Fat Soluble Vitamins**,** Sources**,** RDA**,** Biochemical Functions & Clinical Significance of Water Soluble Vitamins.		6	12
Daily, oral and written exams, reports, discussions	Theoretical and practical	**NUTRITION:** Dietary Importance of Carbohydrates, Lipids & Proteins, Balanced Diet.		6	13
Daily, oral and written exams, reports, discussions	Theoretical and practical	**MOLECULAR BIOLOGY:** DNA Replication & Repair in Prokaryotes , DNA Replication & Repair in Eukaryotes		6	14
Daily, oral and written exams, reports, discussions	Theoretical and practical	Revision		6	15

❖ Course Evaluation

Quest: Theoretical: 25 Practical: 15/ Final: Theoretical: 35 Practical: 25

❖ Learning and Teaching Resources

	Required textbooks (methodology)
1. **TEXTBOOK OF BIOCHEMISTRY** ,2012,U.R,Agrawal,Kiran Agarwal,Kriishna Prakshan. 2. **Lippincott's illustrated reviews :Biochemistry** ,Richard A. Harvy 3rd edition ,2005	Main references (sources)

Description course of the Law and Democracy

❖ Course Name

Law and Democracy

❖ Course Code

ATU13

❖ Semester / Year

First Semester / First Year

❖ The history of preparation of this description

2025\9\15

❖ Available Attendance Forms

Came

❖ Number of Credit Hours (Total) / Number of Units (Total)

2/2

❖ Course administrator's name (if more than one name)

Name:Dr. Abu Talib Hashim Ahmed

Email : abu.ahmedckm@atu.edu.iq

❖ Course Objectives

1 **General:** Increasing the student's knowledge of the theoretical conceptual aspect and the historical development of human rights and democracy Skills Development

The student's analytical and critical regarding the reality and future of human rights and democracy

2.Special: 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

On the basis of good governance, one of the most important components of which is faith in human right

❖ Teaching and Learning Strategies

✓ Cooperative education strategy. ✓ Brainstorming education strategy. ✓ Education strategy collaborative concept planning. ✓ Real-time feedback education strategy ✓ Education Strategy Notes Series. ✓ The strategy of education by exchanging views and discussing. ✓ Education strategy by presenting information. ✓ Education strategy by training and presentation of scientific developments.	**Strategy**

❖ Course Structure

Evaluation method	Learning method	Unit or subject name	Required Learning Outcomes	Hours	The week
Daily, oral and written exams, reports, discussions.	Theoretical	Historical development of human rights, human rights in ancient civilizations		2	1
Daily, oral and written exams, reports, discussions.	Theoretical	Human rights in heavenly laws with a focus on human rights in Islam		2	2
Daily, oral and written exams, reports, discussions.	Theoretical	Human rights in the Middle and Modern Ages		2	3
Daily, oral and written exams, reports, discussions.	Theoretical	Regional recognition of human rights at the European, American, African, Islamic and Arab levels		2	4
Daily, oral and written exams, reports, discussions.	Theoretical	Non-governmental organizations and their role in human rights (International Committee of the Red Cross, Amnesty International, Human Rights Watch, Arab Organization for Human Rights)		2	5
Daily, oral and written exams, reports, discussions.	Theoretical	Human rights in international and regional conventions and national legislation		2	6
Daily, oral and written exams, reports, discussions.	Theoretical	Human rights in regional conventions (European Convention on Human Rights - American Convention on Human Rights - African Charter on Human Rights - Arab Charter on Human Rights)		2	7

Daily, oral and written exams, reports, discussions.	Theoretical	Human rights in national legislation (Iraqi Constitution)		2	8
Daily, oral and written exams, reports, discussions.	Theoretical	Forms and generations of human rights (individual and collective rights)		2	9
Daily, oral and written exams, reports, discussions.	Theoretical	Guarantees and protection of human rights at the national level		2	10
Daily, oral and written exams, reports, discussions.	Theoretical	Human rights guarantees and protection at the regional and international levels		2	11
Daily, oral and written exams, reports, discussions.	Theoretical	Classification of public freedoms (basic and individual, freedom of security and feeling reassured, freedom to go and father, personal freedom)		2	12
Daily, oral and written exams, reports, discussions.	Theoretical	Intellectual and cultural freedoms (freedom of opinion, freedom of belief and freedom of education)		2	13
Daily, oral and written exams, reports, discussions.	Theoretical	Freedom of the press, freedom of assembly and freedom of association		2	14
Daily, oral and written exams, reports, discussions.	Theoretical	Economic and social freedoms (freedom of work, freedom of ownership, freedom of trade and industry)	**27**	2	15

❖ Course Evaluation

Striving: : 30 / Final: 70

❖ Learning and Teaching Resources

Hadi, Riad Azabz. (2005). Human rights (evolving contents and protection) (Baghdad).	Required textbooks (methodology)

Sindi, Naz. Badrakhan. (2012). Human Rights and Democracy. Ibn Rushd College of Education for Human Sciences, University of Baghdad. Hadi, Riad Azabz. (2005). Human rights (evolving contents and protection) (Baghdad). Dulaimi, Hafez Alwan. (2009). A contemporary reading of the subject of human rights. Dulaimi, Hafez Alwan. (2009). A contemporary reading of the subject of human rights.	
	Main references (sources)
	Recommended supporting books references (Scientific journals, reports...)
	Electronic References, Websites

Course Description: Medical Terminology

1: Course Title
Medical Terminology
2: Course Code
ATU.CHM. PT118
3: Semester/Year
First Semester / First Year
4: Date of Preparing this Description
2025/09/15
5: Available Attendance Formats
In person
6: Total Study Hours (Overall) / Total Units (Overall)
3/3
7: Course Coordinator
8:Course Objectives
It is aimed to learn the basic definitions, concepts and issues related to health and, in parallel, the necessary medical terminology.
9:Teaching and Learning Strategies
1. Cooperative Learning Strategy 2. Brainstorming Strategy 3. Concept Mapping Cooperative Strategy 4. Real-Time Feedback Strategy 5. Observation Chain Strategy 6. Exchange of Opinions and Discussion Strategy 7. Presentation of Information Strategy 8. Training and Presentation of Scientific Developments Strategy

10:Course Structure

Evaluation Method	Learning Method	Unit or Topic Title	Learning Outcomes	hours	Week
ily, Oral, and Written Exams; Reports; Discussions	Theory	Definition to Terminology		3	1
Daily, Oral, and Written Exams; Reports; Discussions	Theory	General rules for creating medical terms		3	2
Daily, Oral, and Written Exams; Reports; Discussions	Theory	General rules for creating medical terms		3	4

Daily, Oral, and Written Exams; Reports; Discussions	Theory	Anatomical Body Structure		3	5
Daily, Oral, and Written Exams; Reports; Discussions	Theory	Terminology related to the musculoskeletal system		3	5
Daily, Oral, and Written Exams; Reports; Discussions	Theory	Terminology related to the digestive system		3	6
Daily, Oral, and Written Exams; Reports; Discussions	Theory	Terminology related to the respiratory system		3	7
Daily, Oral, and Written Exams; Reports; Discussions	Theory	Terminology related to the cardiovascular system		3	8
Daily, Oral, and Written Exams; Reports; Discussions	Theory	Terminology related to the urinary system		3	9
Daily, Oral, and Written Exams; Reports; Discussions	Theory	Terminology related to the endocrine system		3	10
Daily, Oral, and Written Exams; Reports; Discussions	Theory	Terminology related to the nervous system		3	11
Daily, Oral, and Written Exams; Reports; Discussions	Theory	Terminology related to sense organs		3	12
Daily, Oral, and Written Exams; Reports; Discussions	Theory	Terminology related to the integumentary System		3	13
Daily, Oral, and Written Exams; Reports; Discussions	Theory	Terminology related to the Reproductive System		3	14
Daily, Oral, and Written Exams; Reports; Discussions	Theory	General evaluation and discuss to terms of		3	`5

11:Course Assessment	
Continuous Assessment: 30% / Final Exam: 70%	
12:Learning and Teaching Resources	
	Prescribed Textbooks (Curricular)
1. Medical terminology made incredibly easy. Author: Springhouse Corporation. Publisher: Springhouse Corp., Publication Date: c2001. Publication Place: Springhouse, Pa. Current medical terminology 2. Author: Pyle, Vera. Publisher: Health Professions Institute, Publication Date: 2000. Publication Place: Modesto, Calif. 3. Using medical terminology : a practical approach Author: Na Judi L. Publisher: Lippincott Williams & Wilkins, Publication Date: c2006. Publication Place: Philadelph 4. Solving the puzzles in medical terminology : an interactive study guide to accompany the telecourse Medical terminology Author: Wetle, Victoria L. , Longshore, Glen. Publisher: Jones and Bartlett Publishers, Publication Date: c1997. Publication Place: Boston 5. Introduction to medical terminology Author: Besser, Pam., Fisher, J. Patrick. Publisher: McGraw-Hill Higher ucation ; McGraw-Hill [distributor], Publication Date: 2005. 33 Publication Place: New York : London	Main References (Sources)
	commended Supplementary Books and References (Scientific Journals, Reports...)
	Electronic References, Websites

Course Description of Human Anatomy 1

❖ Course Name

Human Anatomy 1

❖ Course Code

ATU.CHM. PT112

❖ Semester / Year

First Semester / First Year

❖ The history of preparation of this description

2025\9\15

❖ Available Attendance Forms

Came

❖ Number of Credit Hours (Total) / Number of Units (Total)

6\4

❖ Course administrator's name (if more than one name)

Name: Assist. lec Hussain Al Morshedy
Email :

❖ Course Objectives

General Objective:

Learn the importance of anatomy and the location of organs for the student in his field of specialization.

Special Objective:

1. Acquire knowledge of the structure of the human body in general.
2. Know anatomical positions, terminology and levels.
3. Types of tissues.
4. Understand the histological features of different organs.
5. Identify muscle tissue and its types.
6. Identify bones and their types.
7. Identify joints and their types.
8. Recognize the bones, muscles and nervous processing of the upper limb.

❖ Teaching and Learning Strategies

1. Cooperative education strategy.
2. Brainstorming education strategy.
3. Education strategy collaborative concept planning.
4. Real-time feedback education strategy
5. Education Strategy Notes Series.

6.The strategy of education by exchanging views and discussing.

7. Education strategy by presenting information.

Education strategy by training and presentation of scientific developments.

❖ Course Structure

Evaluation method	Learning method	Unit or subject name	Required Learning Outcomes	Hours	The week
Daily, oral and written exams, reports, discussions.	Face-to-face instruction in the classroom that includes a scientific lecture that contains pictures and explanatory videos, and there is also a practical aspect that includes virtual anatomy in addition to models	**Introduction**: Define Anatomy and mention i sub-divisions, Name regions, cavities and systems of the body.	The student's knowledge the subject Scientific and Skills Perception Scientific, mental and applied	6	1
Daily, oral and written exams, reports, discussions.	Face-to-face instruction in the classroom that includes a scientific lecture that contains pictures and explanatory videos, and there is also a practical aspect that includes virtual anatomy in addition to models	**Histology:** General Histology, study of the basic tissues of the body (classify and mention the microscopic structure of types of tissues) such as , Cell, Epithelium, Connective Tissue, Cartilage, Bone, Muscular tissue, Nerve Tissue – TS & LS, Circulatory system – large sized artery, medium sized artery, large sized vein, lymphoid tissue, Skin and its appendages.	The student's knowledge the subject Scientific and Skills Perception Scientific, mental and applied **33**	6	2
Daily, oral and written exams, reports, discussions.	Face-to-face instruction in the classroom that includes a scientific lecture that	**Osteology:** Anatomical positions of the body, ax planes, common anatomi terminologies (grooves, tuberosity, trochanters et	The student's knowledge the subject Scientific and skill perception Scientific and mental and development	6	3

	contains pictures and explanatory videos, and there is also a practical aspect that includes virtual anatomy in addition to models	**Connective tissue** classification,	Vetch		
For daily, oral and writ exams, reports, discussions.	Face-to-face instruction in the classroom that includes a scientific lecture that contains pictures and explanatory videos, and there is also a practical aspect that includes virtual anatomy in addition to models	**Osteology:** Bones Composition and functions, classification of types according to morphology and development, growth and repair, structure of long bone, vertebral column, types of vertebrae, bones of extremities and body landmarks	The student's knowledge the subject Scientific and Skills Perception Scientific, mental and applied	6	4
Daily, oral and written exams, reports, discussions.	Face-to-face instruction in the classroom that includes a scientific lecture that contains pictures and explanatory videos, and there is also a practical aspect that includes virtual anatomy in	**Arthrology:** Definitions, Classification of joints, Construction of joints, Motions of joints, Structure of fibrous, cartilaginous joints,	The student's knowledge the subject Scientific and Skills Perception Scientific, mental and applied	6	5

	addition to models				
Daily, oral and written exams, reports, discussions.	Face-to-face instruction in the classroom that includes a scientific lecture that contains pictures and explanatory videos, and there is also a practical aspect that includes virtual anatomy in addition to models	**Arthrology:** Blood supply and nerve supply of joints, Articulations – articular surfaces, types of joints, motions of upper and lower extremities, trunk, head	The student's knowledge the subject Scientific and Skills Perception Scientific, mental and applied	6	6
Daily, oral and written exams, reports, discussions.	In-person classroom instruction that includes Presentation of a scientific lecture containing pictures and explanatory videos, and there is also a practical aspect that includes virtual anatomy in addition to models	**Myology:** Types of muscle tissue, Muscles of upper extremity, lower extremity, trunk, eye, face etc. origin, insertion, nerve supply and action (in detail) **Myology of other systems:** Cardiovascular system, Blood lymph, tissue fluid-characteristics, composition, and function, The heart-main arteries, veins, capillaries, Lymph circulationgram –ve cocci, Septicemia-cholera - Shock Typhoid diarrhea	The student's knowledge the subject Scientific and Skills Perception Scientific and mental and applied **35**	6	7
Daily, oral and written exams, reports, discussions.	Face-to-face instruction in the classroom that includes a scientific	**Upper extremity Pectoral region,** Outline the features of pectoral region, Name and identify the	The student's knowledge the subject Scientific and Skills Perception	6	8

	lecture that contains pictures and explanatory videos, and there is also a practical aspect that includes virtual anatomy in addition to models	sternum, clavicle, scapula and humerus. Outline the main features of the bones of shoulder girdle, Identify the parts, borders and surfaces of sternum. Identify the ends, surfaces, curvatures and other features of clavicle. Identify the borders, angles, surfaces, processes, fossae and other features of scapula	Scientific, mental and applied		
Daily, oral and written exams, reports, discussions.	Face-to-face instruction in the classroom that includes a scientific lecture that contains pictures and explanatory videos, and there is also a practical aspect that includes virtual anatomy in addition to models	**Scapular region,** Comprehend the main features of the muscle sin the scapular region, State the layered arrangements of the muscles of the back, Name and identify the muscles of scapular region. Mention their origin, insertion, nerve supply and actions, Demonstrate the bony landmarks of scapula, humerus and clavicle	The student's knowledge the subject Scientific and Skills Perception Scientific, mental and applied	6	9
Daily, oral and written exams, reports, discussions.	Face-to-face instruction in the classroom that includes a scientific lecture that contains pictures and explanatory videos, and there is also a practical	**Shoulder Girdle,** Comprehend the main features of joints of the shoulder girdle. Name the joints of shoulder girdle. Identify the articular surfaces and name the ligaments and movements of sternoclavicular and acromioclavicular joints.	The student's knowledge the subject Scientific and Skills Perception Scientific, mental and applied	6	10

	aspect that includes virtual anatomy in addition to models				
Daily, oral and written exams, reports, discussions.	Face-to-face instruction in the classroom that includes a scientific lecture that contains pictures and explanatory videos, and there is also a practical aspect that includes virtual anatomy in addition to models	**Shoulder Girdle,** Mention the type of the joints. Demonstrate and name the movements of scapula. Mention the chief muscles producing these movements. Correlate movements of scapula. Assign functional roles of the articular disc, costoclavicular ligament of sternoclavicular joint and coracoclavicular ligament.	The student's knowledge the subject Scientific and Skills Perception Scientific, mental and applied	6	11
Daily, oral and written exams, reports, discussions.	Face-to-face instruction in the classroom that includes a scientific lecture presentation containing pictures and explanatory videos and also There is a practical aspect that includes virtual anatomy in addition to models	**Shoulder joint,** Mention the type, articular surfaces and ligaments of the shoulder joint. Define and demonstrate the movements of shoulder joint, Name and identify the chief muscles producing these movements. Mention the blood supply and nerve supply of this joint.	The student's knowledge the subject Scientific and Skills Perception Scientific, mental and applied **37**	6	12
Daily, oral and written exams, reports, discussions.	Face-to-face instruction in the classroom	**Upper Arm,** Name and identify the muscles at the front	The student's knowledge the subject	6	13

	that includes a scientific lecture that contains pictures and explanatory videos, and there is also a practical aspect that includes virtual anatomy in addition to models	and back of the upper arm. Name and identify the ends, borders, surfaces and features of the humerus. Identify the head, anatomical neck, tubercles, surgical neck, bicipital groove, condyles, capitulum, trochlea, epicondyles, radial, coronoid and olecranon fossae. Mention the origin, insertion, nerve supply and actions of the muscles of the front and back of upper arm..	Scientific and Skills Perception Scientific, mental and applied		
Daily, oral and written exams, reports, discussions.	Face-to-face instruction in the classroom that includes the presentation of a scientific lecture containing pictures and explanatory videos, and there is also a practical aspect that includes anatomy Virtual in addition to models	**Elbow joint,** Mention the type, articular surfaces and ligaments of elbow joint. Define and demonstrate the movements possible and name the chief muscles producing these movements. Mention the blood supply and nerve supply.	The student's knowledge the subject Scientific and Skills Perception Scientific, mental and applied **38**	6	14
Daily, oral and written exams, reports, discussions.	Face-to-face instruction in the classroom that includes a scientific lecture that contains pictures and explanatory	REVISION	The student's knowledge the subject Scientific and Skills Perception Scientific and mental and applied	6	15

	videos, and there is also a practical aspect that includes virtual anatomy in addition to models				

❖ Course Evaluation

Striving: Theoretical: 25 Practical: 15/ Final: Theoretical: 35 Practical: 25

❖ Learning and Teaching Resources

	Required textbooks (methodology)
1. 1.Human Anatomy for Students, Byas Deb Ghosh Professor of Anatomy Second Edition: 2013 2. ATLAS OF FUNCTIONAL NEUROANATOMY By WALTER J. HENDELMAN,2000 3. Clinical Anatomy of the Spine, Spinal Cord, and ANS, Third Edition 2014, by Mosby 4. Gray's Anatomy for Students, Third Edition Richard L. Drake, A. Wayne Vogl, Adam W. M. Mitchell,2015. 5. Human Anatomy Coloring Book (Dover Children's Science Books) ,1982,by Margaret Matt (Author), Joe Ziemian (Author) 6. Atlas of Human Anatomy (Netter Basic Science)by Frank H. Netter,2006.	Main references (sources)
	Recommended supporting books and references (Scientific journals, reports...)
	Electronic References, Websites

Course Description of Medical Microbiology

❖ Course Name
Medical Microbiology
❖ Course Code
ATU.CHM. PT114
❖ Semester / Year
First Semester / First Year
❖ The history of preparation of this description
2025\9\15
❖ Available Attendance Forms
Came
❖ Number of Credit Hours (Total) / Number of Units (Total)
6\4
❖ Course administrator's name (if more than one name)
Name: Dr. Sajjad Moayad Abdul Hussein Email : sajjad.alfadhel@atu.edu.iq
❖ Course Objectives
Knowledge of microorganisms that cause injuries, whether bacterial, viral or parasite infections that affect th body systems and that help the physical therapist in treating such cases.
❖ Teaching and Learning Strategies

✓ Cooperative Education Strategy. ✓ Brainstorming Education Strategy. ✓ Education Strategy Collaborative Concept Planning. ✓ Real-time feedback education strategy ✓ Education Strategy Notes Series. ✓ Interactive and Discussion Education Strategy. ✓ Education Strategy by Presentation of Information. ✓ The strategy of education by training and presentation of scient developments. **40**	**Strategies**

❖ Course Structure					
Evaluation method	**Learning method**	**Unit or subject name**	**Required Learning Outcomes**	**Hours**	**The week**
Daily, oral and written exams Reports, discussions.	Theoretical + Practical	microbiology- Introductio &microscope, precaution waste disposal		6	1
Daily, oral and written exams, reports, discussions.	Theoretical + Practical	Classification of Micro-organisms & morphology Bacteria		6	2
Daily, oral and written exams, reports, discussions.	Theoretical + Practical	Sterilization & disinfectio [basic concepts] hospita acquired infection, univers safety		6	3
Daily, oral and written exams, reports, discussions.	Theoretical + Practical	**immunology** :Antigen antibody - reaction & application for diagnosis; Immune response - normal/abnormal		6	4
Daily, oral and written exams, reports, discussions.	Theoretical + Practical	**immunology** : Innate immunity & acquired immunity [vaccination], Hyper - sensitivity & auto-immunity		6	5
Daily, oral and written exams, reports, discussions.	Theoretical + Practical	Laboratory Diagnosis of Infection		6	6
Daily, oral and written exams, reports, discussions.	Theoretical + Practical	**Bacteriology :** . Infection caused by gram +ve cocci; Gas gangrene - clostridium -Diphtheria , Infection caused by gram –ve cocci, Septicemia-cholera - Shock Typhoid diarrhea	**41**	6	7
Daily, oral and written exams, reports, discussions.	Theoretical + Practical	**Bacteriology :** Mycobacterial infection tuberculosis: Leprosy- Atypical Mycobacterium d. syphilis – morphology & pathogenesis [VDRL]		6	8
Daily, oral and written exams, reports, discussions.	Theoretical + Practical	**Viruses** Polio, measles, congenital viral infections, Rubella, CMV Herpes		6	9

Daily, oral and written exams, reports, discussions.	Theoretical + Practical	**Mycology**		6	10
Daily, oral and written exams, reports, discussions.	Theoretical + Practical	Parasites affecting C. N. S.		6	11
Daily, oral and written exams, reports, discussions.	Theoretical + Practical	**Malaria** - Filaria - Toxoplasma – Cystiscercosis		6	12
Daily exams Oral, writt reports, discussions.	Theoretical + Practical	**Applied biology** as relevant to diseases involving Bones, Joints - Nerves - Muscles-Skin - brain-cardiopulmonary system & burns.		6	13
Daily, oral and written exams Reports, Discussions.	Theoretical + Practical	**Viruses:** Introduction & general properties, .HIV		6	14
Daily, oral and written exams Reports, Discussions.	Theoretical + Practical	REVISION		6	15

❖ Course Evaluation

Striving: Theoretical: 25 Practical: 15/ Final: Theoretical: 35 Practical: 25

❖ Learning and Teaching Resources

	Required textbooks (methodology)
1. 2THuman biology: concepts and current issues 1T2b 0T1Johnson, Michael D.0T third edition 2. Biology a functional approach, 1987 ,2P ndP edition MBV Roberts,TJ King . 3. Advanced biology ,2000.Micheal Roberts , Michea rieis, Grace Monger	Main references (sources)
	Recommended supporting books and references (Scientific journals, reports...)
	Electronic References, Websites

Computer Course Description

❖ Course Name

Computer

❖ Course Code

ATM.CHM. PT116

❖ Semester / Year

First Semester / First Year

❖ The history of preparation of this description

2025\9\15

❖ Available Attendance Forms

Came

❖ Number of Credit Hours (Total) / Number of Units (Total)

3\2

❖ Course administrator's name (if more than one name)

Name: Assist.Lec. Ashwaq Mutashar / Assist.Lec. Ahmed Younis

Email : Ashwaqhabeeb66@gmail.com

❖ Course Objectives

General Objective : Providing the student with the skills of dealing with basic office applications and creating office files and documents. And the use of the operating system as well as the basics of working within the digital environment.

Special Objective : Providing the student with knowledge in the management and use of various computer applications .

vocabulary

❖ Teaching and Learning Strategies

✓ Cooperative education strategy. ✓ Brainstorming education strategy. ✓ Education strategy collaborative concept planning. ✓ Real-time feedback education strategy ✓ Education Strategy Notes Series. ✓ The strategy of education by exchanging views and discussing. ✓ Education strategy by presenting information. ✓ Education strategy by training and presentation of scientific developments.	**Strategy**

❖ Course Structure

Evaluation method	Learning method	Unit or subject name	Required Learning Outcomes	Hours	The week
Daily, oral and written exams, reports, discussions.	Theoretical	Computer Fundamentals Computer concept, computer life cycle phases and the development of computer generations		1	1
Daily, oral and written exams, reports, discussions.	Theoretical	Computer advantages and areas of use Computer classification in terms of purpose, size and type of data		1	2
Daily, oral and written exams, reports, discussions.	Theoretical	Computer Components Computer Components Computer Hardware Software Entities		1	3
Daily, oral and written exams, reports, discussions.	Theoretical	Your personal computer computer security concept and software licenses		1	4
Daily, oral and written exams, reports, discussions.	Theoretical	Computer Security and Software Licenses Computer Safety & Software Licences		1	5
Daily, oral and written exams, reports, discussions.	Theoretical	Ethics of the electronic world - forms of transgressions - computer security - computer privacy	**44**	1	6
Daily, oral and written exams, reports, discussions.	Theoretical	Computer software licenses and types, intellectual property, electronic penetration,		1	7

		malicious software, the most important steps necessary to protect against hacking, computer damage to health			
Daily, oral and written exams, reports, discussions.	Theoretical	Operating Systems Operating System Definition, Functions, Objectives, Classification Examples of some operating systems		1	8
Daily, oral and written exams, reports, discussions.	Theoretical	Operating Systems Windows 7 Operating System		1	9
Daily, oral and written exams, reports, discussions.	Theoretical	Desktop components Taskbar Start Menu		1	10
Daily, oral and written exams, reports, discussions.	Theoretical	Folders and files Icons		1	11
Daily, oral and written exams, reports, discussions.	Theoretical	Perform operations on windows desktop wallpapers		1	12
Daily, oral and written exams, reports, discussions.	Theoretical	Control Panel Windows Control Panel Groups (Category)	**45**	1	13
Daily, oral and written exams, reports, discussions.	Theoretical	From the Defragment control panel , organize files inside the computer, install and delete programs		1	14

Daily, oral and written exams, reports, discussions.	Theoretical	Some common conditions and settings in the computer , printer management, setting the time and date, maintenance of primary disks		1	15
Evaluation method	**Learning method**	**Practical vocabulary titles**	**Required Learning Outcomes**	**Hours**	**The week**
Daily, oral and written exams, reports, discussions.	practical	- Practical examples of browsing, opening and closing windows and dialog boxes and the correct way to deal with the keyboard, cursor and other devices.		2	1
Daily, oral and written exams, reports, discussions.	practical	- Practical examples on customization, dealing with icons and changing screen resolution.		2	2
Daily, oral and written exams, reports, discussions.	practical	- Training the student to create a new user, enlarge windows and show the keyboard to identify the physical components of the calculator.		2	3
Daily, oral and written exams, reports, discussions.	practical	- Training the student to deal with computer software licenses and types and deal with the original origin of the programs.		2	4

Daily, oral and written exams, reports, discussions.	practical	Training the student to deal with computer security.		2	5
Daily, oral and written exams, reports, discussions.	practical	Training the student to deal with computer privacy		2	6
Daily, oral and written exams, reports, discussions.	practical	Training the student to deal with electronic penetration and its types Types of virus recipes, how to make a backup image of the computer for protection		2	7
Daily, oral and written exams, reports, discussions.	practical	Training the student to deal with operating systems, formatting and partitioning the hard drive internally and externally		2	8
Daily, oral and written exams, reports, discussions.	practical	- Training the student to install Windows 7.		2	9
Daily, oral and written exams, reports, discussions.	practical	- Train the student on the Start menu Run taskbar commands and configure a file and store it with the student's name on the desktop. Handle from program windows and sliders. .-Training the student on the uses of F1, F2,...,F12 in the keyboard		2	10

Daily, oral and written exams, reports, discussions.	practical	- Create a folder with a specific name and training on name change, concealment, retrieval, deletion and its path.		2	11
Daily, oral and written exams, reports, discussions.	practical	Training the student to perform operations on windows desktop wallpapers		2	12
Daily, oral and written exams, reports, discussions.	practical	Training the student to use the control panel		2	13
Daily, oral and written exams, reports, discussions.	practical	Training the student to delete a specific program and install it again.		2	14
Daily, oral and written exams, reports, discussions.	practical	Training the student on common computer settings Installing the printer and how to deal with it, setting the time and date, maintenance of primary disks Partitions C,D,E,F		2	15

❖ Course Evaluation

Quest: Theoretical: 25 Practical: 15/ Final: Theoretical: 35 Practical: 25

❖ Learning and Teaching Resources

	Required textbooks (methodology)
Computer Fundamentals and Office Applications (Part One)	Main references (sources)
	Recommended supporting books references (Scientific journals, reports...)

	Electronic References, Websites

Description course of Medical Physics

❖ Course Name
Medical Physics **49**
❖ Course Code
ATU.CHM. PT126
❖ Semester / Year
Second Semester / First Year
❖ The history of preparation of this description
2025\9\15
❖ Available Attendance Forms

Came

❖ Number of Credit Hours (Total) / Number of Units (Total)

3\2

❖ Course administrator's name (if more than one name)

Name: Dr. Aqeel Salam

Email :

❖ Course Objectives

Course Objectives: The student should be able to

General Objective:

At the end of the academic year, the student should be able to identify:

The study of some physical properties of materials used in physical therapy Medical physics also deals with the study of electricity by studying some physical and electrical properties among medical devices used in the field of medicine and physical therapy in particular.

It also includes the study of the physical properties of fluids and general characteristics and their use in physical therapy with the use of ultrasound in natural treatment.

(Types and use).

❖ Teaching and Learning Strategies

✓ Cooperative education strategy. ✓ Brainstorming education strategy. ✓ Education strategy collaborative concept planning. ✓ Real-time feedback education strategy ✓ Education Strategy Notes Series. ✓ The strategy of education by exchanging views and discussing. ✓ Education strategy by presenting information. ✓ Education strategy by training and presentation of scientific developments.	**Strategy**

❖ Course Structure

Evaluation method	Learning method	Unit or subject name	Required Learning Outcomes	Hours	The week
Daily, oral and written exams, reports, discussions.	Theoretical	**ELECTRICITY AND MAGNETISM (**Structure of an atom, Electron Theory, Conductors & Insulations, Conduction & Convection, Displacement Current.)		1	1
Daily, oral and written exams, reports, discussions.	Theoretical	**STATIC ELECTRICITY** (Charging by conduction and Induction, Electrostatic Fields, Gold leaf Electroscope ,Capacitors, types of capacitors, Construction, Units, Arrangement of Capacitors in series and parallel, Charging and discharging of capacitors, Oscillating Discharge of Capacitors.)		1	2
Daily, oral and written exams, reports, discussions.	Theoretical	**CURRENT ELECTRICITY** Ohm's Law, Electrical Components and their unit, Resistance, Types of Resistance, Units, Chemical effects of a Current, Types of Current, Cell and Batteries, Simple Voltage Cell, Wet and dry Lachlanhe Cell, Combination of Cells in series and parallel, Thermal effects of current, Electrolysis and Electrolytic burns, Ionization of gases and Thermionic emission,	**51**	1	3

		Electronic tubes, Diodes and Triodes.			
Daily, oral and written exams, reports, discussions.	Theoretical	**ELECTROMAGNETISM** Molecular theory of magnetism, Magnetic effect of an electric current, Moving coil volt meter and Ammeter, Moving iron type, hot wire type and Thermocouple type meter, Measurement of high frequency and alternate current with meters ,Electromagnetic induction, Faradays law and Lenses law, Mutual and self-Induction , Transformer , Construction and types, Static and auto Transformer, Dynamo, construction, A.C & D.C Dynamo.		1	4
Daily, oral and written exams, reports, discussions.	Theoretical	**ELECTRO MECHANICS** Current for treatment, Rectification, Rectification of A.C, Half wave and full wave Rectification, Valve rectification circuits and metal rectifier, Surging of current ,		1	5
Daily, oral and written exams, reports, discussions.	Theoretical	**CLASSIFICATION OF CURRENTS (OVERVIEW)** **LOW FREQUENCY CURRENT** Sinusoidal current, Faradic current , Galvanic current (constant and interrupted), Diadynamic current TENS ,Smart Bristow		1	6

		faradic coil , Super imposed current and their graphical representation.			
Daily, oral and written exams, reports, discussions.	Theoretical	**MEDIUM FREQUENCY CURRENT** Interferential current, Russian current.		1	7
Daily, oral and written exams, reports, discussions.	Theoretical	**HIGH FREQUENCY CURRENT (Produced by)** Spark, Valves, Transistors , Long waves, medium waves short waves micro waves.		1	8
Daily, oral and written exams, reports, discussions.	Theoretical	**SOUND WAVES** Wave motion in sound , Infrasonic, Normal hearing band, Characteristics of the sound waves and their velocities, Ultrasonic, Reflection and refraction of sound waves ,Characteristics of tone resonance and beats , Interference of sound waves.		1	9
Daily, oral and written exams, reports, discussions.	Theoretical	**HEAT** Scales of temp and its conversion to other scales **,** Nature of heat energy**,** Specific heat and three modes of heat energy transfer effect of **,** impurities on melting and boiling points.	**53**	1	10
Daily, oral and written exams, reports, discussions.	Theoretical	**ELECTROMAGNETIC RADIATION** Electromagnetic spectrum, Relationship between frequency and wave length Laws of reflection, refraction and absorptions, Total internal reflection,		1	11

		Cosine law and inverse square law, Concave and convex mirrors Reflectors , Radio wave (long, medium, short, micro waves) , Infra-red rays, Visible rays, Ultra violet rays , X-rays, Nuclear waves (alpha beta and gamma).			
Daily, oral and written exams, reports, discussions.	Theoretical	**SAFETY IN BIOMEDICAL INSTRUMENTS** Electrical outlets, hot, neutral and ground connections, House wiring, Pervasiveness of electricity and of electric shocks, Causes of electric shocks and precaution, Effect of electric current on human body, Techniques to reduce the effect of electric shock Earth shocks and precaution against earth shocks.		1	12
Daily, oral and written exams, reports, discussions.	Theoretical	**RADIATION PROTECTION** Ionizing and non-ionizing radiations, Quantities and associated units of radiations, Effect of ionizing and non-ionizing radiation's, Internal and external hazards , Main principle to control external hazard , Distance and shielding.	**54**	1	13
Daily, oral and written exams, reports, discussions.	Theoretical	**PRACTICAL:** To verify the ohm's Law, To find the specific resistance by using the potential divider, To verify the joules law of		1	14

		electrical methods, To calibrate a thermo couple and an unknown temperature, To find the acceleration due to gravity by simple pendulum			
Daily, oral and written exams, reports, discussions.	Theoretical	To verify the law of reflection of light, To verify the law of refraction of light, To verify the refraction index of glass using rectangular slab.		1	15
Evaluation method	**Learning method**	**Practical vocabulary titles**	**Required Learning Outcomes**	**Hours**	**The week**
Daily, oral and written exams, reports, discussions.	practical	**ELECTRICITY AND MAGNETISM** Structure of an atom, Electron Theory, Conductors & Insulations, Conduction & Convection, Displacement Current.		2	1
Daily, oral and written exams, reports, discussions.	practical	**STATIC ELECTRICITY** Charging by conduction and Induction, Electrostatic Fields, Gold leaf Electroscope ,Capacitors, types of capacitors, Construction, Units, Arrangement of Capacitors in series and parallel, Charging and discharging of capacitors, Oscillating Discharge of Capacitors.		2	2
Daily, oral and written exams, reports, discussions.	practical	**CURRENT ELECTRICITY** Ohm's Law, Electrical Components and their unit, Resistance, Types of		2	3

		Resistance, Units, Chemical effects of a Current, Types of Current, Cell and Batteries, Simple Voltage Cell, Wet and dry Lachlanhe Cell, Combination of Cells in series and parallel, Thermal effects of current, Electrolysis and Electrolytic burns, Ionization of gases and Thermionic emission, Electronic tubes, Diodes and Triodes.			
Daily, oral and written exams, reports, discussions.	practical	**ELECTROMAGNETISM** Molecular theory of magnetism, Magnetic effect of an electric current, Moving coil volt meter and Ammeter, Moving iron type, hot wire type and Thermocouple type meter, Measurement of high frequency and alternate current with meters ,Electromagnetic induction, Faradays law and Lenses law, Mutual and self-Induction , Transformer , Construction and types, Static and auto Transformer, Dynamo, construction, A.C & D.C Dynamo.		2	4
Daily, oral and written exams, reports, discussions.	practical	**ELECTRO MECHANICS** Current for treatment, Rectification, Rectification of A.C, Half wave and full wave Rectification, Valve rectification circuits and		2	5

		metal rectifier, Surging of current ,			
Daily, oral and written exams, reports, discussions.	practical	**CLASSIFICATION OF CURRENTS (OVERVIEW)** **LOW FREQUENCY CURRENT** Sinusoidal current, Faradic current , Galvanic current (constant and interrupted), Diadynamic current TENS ,Smart Bristow faradic coil , Super imposed current and their graphical representation.		2	6
Daily, oral and written exams, reports, discussions.	practical	**MEDIUM FREQUENCY CURRENT** Interferential current, Russian current.		2	7
Daily, oral and written exams, reports, discussions.	practical	**HIGH FREQUENCY CURRENT (Produced by)** Spark, Valves, Transistors , Long waves, medium waves short waves micro waves.		2	8
	practical	**SOUND WAVES** Wave motion in sound , Infrasonic, Normal hearing band, Characteristics of the sound waves and their velocities, Ultrasonic, Reflection and refraction of sound waves ,Characteristics of tone resonance and beats , Interference of sound waves.		2	9
	practical	**HEAT** Scales of temp and its conversion to other scales **,** Nature of heat energy**,** Specific heat and		2	10

		three modes of heat energy transfer effect of **,** impurities on melting and boiling points.			
	practical	**ELECTROMAGNETIC RADIATION** Electromagnetic spectrum, Relationship between frequency and wave lengt Laws of reflection, refraction and absorptions, Total internal reflection, Cosine law and inverse square law, Concave and convex mirrors Reflectors , Radio wave (long, medium, short, micro waves) , Infra red rays, Visible rays, Ultra violet rays , X-rays, Nuclear waves (alpha beta and gamma).		2	11
	practical	**SAFETY IN BIOMEDICAL INSTRUMENTS** Electrical outlets, hot, neutral and ground connections, House wiring, Pervasiveness of electricity and of electric shocks, Causes of electric shocks and precaution, Effect of electric current on human body, Techniques to reduce the effect of electric shock Earth shocks and precaution against earth shocks.		2	12
	practical	**RADIATION PROTECTION** Ionizing and non ionizing radiations, Quantities and associated		2	13

		units of radiations, Effect of ionizing and non ionizing radiation's, Internal and external hazards , Main principle to control external hazard , Distance and shielding.			
	practical	**PRACTICAL:** To verify the ohm's Law, To find the specific resistance by using the potential divider, To verify the joules law of electrical methods, To calibrate a thermo couple and an unknown temperature, To find the acceleration due to gravity by simple pendulum		2	14
	practical	To verify the law of reflection of light, To verify the law of refraction of light, To verify the refraction index of glass using rectangular slab.		2	15

❖ Course Evaluation

Quest: Theoretical: 25 Practical: 15/ Final: Theoretical: 35 Practical: 25

❖ Learning and Teaching Resources

	Required textbooks (methodology)
	59
1. Encyclopaedia of Medical Physics, Volume I : Edited by Slavik Tabakov , Edited by Franco Milano , Edited by Sven-Erik Strand , Edited by Cornelius Lewis , Edited by Perry Sprawls. 2. Advances in Medical Physics ,0 Anthony B. Wolbarst, Andrew Karellas, Elizabeth A. Krupinski, and William R. Hendee, Editors	Main references (sources)

	Recommended supporting books references (Scientific journals, reports...)
	Electronic References, Websites

Description course of the Introduction to Physical Therapy

❖ Course Name
Introduction to Physical Therapy
❖ Course Code
ATU.CHM. PT124
❖ Semester / Year
Second Semester / First Year
❖ The history of preparation of this description

2025\9\15

❖ Available Attendance Forms

Came

❖ Number of Credit Hours (Total) / Number of Units (Total)

6\4

❖ Course administrator's name (if more than one name)

Name: Assist.Lec. Mohammed abd Al Hussein Jabar

Email : Mohammed.pt@atu.edu.iq

❖ Course Objectives

General Objective :

Introducing students to the profession of physical therapy and directing them to it.

Special Objective:

1. The importance of applying physiotherapy to improve human health .
2. Describe the basic elements of the physiotherapy process and apply them to pathological conditio
3. Identify and use basic terms in physical therapy.
4. Know the daily vital activities.
5. Taking into account the privacy of patients.

❖ Teaching and Learning Strategies

Strategy
✓ Cooperative education strategy. ✓ Brainstorming education strategy. ✓ Education strategy collaborative concept planning. ✓ Real-time feedback education strategy ✓ Education Strategy Notes Series. ✓ The strategy of education by exchanging views and discussing. ✓ Education strategy by presenting information. ✓ Education strategy by training and presentation of scientific developments.

❖ Course Structure

Evaluation method	Learning method	Unit or subject name	Required Learning Outcomes	Hours	The week
Daily, oral and written exams, reports, discussions.	Theoretical + Practical	History of physiotherapy.		6	1

Daily, oral and written exams, reports, discussions.	Theoretical + Practical	Terminology in physiotherapy.		6	2
Daily, oral and written exams, reports, discussions.	Theoretical + Practical	Definition and epidemiology of disability, impairment and handicap. Process of disability.		6	3
Daily, oral and written exams, reports, discussions.	Theoretical + Practical	The concept of team approach, members of the interdisciplinary team. The responsibilities and functions of the physiotherapist.		6	4
Daily, oral and written exams, reports, discussions.	Theoretical + Practical	The role of the physiotherapist in the current changes in health care.		6	5
Daily, oral and written exams, reports, discussions.	Theoretical + Practical	Define levels of care within the delivery system (acute, subacute, rehab, skilled nursing, home care, etc.).		6	6
Daily, oral and written exams, reports, discussions.	Theoretical + Practical	Disability prevention and principles of physiotherapy.		6	7
Daily, oral and written exams, reports, discussions.	Theoretical + Practical	Understanding of the organization of physical therapy services(prevention, treatment and restoration).		6	8
Daily, oral and written exams, reports, discussions.	Theoretical + Practical	The role of both non-verbal and verbal communication in physiotherapy. Brief outlines of psychosocial aspects of physiotherapy.	**62**	6	9
Daily, oral and written exams, reports, discussions.	Theoretical + Practical	The importance of patient and family education and the impact of patient and family education on physiotherapy outcomes.		6	10

Daily, oral and written exams, reports, discussions.	Theoretical + Practical	Activities of daily living, functional assessment, training for functional independence.		6	11
Daily, oral and written exams, reports, discussions.	Theoretical + Practical	Introduction to occupational therapy.		6	12
Daily, oral and written exams, reports, discussions.	Theoretical + Practical	The physiology and consequences of aging.		6	13
Daily, oral and written exams, reports, discussions.	Theoretical + Practical	Patient privacy.		6	14
Daily, oral and written exams, reports, discussions.	Theoretical + Practical	Revision.		6	15

❖ Course Evaluation

Quest: Theoretical: 25 Practical: 15/ Final: Theoretical: 35 Practical: 2

❖ Learning and Teaching Resources

	Required textbooks (methodology)
1. Introduction to Physical Therapy . 6th Edition, 2020. Michael Pagliarulo. 2. Introduction to Physical Therapy and Patient Skills. Mark Dutton. 2021 by McGraw Hill. 3. Musculoskeletal Assessment Joint Range of Motion, Muscle Testing, and Function 4th Edition 2020. By: Hazel M. Clarkson. 4. Grieve's Modern Musculoskeletal Physiotherapy4th Edition 2019. By: Gwendolyn Jull.	Main references (sources)
	Recommended supporting books references (Scientific journals, reports...)
	Electronic References, Websites

Description course of Kinesiology

❖ Course Name
Kinesiology
❖ Course Code
ATU.CHM. PT121
❖ Semester / Year
Second Semester / First Year

❖ The history of preparation of this description

2025\9\15

❖ Available Attendance Forms

Came

❖ Number of Credit Hours (Total) / Number of Units (Total)

2/2

❖ Course administrator's name (if more than one name)

Name: Assist. Lec. Salam Khalif Jaber

Email :

❖ Course Objectives

General Objective : To know the types and analysis of movement in the human body.

Special Objective:

1 – Definition of natural laws affecting the movement of the human body.

2 – Definition of factors that help to analyze the movement of the human body.

3 – Determine the deficiency or defect in the movement of the body and how to return it to the normal state.

❖ Teaching and Learning Strategies

✓ Cooperative education strategy. ✓ Brainstorming education strategy. ✓ Education strategy collaborative concept planning. ✓ Real-time feedback education strategy ✓ Education Strategy Notes Series. ✓ The strategy of education by exchanging views and discussing. ✓ Education strategy by presenting information. ✓ Education strategy by training and presentation of scientific developments.	**Strategy**

❖ Course Structure

Evaluation method	Learning method	Unit or subject name	Required Learning Outcomes	Hours	The week
Daily, oral and writte exams, reports, discussions.	Theoretical	**peripheral joints** **The shoulder complex:** Structure and components of the shoulder complex and their integrated function.		2	1

Daily, oral and written exams, reports, discussions.	Theoretical	**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.		2	2
Daily, oral and written exams, reports, discussions.	Theoretical	**The wrist and hand complex:** Structural components and functions of the wrist complex; structure of the hand complex; prehension; functional position of the wrist and hand.		2	3
Daily, oral and written exams, reports, discussions.	Theoretical	**The hip complex:** Structure and function of the hip joint; hip joint pathology - arthrosis, fracture, bony abnormalities of the femur.		2	4
Daily, oral and written exams, reports, discussions.	Theoretical	**The knee complex:** Structure and function of the knee joint – tibiofemoral joint and patellofemoral joint; effects of injury and disease.		2	5
Daily, oral and written exams, reports, discussions.	Theoretical	**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	**66**	2	6

Daily, oral and written exams, reports, discussions.	Theoretical	**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		2	7
Daily, oral and written exams, reports, discussions.	Theoretical	**Thorax and Chest wall:** General structure and function, Rib cage and the muscles associated with the rib cage, Ventilatory motions: its coordination and integration, Developmental aspects of structure and function, Changes in normal structure and function I relation to pregnancy, scoliosis and COPD		2	8
Daily, oral and written exams, reports, discussions.	Theoretical	**Thorax and Chest wall:** General structure and function, Rib cage and the muscles associated with the rib cage, Ventilatory motions: its coordination and integration, Developmental aspects of structure and function, Changes in normal structure and function I relation to pregnancy, scoliosis and COPD	**67**	2	9

Daily, oral and writter exams, reports, discussions.	Theoretical	**Temporomandibular Joint:** General features, structure, function and dysfunction		2	10
Daily, oral and writter exams, reports, discussions.	Theoretical	**Gait:** Define, The stance, swing and double support phases of gait. The sub-division of the stance and swing phases of gait. The time and distance parameters of gait.		2	11
Daily, oral and writter exams, reports, discussions.	Theoretical	**Gait:** Joint motion at the hip, knee and able for one extremity during a gait cycle. The location of line of gravity in relation to the hip, knee and ankle during the stance phases of gait. The gravitational moments of force acting at the hip, knee and able during the stance phase.		2	12
Daily, oral and writter exams, reports, discussions.	Theoretical	**Gait:** Muscle activity at the hop, knee and able throughout the gait cycle, including why ,and when a particular muscle is active and the type of construction required. The role of each of the determinants of gait	68	2	13
Daily, oral and writter exams, reports, discussions.	Theoretical	**Gait:** The muscle activity that occurs in the upper extremity and trunk. Pathological gaits and gait deviations.		2	14
Daily, oral and writter exams, reports, discussions.	Theoretical	Revision		2	15
❖ Course Evaluation					

Endeavor: 30/ Final: 70	
❖ Learning and Teaching Resources	
	Required textbooks (methodology)
1.Clinical Kinesiology for Physical Therapist Assistants by Lippert 2. Applied Kinesiology: A Training Manual and Reference Book of Basic Principles and Practices by Robert Frost (Mar 28, 2002) 3. Kinesiology: The Mechanics and Pathomechanics of Human Movement by Carol A. Oatis 4. Kinesiology by K. Wells; Sauder's Publications. 5. Basic Biomechanics of the Musculoskeletal System by Margareta Nordin and Victor H. Frankel	Main references (sources)
	Recommended supporting books references (Scientific journals, reports...)
	Electronic References, Websites

Description course of the Physiology 2

❖ Course Name
Physiology2
❖ Course Code
ATU.CHM. PT123
❖ Semester / Year
Second Semester / First Year

❖ The history of preparation of this description

2025\9\15

❖ Available Attendance Forms

Came

❖ Number of Credit Hours (Total) / Number of Units (Total)

3\2

❖ Course administrator's name (if more than one name)

Name: Dr. Mortada Mohammed Jawad

Email:Kuh.dr.mur@atu.edu.iq

❖ Course Objectives

General Objective :

The functions of the organism's body systems trying to explain the physical and chemical factors responsible for the origin and composition of the continuity of life, and since man is a living organism, the student must understand the function and work of each part of the body in different cases in order for life to continue.

Special Objective :

1 – The cell, its components and work.

2 – The muscular and nervous system and how it works.

3 – The function of the cardiovascular system and the respiratory system and the relationship between them.

4 - The urinary system and the regulation of body fluids as well as the digestive system and its relationship to the regulation of temperature and thus the work of the endocrine glands and their role in organizing all the activities of other organs, so the student will be able to know the separation between normal work and functional disorder in pathological cases, which qualifies him to understand the special medical rehabilitation for each organ or organ

❖ Teaching and Learning Strategies

✓ Cooperative education strategy. ✓ Brainstorming education strategy. ✓ Education strategy collaborative concept planning. ✓ Real-time feedback education strategy ✓ Education Strategy Notes Series. ✓ The strategy of education by exchanging views and discussing. ✓ Education strategy by presenting information. ✓ Education strategy by training and presentation of scientific developments.	**Strategy**

❖ Course Structure

Evaluation method	Learning method	Unit or subject name	Required Learning Outcomes	Hours	The week
Daily, oral and written exams, reports, discussions.	Theoretical	**Reproductive System :** 1. Sex determination and development, Puberty. 2. Male sex hormones and their functions, spermatogenesis.		1	1
Daily, oral and written exams, reports, discussions.	Theoretical	**Reproductive System :** 3. Female sex hormones and functions, menstrual cycle, ovulation and contraceptives. 4. Pregnancy, functions of placenta and lactation		1	2
Daily, oral and written exams, reports, discussions.	Theoretical	**Excretory System:** 1. Gross and minute structure of Kidney and features of Renal circulation. 2. Mechanism of formation of Urine, GFR and Tubular function.		1	3
Daily, oral and written exams, reports, discussions.	Theoretical	**Excretory System:** 3. Renal function. 4. Physiology of Micturition		1	4
Daily, oral and written exams, reports, discussions.	Theoretical	**Muscle and Nerve:** 1. Structure of Neurons, membrane potential and generation of action potential. 2. Nerve impulse conduction, Saltatory conduct ion.		1	5
Daily, oral and written exams, reports, discussions.	Theoretical	**Muscle and Nerve:** 3. Neuromuscular junction and drugs acting on it – Myasthenia. 4.		1	6

		Degeneration and regeneration in peripheral nerves – Wallerian degeneration of electro tonus and Pflagers Law.			
Daily, oral and written exams, reports, discussions.	Theoretical	**Muscle: :** 1. Type of muscles and their gross structure, stimulus chronaxie, strength duration curve. 2. Structure of sarcomere – Basis of muscle contraction, Starling's Law and changes during muscle contraction.		1	7
Daily, oral and written exams, reports, discussions.	Theoretical	**Muscle:** 3. Electrical – Biphasic and monophasic action potentials. 4. Chemical, Thermal and Physical changes, isometric and isotonic contraction.		1	8
Daily, oral and written exams, reports, discussions.	Theoretical	**Muscle:** 5. Motor units and its properties, Clonus, Tetanus, All or None Law, Beneficial Effect. 6. Nature of Voluntary contraction, Fatigue.		1	9
Daily, oral and written exams, reports, discussions.	Theoretical	**Nervous System:** 1. Types and properties of Receptors, types of sensations. 2. Structure of Synapses, Reflex and its properties, occlusion summation, sub minimal fringe, etc.	**72**	1	10
Daily, oral and written exams, reports, discussions.	Theoretical	**Nervous System:** 3. Tracts of Spinal Cord. 4. Descending, Pyramidal		1	11

		and Extra pyramidal Tracts.			
Daily, oral and written exams, reports, discussions.	Theoretical	**Nervous System:** 5. Hemi section and complete section of spinal cord, upper and lower motor neuron paralysis. 6. Cerebral cortex – areas and functions, E.E.G.		1	12
Daily, oral and written exams, reports, discussions.	Theoretical	**Nervous System:** 7. Structure, connections and functions of Cerebellum. 8. Connections and functions of Basal Ganglia and Thalamus.		1	13
Daily, oral and written exams, reports, discussions.	Theoretical	**Nervous System:** 9. Reticular formation, tone, posture and equilibrium. 10. Autonomic nervous system.		1	14
Daily, oral and written exams, reports, discussions.	Theoretical	**Revision**		1	15
Evaluation method	**Learning method**	**Practical vocabulary titles**	**Required Learning Outcomes**	**Hours**	**The week**
Daily, oral and written exams, reports, discussions.	practical	Microscope,type and uses		2	1
Daily, oral and written exams, reports, discussions.	practical	Finger puncture,blood film		2	2
Daily, oral and written exams, reports, discussions.	practical	Staining of blood film		2	3

Daily, oral and written exams, reports, discussions.	practical	Deferential diagnosis of white blood cells		2	4
Daily, oral and written exams, reports, discussions.	practical	Hemoglobin estimation,ABO GROUP,bleeding ,clotting time,RBC and WBC account,PCV,ESR		2	5
Daily, oral and written exams, reports, discussions.	practical	Pulse rate measurement ,temperature measurement		2	6
Daily, oral and written exams, reports, discussions.	practical	Blood pressure measurement ,heart sounds,ECG		2	7
Daily, oral and written exams, reports, discussions.	practical	Lung volumes measurement ,spirometer General wine examination		2	8
Daily, oral and written exams, reports, discussions.	practical	Revision		2	9

❖ Course Evaluation

Quest: Theoretical: 25 Practical: 15/ Final: Theoretical: 35 Practical: 25

❖ Learning and Teaching Resources

	Required textbooks (methodology)
1. **Essential of exercise physiology,** McArdle, William D.; Katch, Frank I.; Katch, Victor L second edition.2000. 2. **Exercise Physiology: Nutrition, Energy and Human Performance**, William D. McArdle, Frank I. Katch, Victor L. Katch , , seventh edition , 2010. 3. **Anatomy and Physiology for Therapists and Healthcare Professionals** ,Ruth Hull, Greta Couldridge, Vicki Slegg, , 2009.	Main references (sources) **74**

	Recommended supporting books references (Scientific journals, reports...)
	Electronic References, Websites

Description course of Human Anatomy 2

❖ Course Name
Human Anatomy 2 **75**
❖ Course Code
ATU.CHM. PT122
❖ Semester / Year
Second Semester / First Year
❖ The history of preparation of this description
2025\9\15
❖ Available Attendance Forms

Came

❖ Number of Credit Hours (Total) / Number of Units (Total)

6\4

❖ Course administrator's name (if more than one name)

Name: Assist. lec Hussain Al Morshedy

Email :

❖ Course Objectives

General Objective:

Learn the importance of anatomy and the location of organs for the student in his field of specialization.

Special Objective:

1. Recognize the bones, muscles and nervous processing of the forearm
2. Recognize the bones and muscles and prepare the wrist and hand
3. Recognize the bones, muscles and nervous processing of the lower limb
4. Recognize the bones, muscles and nervous processing of the neck and spine

❖ Teaching and Learning Strategies

✓ Cooperative education strategy. ✓ Brainstorming education strategy. ✓ Education strategy collaborative concept planning. ✓ Real-time feedback education strategy ✓ Education Strategy Notes Series. ✓ The strategy of education by exchanging views and discussing. ✓ Education strategy by presenting information. ✓ Education strategy by training and presentation of scientific developments.	**Strategy**

❖ Course Structure

Evaluation method	Learning method	Unit or subject name	Required Learning Outcomes	Hours	The week
Daily, oral and written exams, reports, discussions.	Face-to-face instruction in the classroom that includes a scientific lecture that	**Forearm,** Mention the bones of forearm. Identify the ends, borders, surfaces and features of radius and ulna. Identify the head, neck, tuberosity and styloid process of	The student's knowledge o the subject Scientific and Skills Perception Scientific, mental and appl	6	1

	contains pictures and explanatory videos, and there is also a practical aspect that includes virtual anatomy in addition to models	radius. Identify the coronoid process, olecranon process, trochlear notch, tuberosity, head and styloid process of ulna. Also the radial notch of ulna and ulnar notch of radius. . Identify the muscles of front and back of the forearm. Mention the position, origin, insertion, nerve supply and action of these muscles.			
Daily, oral and written exams, reports, discussions.	Face-to-face instruction in the classroom that includes a scientific lecture that contains pictures and explanatory videos, and there is also a practical aspect that includes virtual anatomy in addition to models	**Forearm,** Mention the position and distribution of radial and ulnar arteries and ulnar, median and radial nerves. Mention the type, articular surface and ligaments of radioulnar joints. Define the movements and muscles producing these movements.	The student's knowledge o the subject Scientific and Skills Perception Scientific, mental and appl **77**	6	2
Daily, oral and written exams, reports, discussions.	Face-to-face instruction in the classroom	**Wrist,** Name and identify the carpal bones, metacarpal	The student's knowledge o the subject Scientific and skill percept	6	3

	that includes a scientific lecture that contains pictures and explanatory videos, and there is also a practical aspect that includes virtual anatomy in addition to models	bones and phalanges in an articulated hand, Name and locate the carpal bones. Define and demonstrate the movements and mention the muscles producing them. Mention its blood supply and nerve supply.	T Scientific and mental and development Vetch		
Daily, oral and written exams, reports, discussions.	Face-to-face instruction in the classroom that includes a scientific lecture that contains pictures and explanatory videos, and there is also a practical aspect that includes virtual anatomy in addition to models	**Hand,** Mention the type of bones forming and ligaments of joints of hand. Ellipsoid type of metacarpophalangeal joints and saddle type of carpometacarpal joint. Name and identify the small muscles of the hand. Mention their position, origin, insertion, nerve supply and action., Define the movements and the muscles producing these movements. .	The student's knowledge o the subject Scientific and Skills Perception Scientific, mental and appl **78**	6	4
Daily, oral and written exams, reports, discussions.	Face-to-face instruction in the classroom	**Lower Extremity** **Pelvis** State the main features, sub-divisions,	The student's knowledge o the subject	6	5

	that includes a scientific lecture that contains pictures and explanatory videos, and there is also a practical aspect that includes virtual anatomy in addition to models	boundaries, walls and floor of pelvis. Mention the features of the public symphysis and sacroiliac joints. Compare the major differences between the male and female pelvis. Identify the muscles of the pelvic floor and mention their attachments, actions and nerve supply, Mention the structure of the urogenital diaphragm.	Scientific and Skills Perception Scientific, mental and appl		
Daily, oral and written exams, reports, discussions.	Face-to-face instruction in the classroom that includes a scientific lecture that contains pictures and explanatory videos, and there is also a practical aspect that includes virtual anatomy in addition to models	**Hip joint** Bony architecture, Joints – structure, range of movement, Muscles: origin, insertion, actions, nerve supply, Major nerves: course, branches and implications of nerve injuries, Development of limb bones, muscles and anomalies	The student's knowledge o the subject Scientific and Skills Perception Scientific, mental and appl **79**	6	6
Daily, oral and written exams, reports, discussions.	Face-to-face instruction in the classroom	**Knee joint** Bony architecture, Joints – structure, range of movement, Muscles:	The student's knowledge o the subject	6	7

	that includes a scientific lecture that contains pictures and explanatory videos, and there is also a practical aspect that includes virtual anatomy in addition to models	origin, insertion, actions, nerve supply, Major nerves: course, branches and implications of nerve injuries, Development of limb bones, muscles and anomalies	Scientific and Skills Perception Scientific, mental and appl		
Daily, oral and written exams, reports, discussions.	Face-to-face instruction in the classroom that includes a scientific lecture that contains pictures and explanatory videos, and there is also a practical aspect that includes virtual anatomy in addition to models	**Ankle joint** Bony architecture, Joints – structure, range of movement, Muscles: origin, insertion, actions, nerve supply, Major nerves: course, branches and implications of nerve injuries, Development of limb bones, muscles and anomalies	The student's knowledge o the subject Scientific and Skills Perception Scientific, mental and appl **80**	6	8
Daily, oral and written exams, reports, discussions.	Face-to-face instruction in the classroom that includes a	**Foot**, Mention the type, articular surface, ligaments, movements, chief muscles	The student's knowledge o the subject Scientific and Skills Perception Scientific, mental and appl	6	9

	scientific lecture that contains pictures and explanatory videos, and there is also a practical aspect that includes virtual anatomy in addition to models	for the movement, axes of movements and applied anatomy of subtalar joints, tarsals, metatarsals and phalanges joints.			
Daily, oral and written exams, reports, discussions.	Face-to-face instruction in the classroom that includes a scientific lecture that contains pictures and explanatory videos, and there is also a practical aspect that includes virtual anatomy in addition to models	**Head** Identify the large skull bones and their parts. Identify the cranial fossae and hypophyseal fossa. Identify the internal and external auditory meatuses, foramen magnum and stylomastoid foramen and name the main structure passing through them. Identify the name of main muscles of the face. Mention their nerve supply and action.	The student's knowledge o the subject Scientific and Skills Perception Scientific, mental and appl **81**	6	10
Daily, oral and written exams, reports, discussions.	Face-to-face instruction in the classroom that includes a scientific lecture that	**Neck** Identify the general feature of atypical cervical vertebra atlas, axis and seventh cervical vertebra. Identify the erector spinae, sternomastoid and	The student's knowledge o the subject Scientific and Skills Perception Scientific, mental and appl	6	11

	contains pictures and explanatory videos, and there is also a practical aspect that includes virtual anatomy in addition to models	scalenei muscles. Mention their attachments, actions and nerve supply.			
Daily, oral and written exams, reports, discussions.	Face-to-face instruction in the classroom that includes a scientific lecture that contains pictures and explanatory videos, and there is also a practical aspect that includes virtual anatomy in addition to models	**Neck** Identify the phrenic, accessory and vagus nerves Identify and state the position, distribution and root values of the nerves of cervical and brachial plexus. Demonstrate the action of sternomastoid. Mention the type, articular surfaces, ligaments, movements and muscles producing these movements and the movements of the cervical part of vertebral column.	The student's knowledge o the subject Scientific and Skills Perception Scientific, mental and appl	6	12
Daily, oral and written exams, reports, discussions.	Face-to-face instruction in the classroom that includes a scientific lecture that contains pictures and	**Vertebral column** Identify parts of a typical vertebra of each group of vertebrae. State the form, structure and movements of joints of vertebral column. Mention the movements and the	The student's knowledge o the subject Scientific and Skills Perception ientific, mental and applied	6	13

	explanatory videos, and there is also a practical aspect that includes virtual anatomy in addition to models	muscles producing them			
Daily, oral and written exams, reports, discussions.	Face-to-face instruction in the classroom that includes a scientific lecture that contains pictures and explanatory videos, and there is also a practical aspect that includes virtual anatomy in addition to models	**Vertebral column** Identify the intervertebral disc and mention its parts. State the formation and ligaments of the intervertebral joints. Name and identify the curvatures of the vertebral column	The student's knowledge o the subject Scientific and Skills Perception Scientific, mental and appl	6	14
Daily, oral and written exams, reports, discussions.	Face-to-face instruction in the classroom that includes a scientific lecture that contains pictures and explanatory videos, and	Revision	The student's knowledge o the subject Scientific and Skills Perception Scientific and mental and applied	6	15

	there is also a practical aspect that includes virtual anatomy in addition to models					

❖ Course Evaluation

Quest: Theoretical: 25 Practical: 15/ Final: Theoretical: 35 Practical: 25

❖ Learning and Teaching Resources

	Required textbooks (methodology)
1.Human Anatomy for Students, Byas Deb Ghosh Professor of Anatomy Second Edition: 2013 2.ATLAS OF FUNCTIONAL NEUROANATOMY By WALTER J. HENDELMAN,2000 3.Clinical Anatomy of the Spine, Spinal Cord, and ANS, Third Edition 2014, by Mosby 4. Gray's Anatomy for Students, Third Edition Richard L. Drake, A. Wayne Vogl, Adam W. M. Mitchell,2015. 5.Human Anatomy Coloring Book (Dover Children's Science Books) ,1982,by Margaret Matt (Author), Joe Ziemian (Author) 6.Atlas of Human Anatomy (Netter Basic Science)by Frank H. Netter,2006	Main references (sources)
	Recommended supporting books references (Scientific journals, reports...)
	Electronic References, Websites

Description course of Arabic1

❖ Course Name
Arabic Language 1
❖ Course Code
ATU11 **85**
❖ Semester / Year
Second Semester / First Year
❖ The history of preparation of this description
2025\9\15
❖ Available Attendance Forms
Came
❖ Number of Credit Hours (Total) / Number of Units (Total)
2/2

❖ Course administrator's name (if more than one name)

Name: Dr. Mohannad Badie

Email : muhannad.najickm@atu.edu.iq

❖ Course Objectives

General: Developing the spirit of pride in the Arabic language

Special: Developing students' language skills

Upgrading students' professional and research level

Developing the grammatical and literary abilities of the university student

❖ Teaching and Learning Strategies

Strategy
✓ Cooperative education strategy. ✓ Brainstorming education strategy. ✓ Education strategy collaborative concept planning. ✓ Real-time feedback education strategy ✓ Education Strategy Notes Series. ✓ The strategy of education by exchanging views and discussing. ✓ Education strategy by presenting information. ✓ Education strategy by training and presentation of scientific developments.

❖ Course Structure

Evaluation method	Learning method	Unit or subject name	Required Learning Outcomes	Hours	The week
Daily, oral and written exams, reports, discussions.	Theoretical	Introduction to Linguistic Errors – T The tethered - the long and the open t	**86**	2	1
Daily, oral and written exams, reports, discussions.	Theoretical	Rules for writing an elongated thousand The cabin – solar letters The Lunar		2	2
Daily, oral and written exams, reports, discussions.	Theoretical	Al-Daad and Al-Zaa		2	3

Daily, oral and written exams, reports, discussions.	Theoretical	Hamza writing		2	4
Daily, oral and written exams, reports, discussions.	Theoretical	Punctuation		2	5
Daily, oral and written exams, reports, discussions.	Theoretical	Noun and verb and differentiate between them		2	6
Daily, oral and written exams, reports, discussions.	Theoretical	Reactor		2	7
Daily, oral and written exams, reports, discussions.	Theoretical	Number		2	8
Daily, oral and written exams, reports, discussions.	Theoretical	Applications of common linguistic errors		2	9
Daily, oral and written exams, reports, discussions.	Theoretical	Noon and Tanween meanings of prepositions		2	10
Daily, oral and written exams, reports, discussions.	Theoretical	Formal aspects of administrative discourse		2	11
Daily, oral and written exams, reports, discussions.	Theoretical	The language of administrative discourse		2	12
Daily, oral and written exams, reports, discussions.	Theoretical	Samples of administrative correspondence		2	13
Daily, oral and written exams, reports, discussions.	Theoretical	Introduction to Linguistic Errors – T The tethered - the long and the open t		2	14

Daily, oral and written exams, reports, discussions.	Theoretical	Rules for writing an elongated thousand The cabin – solar letters The Lunar		2	15

❖ Course Evaluation	
Endeavor: 30/ Final: 70	
❖ Learning and Teaching Resources	
	Required textbooks (methodology)
1 The book of the workbook in the explanation of the book of discharge 2 Manual grammar book	Main references (sources)
	Recommended supporting books and referen (Scientific journals, reports...)
	Electronic References, Websites

Description course of Pathology

1. Course Name:
Pathology
2. Course Code:
ATU.CHM. PT216
3. Semester / Year:
First Semester /Second year
4. Description Preparation Date:
15-9-2025
5. Available Attendance Forms:
Came
6. Number of Credit Hours (Total) / Number of Units (Total)
4/3
7. Course administrator's name (mention all, if more than one name) :

Sajjad Muiead Abd Alhussien
Email:sajjad.alfadhel@atu.edu.iq

8. Course Objectives

Overall goal. Knowledge of disease causes in general

Own goals.

1- Definition of the disease, its causes, and the mechanism of disease occurrence.
2- Multiple and chronic viruses (various signs, causes) healing.
3- Knowing the diseases that affect the various body systems and their causes and causes

9. Teaching and learning strategies

1. Cooperative education strategy.
2. Brainstorming education strategy.
3. Education strategy collaborative concept planning.
4. Real-time feedback education strategy
5. Education strategy notes series.
6. Education strategy by exchanging opinions and discussion.
7. Education strategy by presenting information.
8. Education strategy through training and presenting scientific developments.

10. Course Structure

Evaluation method	Learning method	Subjects	Required Learning Outcomes	Hours	Week
Daily, oral and written . examinations, reports, discussions	Theoretically +Practical	**Introduction:** Aims and objects of study of pathology. Definitions of health, disease, causes of disease, **Cell injury-** causes, mechanism & toxic injuries with special reference	- -	4	1

		to Physical, Chemical, & ionizing radiation			
Daily, oral and written . examinations, reports, discussions	Theoretically +Practical	**Inflammation & Repair (Acute inflammation**)- features, causes, vascular & cellular events, Morphologic variations, Inflammatory cells & mediators,		4	2
Daily, oral and written examinations, reports, discussions	Theoretically +Practical	**Inflammation & Repair (Chronic inflammation)**- causes, types, non-specific & granulomatous - with examples ,		4	3
Daily, oral and written examinations, reports, discussions	Theoretically +Practical	**Wound healing** by primary & secondary union factors promoting & delaying healing process. Healing at various sites- including- bones, nerve & muscle ,Regeneration & repair		4	4
Daily, oral and written examinations, reports, discussions	Theoretically +Practical	**Circulatory disturbances** Edema - pathogenesis - types - transudates /exudates. Chronic venous congestion- lung, liver, spleen, Thrombosis - formation - fate -:- effects, Embolism - types- clinical effects. Infarction	**90**	4	5

		- types - common sites , Shock - Pathogenesis, types, morphological changes			
Daily, oral and written . examinations, reports, discussions	Theoretically +Practical	**Neoplasia:** General outline, classification, characteristics of benign and malignant tumors, spread of tumors, systemic effects.		4	6
Daily, oral and written examinations, reports, discussions	Theoretically +Practical	**Bone & Joints** - fracture healing - Osteomyelitis - rickets – Osteomalacia, Bone tumors Osteoporosis Spondylosis,		4	7
Daily, oral and written . examinations, reports, discussions	Theoretically +Practical	**Bone & Joints** P.I.D- Scoliosis - Haemarthrosis - Gout - T.B. Arthritis - degenerative - inflammatory - RA-Ankylosing spondylitis, Tenosynovitis.		4	8
Daily, oral and written . examinations, reports, discussions	Theoretically +Practical	**Muscle diseases** - Muscular dystrophy- hypertrophy- Pseudo- hypertrophy- atrophy Polio- myelitis ,Myositis ossificance, necrosis. Regeneration- Myotonia.	**91**	4	9

Daily, oral and written . examinations, reports, discussions	Theoretically +Practical	**Neuro - muscular junction** - Myasthenia gravis - Myasthenic syndrome. myopathies, genetically determined neuromuscular diseases.		4	10
Daily, oral and written . examinations, reports, discussions	Theoretically +Practical	**G. I. T. System-** Gastric/ duodenal ulcer, enteric fever, TB, enteritis, Gastritis (related to consumption of NSAID)		4	11
Daily, oral and written . examinations, reports, discussions	Theoretically +Practical	**Urinary -** commonly encountered in paralytic bladder, common urinary tract infections (brief) - urinary calculi.		4	12
Daily, oral and written . examinations, reports, discussions	Theoretically +Practical	**Deficiency disorders -** Vitamins A, B, C, D.		4	13
Daily, oral and written examinations, reports, discussions	Theoretically +Practical	**Growth Disturbance** Atrophy- malformation, agenesis, dysplasia, Neoplasia classification, histogenesis, biologic behaviour, difference between benign & malignant tumour	**92**	4	14

Daily, oral and written examinations, reports, discussions	Theoretically +Practical	**Endocrine** - Hyperthyroidism - Diabetes, **Hepatic diseases** - Cirrhosis - emphasis on systemic effects of portal hypertension. **Infections** - cutaneous TB, Soleroderma. SLE, Leprosy Alopacia.		4	15
11.ACourse evaluation					
Striving: 40/ Final: 60					
12.Learning and teaching resources					
	Required textbooks (methodology)				
	Recommended supporting books and references				
	(Scientific journals, reports....)				

Description course of Therapeutic Equipment's 1

1. Course Name:
Therapeutic Equipments 1
2. Course Code:
ATU.CHM. PT212
3. Semester / Year:
First Semester /Second Year
4. Description Preparation Date:
15-9-2025
5. Available Attendance Forms:
Came
6. Number of Credit Hours (Total) / Number of Units (Total)
6/4
7. Course administrator's name (mention all, if more than one name):

Assist. Lec. Salam Khalif Jaber

8. Course Objectives

Overall goal. Knowledge of the devices used in physical therapy in general.

Own goals.

1. Introducing the student to each electrical device used in treatment
2. Introducing the student to the work of each device's principles
3. Knowing the physiological effects and therapeutic effects of each device.
4. Reasons and prohibitions for using devices used in physical therapy.
5. Knowledge of application methods and techniques for each therapeutic device.
6. Knowledge of the standards for normal doses used and hair durations with physical therapy devices

9. Teaching and learning strategies

1. Cooperative education strategy.
2. Brainstorming education strategy.
3. Education strategy collaborative concept planning.
4. Real-time feedback education strategy
5. Education strategy notes series.
6. Education strategy by exchanging opinions and discussion.
7. Education strategy by presenting information.
8. Education strategy through training and presenting scientific developments.

Course Structure

Evaluation method	Learning method	Subject name	Required Learning Outcomes	Hours	Week
Daily, oral and written . examinations, reports, discussions	Theoretically +Practical	**Electromagnetic Waves: Electromagnetic** spectrum, physical properties of Electromagnetic radiations reflection, refraction, absorption, grothus		6	1

		law, cosine law inverse square law and its practical application.			
Daily, oral and written . examinations, reports, discussions	Theoretically +Practical	**Managing Pain with Therapeutic Modalities,** Types of Pain (Acute versus Chronic, referred, Radiating, Deep Somatic Pain), The Gate Control Theory of Pain		6	2
Daily, oral and written examinations, reports, discussions	Theoretically +Practical	**Infra-Red Radiation**: Production of infra-red rays, luminous and non-luminous generators, penetration, physiological effects and therapeutics uses of infra-red rays, indications and contraindications, dangers and precautions.		6	3
Daily, oral and written examinations, reports, discussions	Theoretically +Practical	**Infra-Red Radiation**: technique of application, duration and frequency of treatment	**95**	6	4
Daily, oral and written examinations, reports, discussions	Theoretically +Practical	**Moist Heat Therapy**: Hydro collator packs – in brief, Therapeutic uses, Indications & Contraindications.		6	5
Daily, oral and written . examinations, reports, discussions	Theoretically +Practical	**Moist Heat Therapy**: Methods of application,		6	6

		technique of application			
Daily, oral and written examinations, reports, discussions	Theoretically +Practical	**Wax Therapy:** Structure of the bath, composition of wax and mineral oils, Principle of Wax Therapy application – latent Heat, Composition of Wax Bath Therapy unit, Physiological & Therapeutic		6	7
Daily, oral and written . examinations, reports, discussions	Theoretically +Practical	**Wax Therapy:** Methods of application of Wax, technique of application		6	8
Daily, oral and written . examinations, reports, discussions	Theoretically +Practical	**Contrast Bath:** Therapeutic uses, Indications, Contraindications. Methods of applications, technique of application		6	9
Daily, oral and written . examinations, reports, discussions	Theoretically +Practical	**Fluid therapy**: Construction, Therapeutic uses, Indications & Contraindications.		6	10
Daily, oral and written . examinations, reports, discussions	Theoretically +Practical	**Fluid therapy**: Methods of applications, technique of application	**96**	6	11
Daily, oral and written . examinations, reports, discussions	Theoretically +Practical	**Ultra Violet** Production of U. V. R. physiological effects of U.V.R. (chemical reaction with skin). Structure of skin, penetration and absorption of U. V.		6	12

		R. Erythema, differen			
Daily, oral and written . examinations, reports, discussions	Theoretically +Practical	**LASER:** Define, Types, Principles of Production. Production of LASER by various methods, Physiological &Therapeutic effects, Dangers and contraindications		6	13
Daily, oral and written examinations, reports, discussions	Theoretically +Practical	**LASER:** Methods of application, technique of application		6	14
Daily, oral and written examinations, reports, discussions	Theoretically +Practical	General Revision		6	15

11. Course evaluation

Striving: 40/ Final: 60

12.Learning and teaching resources

	Required textbooks (methodology)
1. **Clayton's Electrotherapy (Physiotherapy Essentials)** 2. *8T***Physical Agents : Theory and Practice***8T*,*7T*3rd Edition ,*7T8T***Barbara J. Behrens***8T 7T*PTA, MS*7T* ,*8T***Holly Beinert***8T 7T*PT, MPT 3. **Physical Agents in Rehabilitation: *From Research to Practice* ,Fourth Edition,** by Michelle H. Cameron, MD, PT, OCS 4. **Therapeutic Modalities For Sports Medicine and Athletic Training**, Sixth Edition by William E. Prentice , Ph.D., A.T.C., P.T. 5. **Textbook of Electrotherapy Kindle Edition** 6. **Practical Electrotherapy: A Guide to Safe Application** *8T***,by** *8T* John Fox and Tim Sharp*8T***,***8T* 2007	**97**
	Recommended supporting books and references

	(Scientific journals, reports....)

Description course of Physiotherapy for Orthopedics

1. Course Name:
physiotherapy for Orthopedics
2. Course Code:
ATU.CHM. PT214
3. Semester / Year:
First Semester /Second Year
4. Description Preparation Date:
15-9-2025
5. Available Attendance Forms:
Came
6. Number of Credit Hours (Total) / Number of Units (Total)
6/4

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

Assist. Lec Mohammed Abd Al Hussien Jabar

8. Course Objectives

<u>Overall goal</u>. Knowing the types of fractures and some diseases that affect bones.

<u>Own goals.</u>

1. Defining medical terms related to fractures and some bone diseases.
2. Identify the causes, types, and treatment methods of fractures.
3. Identify the causes of diseases that affect bones, signs and symptoms.
4. Knowledge of the medical field is necessary in fractures and bone diseases.
5. Identify the therapeutic methods and the re-registration program after the fractures heal

9. Teaching and learning strategies

1. Cooperative education strategy.
2. Brainstorming education strategy.
3. Education strategy collaborative concept planning.
4. Real-time feedback education strategy
5. Education strategy notes series.
6. Education strategy by exchanging opinions and discussion.
7. Education strategy by presenting information.
8. Education strategy through training and presenting scientific developments.

10. Course Structure

Evaluation method	Learning method	Subject name	Required Learning Outcomes	Hours	Week
Daily, oral and written . examinations, reports, discussions	Theoretically+ Practical	**Anatomy of bone**: upper limb, lower limb, vertebrae, pelvis.		6	1
Daily, oral and written . examinations, reports, discussions	Theoretically+ Practical	**Fractures:** Definition, Types of Bone Fracture, Pathophysiology of Bone Healing.		6	2

Daily, oral and written examinations, reports, discussions	Theoretically+ Practical	**Fractures:** Clinical Features, Factors affecting healing, Radiological features.		6	3
Daily, oral and written examinations, reports, discussions	Theoretically+ Practical	**Fractures:** Outlines of treatment and Prognosis.		6	4
Daily, oral and written examinations, reports, discussions	Theoretically+ Practical	**Fractures:** Assessment, Physiotherapy.		6	5
Daily, oral and written . examinations, reports, discussions	Theoretically+ Practical	**Fractures:** Complications, Rehabilitation.		6	6
Daily, oral and written examinations, reports, discussions	Theoretically+ Practical	**Specific fractures and dislocations**.		6	7
Daily, oral and written . examinations, reports, discussions	Theoretically+ Practical	**Total knee replacement:** Definition, Indications, Complications, Pre-operative assessment, Pre-surgical Physiotherapy.		6	8
Daily, oral and written . examinations, reports, discussions	Theoretically+ Practical	**Total knee replacement:** Post-surgical Physiotherapy, Outcome Measures.		6	9
Daily, oral and written . examinations, reports, discussions	Theoretically+ Practical	**Total hip replacement:** Definition, Indications, Complications, Surgical Approaches, Pre-operative assessment, Pre-surgical Physiotherapy		6	10

Daily, oral and written . examinations, reports, discussions	Theoretically+ Practical	**Total hip replacement:** Post-surgical Physiotherapy, Outcome Measures.		6	11
Daily, oral and written . examinations, reports, discussions	Theoretically+ Practical	**Shoulder instabilities:** Definition, Etiology, Complications, Post-surgical Physiotherapy.		6	12
Daily, oral and written . examinations, reports, discussions	Theoretically+ Practical	**Shoulder joint**: Total shoulder replacement and Hemi-replacement post-operative, Definition, Indications, Complications, physiotherapy management		6	13
Daily, oral and written examinations, reports, discussions	Theoretically+ Practical	**Deformities of lower limb:** Definition, Etiology, Classifications, Clinical presentation, Physical therapy Management		6	14
Daily, oral and written examinations, reports, discussions	Theoretically+ Practical	**Benign and malignant bone tumor:** Definition, Etiology, Classifications, Clinical presentation, Physical therapy Management.	**101**	6	15
11.Course evaluation					
Striving: 40/ Final: 60					
12.Learning and teaching resources					

	Required textbooks (methodology)
Primer on the Rheumatic Diseases / Edition 13 by John H. Klippel, John H. Stone, L eslie J. Crofford, Patience H. White. 2. Handbook of Physical Medicine and Rehabilitation Hardcover – October, 1982 by F.H. Krusen (Editor), etc. (Editor), F.J. Kottke (Editor). 3. Management of Common Musculoskeletal Disorder by: Hertling, D, and Kessler RM Physical Therapy Principles and Methods. 3rd ed. Philadelphia.PA: WB Sunders. 4. Orthopaedic Physical Therapy By: Donatelli & Michael J. Wooden 4th Edition. 5. Physiotherapy in Orthopedics, A problem-solving approach By: Atkinson, Coutts & Hassenkamp 2nd Edition.	Scientific journals, reports....)
	Recommended supporting books and references

Description course of Physiotherapy for General Surgery 1

1. Course Name:
physiotherapy for General Surgery 1
2. Course Code:
ATU.CHM. PT224
3. Semester / Year:
Second Semester /Second Year
4. Description Preparation Date:
15-9-2025
5. Available Attendance Forms:
Came
6. Number of Credit Hours (Total) / Number of Units (Total)
6/4

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

Name: Assist.Lec. Mohammed abd Al Hussein Jabar

Email : Mohammed.pt@atu.edu.iq

8. Course Objectives

Overall goal. Introducing the general process principles, in addition to terms and abbreviations

Own goals.

1.Identifying diseases, new from their various crops and secondary to their surgical treatment.

2. Educating students in the treatment of various surgical cases so that they become effective rehabilitation Follow up and then.

3. Clinically evaluate different patients' conditions in general after surgery, with special attention to cardiovascular functions Lung and wound scar treatment

9. Teaching and learning strategies

1. Cooperative education strategy.
2. Brainstorming education strategy.
3. Education strategy collaborative concept planning.
4. Real-time feedback education strategy
5. Education strategy notes series.
6. Education strategy by exchanging opinions and discussion.
7. Education strategy by presenting information.
8. Education strategy through training and presenting scientific developments.

10. Course Structure

Evaluation method	Learning method	Subject name	Required Learning Outcomes	Hours	The Week
Daily, oral and written . examinations, reports, discussions	Theoretically+ Practical	**Introduction**: Definition, Indications for surgery, Methods of Surgery, Effect of Anesthesia, Hemorrhage, Shock, Water & Electrolyte imbalance.		6	1

Daily, oral and written . examinations, reports, discussions	Theoretically+ Practical	**Postoperative complications**.		6	2
Daily, oral and written examinations, reports, discussions	Theoretically+ Practical	**Infection and Inflammation** – Definition, acute & chronic, Causes, Signs and symptoms, Resolution, Complications, Management		6	3
Daily, oral and written examinations, reports, discussions	Theoretically+ Practical	**Wounds / ulcers** - classification, healing process, staging, factors affecting healing, management		6	4
Daily, oral and written examinations, reports, discussions	Theoretically+ Practical	**Complications of immobilization**		6	5
Daily, oral and written . examinations, reports, discussions	Theoretically+ Practical	**Abdominal surgeries for gastrointestinal tract**: Surgical anatomy, Approaches, Common abdominal procedures, Scar during surgical approach, Scar management , Postoperative activity	**104**	6	6
Daily, oral and written examinations, reports, discussions	Theoretically+ Practical	**Genito-urinary system surgeries:** Surgical anatomy, Approaches, Common procedures, Scar during surgical approach, Scar management ,		6	7

		Postoperative activity.			
Daily, oral and written . examinations, reports, discussions	Theoretically+ Practical	**Breast cancer and mastectomy** : Epidemiology, Classification, Staging, Metastases, Clinical Presentation, Surgical management , Post-Mastectomy Pain Syndrome		6	8
Daily, oral and written . examinations, reports, discussions	Theoretically+ Practical	**Mastectomy**: Physical therapy management, Post-surgical physical activity		6	9
Daily, oral and written . examinations, reports, discussions	Theoretically+ Practical	**Burn:** Definition, Types, Classification, Local and systemic effects, Complications, Assessment, Specific site of burn.		6	10
Daily, oral and written . examinations, reports, discussions	Theoretically+ Practical	**Burn**: Immediate Care, Physical therapy management.		6	11
Daily, oral and written . examinations, reports, discussions	Theoretically+ Practical	**Skin grafting**: Indications, Types, Post-operative care of plastic surgery with specific role of physiotherapy.	**105**	6	12
Daily, oral and written . examinations, reports, discussions	Theoretically+ Practical	**Tendon repair**: Procedure, Recovery, Complications, Pre-operative and post-operative physical		6	13

		therapy management.			
Daily, oral and written examinations, reports, discussions	Theoretically+ Practical	**Reconstructive surgery of peripheral nerves.**		6	14
Daily, oral and written examinations, reports, discussions	Theoretically+ Practical	**Revision**		6	15

11.Course evaluation	
Striving: 40/ Final: 60	
12.Learning and teaching resources	
	Required textbooks (methodology)
1.Short practice of surgery by Baily and Love's. 2. Text Book of Surgery by Ijaz Ahsan. 3. Outline of Fractures by david hamblen, Hamish Simpsons. 4. Outline of orthopedics. by david hamblen, Hamish Simpsons. 5. Apley's systems of orthopedics and fractures by Louis Solomon 9th ed, publisher holder Arnold. 6. General Surgical Operations – by Kirk / Williamson. 7. Surgery by Nan. 8. Chest Disease by Crofton and Douglas. 9. Surgery – S. Basu	Scientific journals, reports....)

Description of Physiotherapy for Musculoskeletal Diseases 1

1. Course Name:
Physiotherapy for Musculoskeletal Diseases 1
2. Course Code:
ATU.CHM. PT213
3. Semester / Year:
First Semester /Second Year
4. Description Preparation Date:
15-9-2025
5. Available Attendance Forms:
Came

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

6/4

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

Name: Assist.Lec. Mohammed abd Al Hussein Jabar
Email : Mohammed.pt@atu.edu.iq

8. Course Objectives

Overall goal. Knowing the types of diseases that affect the musculoskeletal system.

Own goals.

1. Define medical terms related to skeletal spasticity.
2. Identify the causes of diseases that affect the musculoskeletal system, signs and symptoms.
3. Knowledge of the medical field and its registration in diseases of the comprehensive thoracic system.
4. Identify the therapeutic methods and the re-registration program for diseases of the musculoskeletal system.

9. Teaching and learning strategies

1. Cooperative education strategy.
2. Brainstorming education strategy.
3. Education strategy collaborative concept planning.
4. Real-time feedback education strategy
5. Education strategy notes series.
6. Education strategy by exchanging opinions and discussion.
7. Education strategy by presenting information.
8. Education strategy through training and presenting scientific developments.

10. Course Structure

Evaluation method	Learning method	Unit or subject name	Required Learning Outcomes	Hours	Week
Daily, oral and written . examinations, reports, discussions	Theoretically +Practical	**Medical terminology** regarding musculoskeletal system, Principles and concepts of musculoskeletal		6	1

		evaluation and assessment			
Daily, oral and written . examinations, reports, discussions	Theoretically +Practical	**Patient history, Examination**, principles, observation, vital signs, examination of specific joints, functional assessment, specific diagnostic test, joint play movements.		6	2
Daily, oral and written examinations, reports, discussions	Theoretically +Practical	**Musculoskeletal Signs and Symptoms**: Monoarticular Joint Disease, Polyarticular Joint Disease, Neck and Back Pain.		6	3
Daily, oral and written examinations, reports, discussions	Theoretically +Practical	**Rheumatoid Arthritis:** Definition, Epidemiology, Pathology, and Pathogenesis, Clinical and Laboratory Manifestations.		6	4
Daily, oral and written examinations, reports, discussions	Theoretically +Practical	**Rheumatoid Arthritis:** Assessment and Physical Therapy Management.		6	5
Daily, oral and written . examinations, reports, discussions	Theoretically +Practical	**Ankylosing Spondylitis**: Definition, Epidemiology, Pathology, Clinical presentation, Assessment, Physical Therapy Management.	**108**	6	6
Daily, oral and written examinations, reports, discussions	Theoretically +Practical	**Psoriatic Arthritis:** Definition, Epidemiology,		6	7

		Pathology, Clinical presentation, Physical Therapy Management.			
Daily, oral and written . examinations, reports, discussions	Theoretically +Practical	**Reactive Arthritis**: Definition, Epidemiology, Pathology, Clinical presentation, Physical Therapy Management.		6	8
Daily, oral and written . examinations, reports, discussions	Theoretically +Practical	**Systemic lupus Erythematosus:** Definition, Epidemiology, Pathology, Clinical presentation, Physical Therapy Management.		6	9
Daily, oral and written . examinations, reports, discussions	Theoretically +Practical	**Systemic Sclerosis**: Definition, Epidemiology, Pathology, Clinical presentation, Physical Therapy Management..		6	10
Daily, oral and written . examinations, reports, discussions	Theoretically +Practical	**Polymyalgia Rheumatica**: Definition, Etiology, Pathology, Clinical presentation, Physical Therapy Management.		6	11
Daily, oral and written . examinations, reports, discussions	Theoretically +Practical	**Gout:** Definition, Epidemiology, Pathology, Clinical presentation, Physical Therapy Management..	**109**	6	12
Daily, oral and written . examinations, reports, discussions	Theoretically +Practical	**Pseudo gout:** Definition, Epidemiology, Pathology, Clinical presentation,		6	13

		Physical Therapy Management.			
Daily, oral and written examinations, reports, discussions	Theoretically +Practical			6	14
Daily, oral and written examinations, reports, discussions	Theoretically +Practical	General Revision		6	15
11.Course evaluation					
Striving: 40/ Final: 60					
12.Learning and teaching resources					
		Required textbooks (methodology)			

Therapeutic exercises 1

1. Course Name:
Therapeutic exercises 1
2. Course Code:
ATU.CHM. PT211
3. Semester / Year:
First Semester /Second Year
4. Description Preparation Date:
15-9-2025

5. Available Attendance Forms:

Came

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

6/4

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

Name: Assist.Lec. Mohammed abd Al Hussein Jabar

Email : Mohammed.pt@atu.edu.iq

8. Course Objectives

Overall goal. Knowledge of the general principles used in therapeutic exercises.

Own goals.

-1 Identify the mechanical details of the natural movements of the human body

2-The student must be able to examine the muscle according to scientific standards

-3 The student should be able to examine the range of motion of the joints according to scientific standards

4-Knowing the types of medical exercises and their applications

9. Teaching and learning strategies

1. Cooperative education strategy.
2. Brainstorming education strategy.
3. Education strategy collaborative concept planning.
4. Real-time feedback education strategy
5. Education strategy notes series.
6. Education strategy by exchanging opinions and discussion.
7. Education strategy by presenting information.
8. Education strategy through training and presenting scientific developments.

10. Course Structure

Evaluation method	Learning method	Unit or subject name	Required Learning Outcomes	Hours	Week
Daily, oral and written . examinations, reports, discussions	Theoretically +Practical	INTRODUCTION TO EXERCISE THERAPY		6	1

Daily, oral and written . examinations, reports, discussions	Theoretically +Practical	BASICS OF EXERCISE: - • Mechanical principles applied in the human body – gravity, center of gravity, line of gravity, the base of support, equilibrium, axis and planes		6	2
Daily, oral and written examinations, reports, discussions	Theoretically +Practical	• Disability models – ICIDH model of disability, Nagi model of disability, ICF model		6	3
Daily, oral and written examinations, reports, discussions	Theoretically +Practical	• Exercise physiology – effect of exercise in various systems – musculoskeletal, neuromuscular, cardiovascular, respiratory system		6	4
Daily, oral and written examinations, reports, discussions	Theoretically +Practical	JOINT MOVEMENTS: - • Terminology. Range of motion. axes and • Planes of movement levers. • Passive movements – definition,		6	5
Daily, oral and written . examinations, reports, discussions	Theoretically +Practical	classification, indications, contra indications, advantages, limitations, techniques - emphasize PROM to upper, lower, neck and trunk muscles	**112**	6	6

Daily, oral and written examinations, reports, discussions	Theoretically +Practical	• Active movements - definition, classification, indications, contra indications, advantages, limitations, techniques - emphasize active movements to upper, lower, and neck and trunk muscles		6	7
Daily, oral and written . examinations, reports, discussions	Theoretically +Practical	STARTING POSITIONS:- • Fundamental starting positions. • Derived positions. • Muscle work - effects and uses.		6	8
Daily, oral and written . examinations, reports, discussions	Theoretically +Practical	MANUAL MUSCLE TEST :- • start position, grading system • describe the types of muscle grading, key to muscle grading, • Techniques of muscle testing - upper, lower, neck and trunk muscles.		6	9
Daily, oral and written . examinations, reports, discussions	Theoretically +Practical	GONIOMETRY:- • Principles of goniometry. • Types (bubble and gravity goniometry). • Normal range of various joints. • Measurement of individual joint range using goniometry.		6	10

Daily, oral and written . examinations, reports, discussions	Theoretically +Practical	CAUSES FOR RESTRICTION OF RANGE OF MOTION:- • causes for restriction of range of motion. • distinguish between skin, muscle, capsular contractures		6	11
Daily, oral and written . examinations, reports, discussions	Theoretically +Practical	• Mobility aids – crutches, canes, walk		6	12
Daily, oral and written . examinations, reports, discussions	Theoretically +Practical	Measurement of limb length, girth		6	13
Daily, oral and written examinations, reports, discussions	Theoretically +Practical	SUSPENSION THERAPY:- • Definition and concepts of suspension. • Points of suspension. • Types of suspension. • Joint range or muscle power.		6	14
Daily, oral and written examinations, reports, discussions	Theoretically +Practical	RELAXATION:- • Types & Techniques. • Effects & Use		6	15

11.Course evaluation
Striving: 40/ Final: 60

12.Learning and teaching resources	
	Required textbooks (methodology)
1. Therapeutic Kinesiology Musculoskeletal Systems, Palpation, and Body Mechanics/2013. 2. Manual Muscle Testing Practice Guide/2019 3. Measurement of Joint Structure A Guide To Goniometry/2016	Scientific journals, reports....)

4. Therapeutic Exercise Prescription/2019	
	Recommended supporting books and references

Human Anatomy 3

1. Course Name:
Human Anatomy 3
2. Course Code:

ATU.CHM. PT215

3. Semester / Year:

First Semester First/Second Year

4. Description Preparation Date:

15-9-2025

5. Available Attendance Forms:

Came

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

6/4

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

Dr. Hassnien Fadhel

8. Course Objectives

Overall goal. Identify the central nervous system

Own goals.

1-Identify the central and peripheral nervous system
2-Identifying the spinal cord and its branches
3-Identify endocrine gland
4- Identify the chest and abdomen areas

9.Teaching and learning strategies

1. Cooperative education strategy.
2. Brainstorming education strategy.
3. Education strategy collaborative concept planning.
4. Real-time feedback education strategy
5. Education strategy notes series.
6. Education strategy by exchanging opinions and discussion.
7. Education strategy by presenting information.
8. Education strategy through training and presenting scientific developments.

10.Course Structure

Evaluation method	Learning method	Unit or subject name	Required Learning Outcomes	Hours	Week
Daily, oral and written . examinations, reports, discussions	Theoretically +Practical	Nervous system: Central Nervous System: Disposition, Parts and Functions, Brain stem (Pons, Medulla, and Mid Brain).		6	1

Daily, oral and written . examinations, reports, discussions	Theoretically +Practical	Nervous system: Cerebrum, Cerebellum, Thalamus, Hypothalamus, Internal Capsule, Blood Supply of Brain		6	2
Daily, oral and written examinations, reports, discussions	Theoretically +Practical	Nervous system: Stroke and its types ,Ventricles of Brain, CSF circulation and Hydrocephalus ,Meninges of brain .		6	3
Daily, oral and written examinations, reports, discussions	Theoretically +Practical	Nervous system: Neural pathways (Neural Tracts) ,Pyramidal and Extra pyramidal System (Ascending and Descending tracts) ,Functional significance of Spinal cord level		6	4
Daily, oral and written examinations, reports, discussions	Theoretically +Practical	Nervous system: Cranial Nerves with special emphasis upon IV, V, VII, XI, XII (their course, distribution, and palsies).		6	5
Daily, oral and written . examinations, reports, discussions	Theoretically +Practical	Nervous system, Autonomic nervous system, its components, Nerve receptors		6	6
Daily, oral and written examinations, reports, discussions	Theoretically +Practical	Spinal cord: Gross appearance, Structure of spinal cord ,Grey and white matter (brief description).		6	7
Daily, oral and written . examinations, reports, discussions	Theoretically +Practical	Spinal cord: Meninges of spinal cord ,Blood supply of spinal cord ,Autonomic Nervous system.		6	8

Daily, oral and written . examinations, reports, discussions	Theoretically +Practical	Thoracic region, Thoracic Wall: Bones: Ribs, Sternum, Thoracic Vertebrae, Joints, Muscles, Nerves, Blood, Vessels, Lymphatics,		6	9
Daily, oral and written . examinations, reports, discussions	Theoretically +Practical	. Abdomen region: Bones: Lumbar vertebrae, Pelvis (Male & Female), Sacrum, Joints Anterior abdominal wall, Rectus sheath, external genitalia, Inguinal canal. Organs- stomach, small intestine, large intestine, liver, pancreas, spleen, urinary system, reproductive system male, female. Perineum: Male, Female, Anatomy of family planning.		6	10
Daily, oral and written . examinations, reports, discussions	Theoretically +Practical	Back: Vertebral column, Curvatures, Movements, Muscles of Back, Thoracolumbar Fascia, Spinal cord & Meninges – (Tracts, Blood supply), Posture & Gait, line of gravity, center of gravity.	**118**	6	11
Daily, oral and written . examinations, reports, discussions	Theoretically +Practical	. Endocrine System: List the endocrine organs and mention their positions, Mention the hormones produced by each endocrine organ		6	12

Daily, oral and written . examinations, reports, discussions	Theoretically +Practical	Endocrine System: List the endocrine organs and mention their positions, Mention the hormones produced by each endocrine organ.		6	13
Daily, oral and written examinations, reports, discussions	Theoretically +Practical	. Embryology: Ovum, Spermatozoa, fertilization and formation of the Germ layers and their derivations. Development of skin, Fascia, blood vessels, lymphatic,		6	14
Daily, oral and written examinations, reports, discussions	Theoretically +Practical	Embryology: Development of bones, axial and appendicular skeleton and muscles, Neural tube, brain vessels and spinal cord, Development of brain and brain stem structures.		6	15

Course evaluation

Striving: 40/ Final: 60

Learning and teaching resources

	Required textbooks (methodology)
1- Human Anatomy for Students, Byas Deb Ghosh Professor of Anatomy Second Edition: 2013 2- - . ATLAS OF FUNCTIONAL NEUROANATOMY By WALTER J. HENDELMAN,2000 3- Clinical Anatomy of the Spine, Spinal Cord, and ANS, Third Edition 2014, by Mosby 4- Gray's Anatomy for Students, Third Edition Richard L. Drake, A. Wayne Vogl, Adam W. M. Mitchell,2015 5-. Human Anatomy Coloring Book (Dover Children's Science Books) ,1982,by Margaret Matt (Author), Joe Ziemian (Author)	**119**

Atlas of Human Anatomy (Netter Basic Science)by Frank H. Netter,2006	
	Recommended supporting books and references
	(Scientific journals, reports....)

Pharmacology

1. Course Name:

Pharmacology

2. Course Code:

ATU.CHM. PT226

3. Semester / Year:

Second Semester /Second year

4. Description Preparation Date:

15-9-2025

5. Available Attendance Forms:

Came

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

1/1

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

Assist. Lec Hawraa Hussien

8. Course Objectives

Overall goal.

Knowledge of medications used in physical therapy

Own goals.

4- Scientific and commercial names of medicines in general
5- Knowing the negative effects of medications
6- toxic doses
7- Types of medications and methods of taking them

9. Teaching and learning strategies

1. Cooperative education strategy. 2. Brainstorming education strategy. 3. Education strategy collaborative concept planning. 4. Real-time feedback education strategy 5. Education strategy notes series. 6. Education strategy by exchanging opinions and discussion. 7. Education strategy by presenting information. 8. Education strategy through training and presenting scientific developments.	**strategies**

10. Course Structure

Evaluation method	Learning method	Unit or subject name	Required Learning Outcomes	Hours	Week
Daily, oral and written . examinations, reports, discussions	Theoretically	Pharmacology – general principles of pharmacology – pharmacokinetics – pharmacodynamics – drug's receptors – doses – therapeutic index.		1	1
Daily, oral and written . examinations, reports, discussions	Theoretically	Drugs acting on cardiovascular system: antianginal - antiarrhythmic agents – drugs used in treatment of congestive heart failure – vasodilators – antihypertensive - Hemopoietic agents		1	2
Daily, oral and written examinations, reports, discussions	Theoretically	, Drugs Affecting the Autonomic Nervous system cholinergic Agonist cholinergic Antagonists - Adrenergic Agonists - Adrenergic Antagonists.		1	3
Daily, oral and written examinations, reports, discussions	Theoretically	Drugs Affecting the central Nervous system - Anxiolytic and hypnotic analgesic Drugs (Opioids)	**122**	1	4
Daily, oral and written examinations, reports, discussions	Theoretically	General anesthetics: (inhaled) and (Intravenous) - Local anesthesia		1	5
Daily, oral and written . examinations, reports, discussions	Theoretically	Drugs affecting the endocrine system, hormones of the pituitary and thyroid -		1	6

		Insulin and oral hypoglycemic drugs			
Daily, oral and written examinations, reports, discussions	Theoretically	Review		1	7
Daily, oral and written . examinations, reports, discussions	Theoretically	drugs acting on digestive system: antacids – gastric and peptic ulcer treatment – laxatives – purgatives - antidiarrheal agents – digestives – antiemetic – antifleutents.		1	8
Daily, oral and written . examinations, reports, discussions	Theoretically	Drugs acting on respiratory system: Antitussives – expectorants – bronchodilators – drugs used in treatment of asthma.		1	9
Daily, oral and written . examinations, reports, discussions	Theoretically	Analgesics (non-opioids) – anti-inflammatory drugs – SAIDs and NSAIDs.		1	10
Daily, oral and written . examinations, reports, discussions	Theoretically	ntibiotics and antibacterial agents – classification – spectrum – therapeutic uses – side effects. Antiseptic and disinfectants: types and uses	**123**	1	11
Daily, oral and written . examinations, reports, discussions	Theoretically	antibiotics and antibacterial agents – classification – spectrum – therapeutic uses – side effects. Antiseptic and disinfectants: types and uses		1	12

Daily, oral and written . examinations, reports, discussions	Theoretically	a. ntiviral Agents - Antifungal - Antiparasitic Agents: Cancer Chemotherapy and immunopharmacology		1	13
Daily, oral and written examinations, reports, discussions	Theoretically	toxicology: toxic doses – lethal doses – therapeutic index.		1	14
Daily, oral and written examinations, reports, discussions	Theoretically	**Revision**		1	15

11.Course evaluation	
Striving: 30/ Final: 70	
12.Learning and teaching resources	
	Required textbooks (methodology)
Pharmacology for the Physical Therapist- Second Edition/2020	
	Recommended supporting books and references
	(Scientific journals, reports....)

Human Anatomy 4

1. Course Name:
Human Anatomy 4
2. Course Code:
ATU.CHM. PT225
3. Semester / Year:
Second Semester /Second year
4. Description Preparation Date:
15-9-2025
5. Available Attendance Forms:
Came
6. Number of Credit Hours (Total) / Number of Units (Total)
6/4
7. Course administrator's name (mention all, if more than one name):
Dr. Hassnien Fadhel
8. Course objectives
Overall goal. Identifying different organs in the body **Own goals.** 1-Identify different areas of the body 2-Learn about the digestive system 3-Identify the respiratory system 4-Identify the urinary system 5- Identify the cardiovascular system
9. Teaching and learning strategies
1. Cooperative education strategy. 2. Brainstorming education strategy. 3. Education strategy collaborative concept planning. 4. Real-time feedback education strategy 5. Education strategy notes series. 6. Education strategy by exchanging opinions and discussion. 7. Education strategy by presenting information. 8. Education strategy through training and presenting scientific developments.

10.Course Structure					
Evaluation method	**Learning method**	**Unit or subject name**	**Required Learning Outcomes**	**Hours**	**Week**
Daily, oral and written . examinations, reports, discussions	Theoretically +Practical	Cardio-Vascular system: Comprehend the external and internal features of the structure of the heart and their implications. Identify and name the chambers of the heart, surfaces and borders of the heart, Identify the venae cavae, pulmonary trunk and aorta.		6	1
Daily, oral and written . examinations, reports, discussions	Theoretically +Practical	Cardio-Vascular system: Mention the Internal features of the chambers of the heart, State the basic features of the blood supply and nerve supply of the heart State the basic arrangement of the pericardium,		6	2
Daily, oral and written examinations, reports, discussions	Theoretically +Practical	. Cardio-Vascular system: Identify the coronary arteries and coronary sinus, Name the parts of the conducting system of heart,	**126**	6	3
Daily, oral and written examinations, reports, discussions	Theoretically +Practical	Lymphatic system: Comprehend the general and regional arrangements of the lymphatic System, Name the lymphatic organs and mention their location,		6	4

		Illustrate the basic structural features of lymphatic vessels, lymph nodes, thymus, spleen and tonsils.			
Daily, oral and written examinations, reports, discussions	Theoretically +Practical	Lymphatic system: State the position and immediate relations of spleen. Assign functions to the lymphatic system, lymph nodes, thymus, spleen and tonsils.		6	5
Daily, oral and written . examinations, reports, discussions	Theoretically +Practical	Respiratory system, List the parts of respiratory system, Comprehend the functional anatomy of the parts of the respiratory system. Mention the basic features of innervation of bronchi and lungs.		6	6
Daily, oral and written examinations, reports, discussions	Theoretically +Practical	Respiratory system, State the position, extent and gross and microscopic structure of the parietal pleura, Comprehend the arrangements of pleurae		6	7
Daily, oral and written . examinations, reports, discussions	Theoretically +Practical	Respiratory system: Name the bronchopulmonary segments, Illustrate the main features of the microscopic structure of the lung, Identify the borders and surfaces of the lung on the specimen.	**127**	6	8

Daily, oral and written . examinations, reports, discussions	Theoretically +Practical	Digestive system: List the parts of the digestive system, Mention the boundaries and features of the mouth, Classify teeth		6	9
Daily, oral and written . examinations, reports, discussions	Theoretically +Practical	Digestive system: state the position, course and extent of oesophagus. Identify oesophagus in the specimen		6	10
Daily, oral and written . examinations, reports, discussions	Theoretically +Practical	Genito-urinary system: Comprehend the basic functional implications and the basic structure of the kidney and ureters		6	11
Daily, oral and written . examinations, reports, discussions	Theoretically +Practical	Genito-urinary system: State the anatomy of the bladder and urethra, Mention the position, shape, size and surfaces of the bladder, Indicate the immediate relations of the bladder, Mention the basic innervation of the bladder,		6	12
Daily, oral and written . examinations, reports, discussions	Theoretically +Practical	genito-urinary system: List the parts of male reproductive organs and its location. State, the anatomy and functional considerations of the testes, male accessory organs of reproduction and external organs. Name the constituent structure of the	**128**	6	13

		spermatic cord, Mention the position of the inguinal canal, Name the component structures and parts of the penis.			
Daily, oral and written examinations, reports, discussions	Theoretically +Practical	Genito-urinary system: List the female reproductive organs and their location. State the anatomy and functional considerations of ovary, uterine tubes, uterus, vagina and female external genitalia. Mention the basic features of parts of the female external genitalia		6	14
Daily, oral and written examinations, reports, discussions	Theoretically +Practical	**Revision**		6	15

Course evaluation	
Striving: 40/ Final: 60	
Learning and teaching resources	
	Required textbooks (methodology)
1- Human Anatomy for Students, Byas Deb Ghosh Professor of Anatomy Second Edition: 2013 2- - . ATLAS OF FUNCTIONAL NEUROANATOMY By WALTER J. HENDELMAN,2000 3- Clinical Anatomy of the Spine, Spinal Cord, and ANS, Third Edition 2014, by Mosby 4- 4. Gray's Anatomy for Students, Third Edition Richard L. Drake, A. Wayne Vogl, Adam W. M. Mitchell,2015 5-. Human Anatomy Coloring Book (Dover Children's Science Books) ,1982,by Margaret Matt (Author), Joe Ziemian (Author)	**129**

Atlas of Human Anatomy (Netter Basic Science)by Frank H. Netter,2006	
	Recommended supporting books and references
	(Scientific journals, reports....)

Physiotherapy for Musculoskeletal Diseases 2

1. Course Name:
Physiotherapy for Musculoskeletal Diseases 2
2. Course Code:
ATU.CHM. PT223
3. Semester / Year:
Second Semester /Second Year
4. Description Preparation Date:
15-9-2025
5. Available Attendance Forms:
Came
6. Number of Credit Hours (Total) / Number of Units (Total)
6/4
7. Course administrator's name (mention all, if more than one name)
Assist lec. Mohammed Abd Al-Hussien
8. Course objectives
Overall goal. Knowing the types of diseases that affect the musculoskeletal system. **Own goals**. 1. Define medical terms related to skeletal spasticity. 2. Identify the causes of diseases that affect the musculoskeletal system, signs and symptoms. 3. Knowledge of the medical field and its registration in diseases of the comprehensive thoracic system. 4. Identify the therapeutic methods and the re-registration program for diseases of the musculoskeletal system
9. Teaching and learning strategies
1. Cooperative education strategy. 2. Brainstorming education strategy. 3. Education strategy collaborative concept planning. 4. Real-time feedback education strategy 5. Education strategy notes series. 6. Education strategy by exchanging opinions and discussion. 7. Education strategy by presenting information. 8. Education strategy through training and presenting scientific developments.

10. Course Structure					
Evaluation method	**Learning method**	**Unit or subject name**	**Required Learning Outcomes**	**Hours**	**Week**
Daily, oral and written . examinations, reports, discussions	Theoretically +Practical	**Osteoarthritis:** Definition, Epidemiology, Etiology, Primary and Secondary, Pathophysiology.		6	1
Daily, oral and written . examinations, reports, discussions	Theoretically +Practical	**Knee, Hip, Ankle Osteoarthritis**: Clinical presentation, Outcome Measures, Physical therapy management.		6	2
Daily, oral and written examinations, reports, discussions	Theoretically +Practical	**Shoulder, Elbow, Hand Osteoarthritis**: Clinical presentation, Outcome Measures, Physical therapy management		6	3
Daily, oral and written examinations, reports, discussions	Theoretically +Practical	**Osteoporosis**: Definition, Epidemiology, Pathology and Pathophysiology, Risk Factors, Classification.		6	4
Daily, oral and written examinations, reports, discussions	Theoretically +Practical	**Osteoporosis**: Clinical presentation, Physical therapy management.		6	5
Daily, oral and written . examinations, reports, discussions	Theoretically +Practical	**Sacropenia:** Definition, Etiology, Pathology, Clinical presentation, Physical therapy management.		6	6
Daily, oral and written examinations, reports, discussions	Theoretically +Practical	**Osteonecrosis**: Definition, Etiology, Pathology, Clinical presentation,		6	7

		Physical Therapy Management			
Daily, oral and written . examinations, reports, discussions	Theoretically +Practical	**Septic Arthritis**: Definition, Etiology, Pathology, Clinical presentation, Physical Therapy Management.		6	8
Daily, oral and written . examinations, reports, discussions	Theoretically +Practical	**Brucellosis:** Definition, Etiology, Pathology, Clinical presentation, Physical Therapy Management		6	9
Daily, oral and written . examinations, reports, discussions	Theoretically +Practical	**Tuberculosis Arthritis:** Definition, Etiology, Pathology, Clinical presentation, Physical Therapy Management		6	10
Daily, oral and written . examinations, reports, discussions	Theoretically +Practical	**Spondylodiscitis:** Definition, Etiology, Pathology, Clinical presentation, Physical Therapy Management..		6	11
Daily, oral and written . examinations, reports, discussions	Theoretically +Practical	**Benign Joint Hypermobility Syndrome, Ehlers–Danlos Syndrome, Marfan Syndrome, Osteogenesis Imperfecta**: Definition, Etiology, Clinical presentation, Physical Therapy Management.	**133**	6	12
Daily, oral and written . examinations, reports, discussions	Theoretically +Practical	**Paget's Disease of Bone**: Etiology, Pathology, Clinical presentation, Physical therapy management.		6	13

Daily, oral and written examinations, reports, discussions	Theoretically +Practical	. **Neoplasms of the Joint** (etiology, pathology, clinical presentation, Physical therapy management).		6	14
Daily, oral and written examinations, reports, discussions	Theoretically +Practical	General Revision		6	15

11.Course evaluation
Striving: 40/ Final: 60

12. Learning and teaching resources	
	Required textbooks (methodology)
1. Primer on the Rheumatic Diseases / Edition 13 by John H. Klippel, John H. Stone, L eslie J. Crofford, Patience H. White. 2. Handbook of Physical Medicine and Rehabilitation Hardcover – October, 1982 by F.H. Krusen (Editor), etc. (Editor), F.J. Kottke (Editor). 3. Management of Common Musculoskeletal Disorder by: Hertling, D, and Kessler RM Physical Therapy Principles and Methods. 3rd ed. Philadelphia.PA: WB Sunders. 4. Orthopaedic Physical Therapy By: Donatelli & Michael J. Wooden 4th Edition. 5. Physiotherapy in Orthopedics, A problem-solving approach By: Atkinson, Coutts & Hassenkamp 2nd Edition.	Scientific journals, reports....)
	Recommended supporting books and references

Therapeutic Equipment 2

1. Course Name:
Therapeutic Equipment 2
2. Course Code:
ATU.CHM. PT222
3. Semester / Year:
Second Semester /Second Year
4. Description Preparation Date:
15-9-2025
5. Available Attendance Forms:
Came
6. Number of Credit Hours (Total) / Number of Units (Total)
6/4
7. Course administrator's name (mention all, if more than one name)
Assist. Lec. Salam Khalif Jaber
8. Course Objectives

Overall goal. Knowledge of the devices used in physical therapy in general.

Own goals.

1. Introducing the student to each electrical device used in treatment
2. Introducing the student to the work of each device's principles
3. Knowing the physiological effects and therapeutic effects of each device.
4. Reasons and prohibitions for using devices used in physical therapy.
5. Knowledge of application methods and techniques for each therapeutic device.
6. Knowledge of the standards for normal doses used and hair durations with physical therapy devices

9. Teaching and learning strategies	
1. Cooperative education strategy. 2. Brainstorming education strategy. 3. Education strategy collaborative concept planning. 4. Real-time feedback education strategy 5. Education strategy notes series. 6. Education strategy by exchanging opinions and discussion. 7. Education strategy by presenting information. 8. Education strategy through training and presenting scientific developments.	

10. Course Structure					
Evaluation method	**Learning method**	**Unit or subject name**	**Required Learning Outcomes**	**Hours**	**Week**
Daily, oral and written . examinations, reports, discussions	Theoretically +Practical	**Ultrasound therapy:** Define, Production of US, Coupling Media, Thermal effects, Non thermal effects . Uses of US,Indications & Contraindications, Dangers of Ultrasound		6	1
Daily, oral and written . examinations, reports, discussions	Theoretically +Practical	**Ultrasound therapy:** Frequency, Treatment Dosage parameters: Continuous & Pulsed mode, Intensity, US Fields: Near field, Far field, Half value distance, Attenuation, Principles & Application of US: Direct contact, Water bag, Water bath, Solid sterile gel pack method for wound.		6	2
Daily, oral and written examinations, reports, discussions	Theoretically +Practical	**Phonophoresis:** Define, Methods of application, Commonly used drugs, Uses. Dosages of US	**136**	6	3
Daily, oral and written examinations, reports, discussions	Theoretically +Practical	**Micro Wave Diathermy:** Define Wave length & Frequency, Physiological & Therapeutic effects, Indications &		6	4

		Contraindications, Dangers of MWD.			
Daily, oral and written examinations, reports, discussions	Theoretically +Practical	**Micro Wave Diathermy:** Methods of applications, technique of application, Dosage Parameters		6	5
Daily, oral and written . examinations, reports, discussions	Theoretically +Practical	**Continuous Short - Wave Diathermy:** Define, Frequency & Wavelength of SWD, Principle of Production of SWD, Physiological & Therapeutic, effects, Indications & Contraindications, Dangers,		6	6
Daily, oral and written examinations, reports, discussions	Theoretically +Practical	**Continuous Short - Wave Diathermy** Methods of Heat Production by SWD treatment, Types of SWD Electrode, Placement & Spacing of Electrodes, Tuning, Testing of SWD Apparatus, Factors influence field distribution in short wave diathermy, Therapeutic variation in the field distribution	**137**	6	7
Daily, oral and written . examinations, reports, discussions	Theoretically +Practical	**Pulse Short -Wave Diathermy** Definition, Chrematistics, Mechanism of work, physiological effects & therapeutic effects, indications, principle of treatment and		6	8

		contra-indications. Technique of Application			
Daily, oral and written . examinations, reports, discussions	Theoretically +Practical	**Pulsed Electro Magnetic Energy:** Principles, Production & Parameters of PEME, Uses of PEME. Methods of applications, technique of application		6	9
Daily, oral and written . examinations, reports, discussions	Theoretically +Practical	**Compression** Effects of External Compressions, Clinical indications for the Use of External Compression, Contraindications and Precautions of External Compression,		6	10
Daily, oral and written . examinations, reports, discussions	Theoretically +Practical	**COMPRESSION**: Contraindications for the Use of Intermittent or Sequential Compression Pumps, Precautions for the Use of Intermittent or Sequential Compression Pumps, Adverse Effects of External Compression,	**138**	6	11
Daily, oral and written . examinations, reports, discussions	Theoretically +Practical	**COMPRESSION**: Methods of applications, technique of application		6	12
Daily, oral and written . examinations, reports, discussions	Theoretically +Practical	**Extracorporeal Shock Wave Therapy,** physical		6	13

		characteristic of ESWT, indication, contraindication			
Daily, oral and written examinations, reports, discussions	Theoretically +Practical	**Extracorporeal Shock Wave Therapy** Methods of applications, technique of application		6	14
Daily, oral and written examinations, reports, discussions	Theoretically +Practical	**General Revision**		6	15

11.Course evaluation
Striving: 40/ Final: 60

12. Learning and teaching resources	
	Required textbooks (methodology)
Clayton's Electrotherapy (Physiotherapy Essentials) Paperback – Import, 24 Nov 1995 2. *8T***Physical Agents : Theory and Practice***8T,7T*3rd Edition ,*7T8T***Barbara J. Behrens***8T 7T*PTA, MS*7T ,8T***Holly Beinert***8T 7T*PT, MPT 3. **Physical Agents in Rehabilitation: *From Research to Practice* ,Fourth Edition,** by Michelle H. Cameron, MD, PT, OCS 4. **Therapeutic Modalities For Sports Medicine and Athletic Training**, Sixth Edition by William E. Prentice , Ph.D., A.T.C., P.T. 5. **Textbook of Electrotherapy Kindle Edition** 6. **Practical Electrotherapy: A Guide to Safe Application** *8T***,by** *8T* John Fox and	Scientific journals, reports....)
	Recommended supporting books and references

Therapeutic exercises 2

1. Course Name:
Therapeutic exercises 2
2. Course Code:
ATU.CHM. PT221
3. Semester / Year:
Second Semester /Second Year
4. Description Preparation Date:
15-9-2025
5. Available Attendance Forms:
Came
6. Number of Credit Hours (Total) / Number of Units (Total)
6/4
7. Course administrator's name (mention all, if more than one name)
Name: Assist.Lec. Mohammed abd Al Hussein Jabar Email : Mohammed.pt@atu.edu.iq
8. Course Objectives
Overall goal. Learn about various therapeutic procedures. **Own goals.** 1- Application of brushing exercises and free exercises of all kinds 2 -Applying all types of resistance 3- Applying various types of stretching qualification exercises 4 -Apply breathing and aerobic exercises 5-Knowing the patient's motor coordination and correct positions 6-Knowing how to walk normally and abnormally and how to use walking aids 7-Knowing the types and stages of soft tissue injuries and how to deal with them
9. Teaching and learning strategies
1. Cooperative education strategy. 2. Brainstorming education strategy. 3. Education strategy collaborative concept planning. 4. Real-time feedback education strategy 5. Education strategy notes series. 6. Education strategy by exchanging opinions and discussion. 7. Education strategy by presenting information. 8. Education strategy through training and presenting scientific developments.

10. Course Structure					
Evaluation method	**Learning method**	**Unit or subject name**	**Required Learning Outcomes**	**Hours**	**Week**
Daily, oral and written . examinations, reports, discussions	Theoretically +Practical	MAT EXERCISES:- • Principles. • Equilibrium/balancing exercises. • Transfer activities. • Indications and contraindications.		6	1
Daily, oral and written . examinations, reports, discussions	Theoretically +Practical	FREE EXERCISES:- • Classification, techniques, therapeutic effects of free exercises. • Application for shoulder, neck, hip and knee joints. • Techniques of mobilization for stiff joints and increasing the range of motion.		6	2
Daily, oral and written examinations, reports, discussions	Theoretically +Practical	Resisted exercise: Definition – strength, power, endurance. Guiding principle of resisted exercise, determinants, types Manual and Mechanical Resistance Exercise, Isometric Exercise, Dynamic Exercise - Concentric and Eccentric, Dynamic Exercise - Constant and Variable Resistance, Isokinetic Exercise, Chain Exercise, precautions, contraindications	**141**	6	3

Daily, oral and written examinations, reports, discussions	Theoretically +Practical	• Progressive Resistance Exercise - de Lormes, Oxford, MacQueen, Circuit Weight Training, Plyometric Training—Stretch-Shortening Drills, Isokinetic Regimens 4. Proprioceptive Neuromuscular Facilitation – Principles, Diagonal patterns of movements, Basic procedures, Upper Extremity Diagonal patterns, Lower Extremity Diagonal Patterns. Technique in PNF – Rhythmic Initiation, Repeated Contractions, Reversal of Antagonists, Alternating Isometrics, Rhythmic Stabilization.		6	4
Daily, oral and written examinations, reports, discussions	Theoretically +Practical	Stretching: • Definition, properties of soft tissue, mechanical and neurophysiological properties of connective tissue, mechanical properties of non contractile tissue. •Determinants, • type and effect of stretching, precautions, general applications of stretching technique	**142**	6	5

Daily, oral and written . examinations, reports, discussions	Theoretically +Practical	BREATHING EXERCISES:- • Mechanism of breathing, muscles of respiration. • Diaphragmatic and segmental breathing. • Principles and techniques. • Exercises to mobilize the chest, Postural Drainage, Manual Technique used in • Postural Drainage, Postural Drainage Positions, Modified Postural Drainage..		6	6
Daily, oral and written examinations, reports, discussions	Theoretically +Practical	AEROBIC EXERCISE : • Definitions, Physiological response to Aerobic Exercise • Evaluation of aerobic capacity – exercise testing, Determinant of Aerobic Exercise. • Physiological Changes with Aerobic Training, Aerobic Exercise Program, Applications of Aerobic Program in patients with chronic illness	**143**	6	7
Daily, oral and written . examinations, reports, discussions	Theoretically +Practical	Co-ordination • Define balance (static and dynamic). • Explain the mechanism of neuromuscular co-ordination., Balance		6	8

		control, Components of balance, Balance Impairment, Examination of Impaired Balance, Balance training Exercises			
Daily, oral and written . examinations, reports, discussions	Theoretically +Practical	Posture: • Normal Postural Control, Postural Alignment, Postural Stability, Postural Impairment and Mal-Alignment, Postural Training.		6	9
Daily, oral and written . examinations, reports, discussions	Theoretically +Practical	Gait Training: Definition, Different methods of Gait Training, Gait Training in Parallel Bars, Walking Aids: Types: Crutches, Canes, Frames; Principles and training with walking aids.		6	10
Daily, oral and written . examinations, reports, discussions	Theoretically +Practical	SOFT TISSUE LESIONS • Soft Tissue Injury, Repair, and Management • Severity of Tissue Injury, Grade 1 (first-degree), Grade 2 (second-degree), Grade 3 (third-degree). • Analog visual scale. • Plan of Care for(acute, sub acute, and chronic stages of soft tissue injury	**144**	6	11

Daily, oral and written . examinations, reports, discussions	Theoretically +Practical	Massage: Define and describe the various manipulation techniques used in massage. • Stroking manipulation: Effleurage, Stroking. • Pressure manipulations: Kneading, Squeezing, Stationery, Circular ironing (reinforced kneading), Finger kneading, Petrissage (picking up, wringing, rolling), Frictions. • Percussion manipulation: Hacking, Clapping, Beating & Pounding. • Shaking manipulations: vibration, shaking		6	12
Daily, oral and written . examinations, reports, discussions	Theoretically +Practical	Hydrotherapy: Definitions, Goals and Indications, Precautions and Contraindications, Properties • of water, Therapeutic Exercises in Hydrotherapy, Special equipments used	**145**	6	13
Daily, oral and written examinations, reports, discussions	Theoretically +Practical	Transfers training:- selection of transfers ,levels ,amount of assist transfer ,belt of transfers		6	14

Daily, oral and written examinations, reports, discussions	Theoretically +Practical	Proprioceptive Neuromuscular Facilitation : Introduction, responses of NM mechanism, basis techniques of PNF patterns of arm, leg, neck, head and trunk (emphasis on straight patterns),		6	15

11.Course evaluation
Striving: 40/ Final: 60

12. Learning and teaching resources	
	Required textbooks (methodology)
1. Stretching Exercises Encyclopedia/2012 2. Therapeutic Programs For Musculoskeletal Disorders/2013 3. Practical Proprioception: An Examination Of A Core Physiological Foundation For Physical Performance Training. 4. Therapeutic exercise foundation and technique /2012 5. The Muscle And Bone Palpation Manual With Trigger Points, Referral Patterns, And Stretching/ 2009	Scientific journals, reports....)

Course Description of Medical Statics

❖ Course Name

Medical Statics

❖ Course Code

ATU.CHM.PT317

❖ Semester / Year

First Semester / Third Year

❖ The history of preparation of this description

2025\9\15

❖ Available Attendance Forms

Came

❖ Number of Credit Hours (Total) / Number of Units (Total)

2\2

❖ Course administrator's name (if more than one name)

Name: Assist lecturer: Ghassan Zahir Mohammed

❖ Course Objectives

General Objective: To understand the basic theoretical principles of statistical analysis

Specific Objectives: 1. To provide students with the necessary concepts of statistical operations to enable them to carry out a research project in the field of physical therapy.2. To select appropriate statistical methods for addressing issues of medical importance.3. To identify and apply suitable statistical methods for managing commo types of medical data.

❖ Teaching and Learning Strategies

- ✓ Cooperative education strategy.
- ✓ Brainstorming education strategy.
- ✓ Education strategy collaborative concept planning.
- ✓ Real-time feedback education strategy
- ✓ Education Strategy Notes Series.
- ✓ The strategy of education by exchanging views and discussing.
- ✓ Education strategy by presenting information.
- ✓ Education strategy by training and presentation of scientific developments.

❖ Course Structure

Evaluation method	Learning method	Unit or subject name	Required Learning Outcomes	Total Hours	The week
Daily, oral and written exams, reports, discussions.	Theoretically	Introduction: Meaning, definition, characteristics of statistics. Importance of the study of statistics, Branches of statistics, Statistics and health science , Parameters and Estimates, Variables and their types, Measurement scales.		2	1
Daily, oral and written exams, reports, discussions.	Theoretically	Tabulation of Data: Basic principles of graphical representation, Types of diagrams – histograms, frequency polygons, smooth frequency polygon, cumulative frequency curve, Normal probability curve.		2	2
Daily, oral and written exams, reports, discussions.	Theoretically	the Same lecture as the last week	**148**	2	3
For daily, oral and written exams, reports discussions.	Theoretically	Measures of Central Tendency: Need for measures of central Tendency, Definition and calculation of Mean – ungrouped and grouped, interpretation and calculation of Medianungrouped and		2	4

		grouped, Meaning and calculation of Mode, Geometric mean & Hormonic mean, Guidelines for the use of various measures of central tendency			
Daily, oral and written exams, reports, discussions.	Theoretically	the Same lecture as the last week		2	5
Daily, oral and written exams, reports, discussions.	Theoretically	Measures of Dispersion: Range, mean deviation, standard deviation & variance		2	6
Daily, oral and written exams, reports, discussions.	Theoretically	Probability and Standard Distributions: Meaning of probability of standard distribution, the binominal distribution, the normal distribution, Divergence from normality – skewness,kurtosis		2	7
Daily, oral and written exams, reports, discussions.	Theoretically	the Same lecture as the last week	**149**	2	8
Daily, oral and written exams, reports, discussions.	Theoretically	Correlation & regression: Significance, correlation coefficient, linear regression and Regression equation.		2	9

Daily, oral and written exams, reports, discussions.	Theoretically	Testing of Hypotheses , Level of significance, Degrees of freedom		2	10
Daily, oral and written exams, reports, discussions.	Theoretically	Chi-square test, test of Goodness of fit & student t-test.		2	11
Daily, oral and written exams, reports, discussions.	Theoretically	Analysis of variance & covariance: Analysis of variance (ANOVA), what is ANOVA? Basic principle of ANOVA, ANOVA technique, Analysis of Co variance (ANACOVA)		2	12
Daily, oral and written exams, reports, discussions.	Theoretically	Sampling: Definition, Types- simple, random, stratified, cluster and double sampling. Need for sampling - Criteria for good samples, Application of sampling in community, Procedures of sampling and sampling designs errors.		2	13
Daily, oral and written exams, reports, discussions.	Theoretically	The Same lecture as the last week	**150**	2	14
Daily, oral and written exams, reports, discussions.	Theoretically	General Revision.		2	15

❖ Course Evaluation

Striving: 30 / Final: 70

❖ Learning and Teaching Resources

	Required textbooks (methodolog
1. Research Methodology: Methods and Techniques 3 Edition by 6TUC. R. KothariU6T 2. Comprehensive Textbook of Biostatistics And Research Methodology, DR.S. Kartikeyan , R.M. Chaturvedi , R.M.Bhosale, 1st Edition,2016 3. Research Methodology: The Aims, Practices and Ethics of Science by Peter Pruzan, 1st edition. 2016 4. Elements of Health Statistics: Rao.N.S.N 5. An introduction of Biostatistics: Sunder Rao.P.S.S. 6. Methods in Bio-Statistics 6th Edn. 1997: B.K. Mahajan (Author) Atlas of Human Anatomy (Netter Basic Science)by Frank H. Netter,2006.	Main references (sources)
	Recommended supporting bo and references (Scientific journals, reports...)
	Electronic References, Websites

Course Description of Physiotherapy for Musculoskeletal Diseases 3

❖ Course Name

Physiotherapy for Musculoskeletal Diseases 3

❖ Course Code

ATU.CHM.PT311

❖ Semester / Year

First Semester / Third Year

❖ The history of preparation of this description

2025\9\15

❖ Available Attendance Forms

Came

❖ Number of Credit Hours (Total) / Number of Units (Total)

5\3

❖ Course administrator's name (if more than one name)

Name: Assist lecturer: Murtada Altalaqani (Theory) Name: Loay Abd Kashy

❖ Course Objectives

General Objective: To know the types of diseases that affect the musculoskeletal system

Specific Objectives: - To become familiar with medical terminology related to musculoskeletal system diseases. - To identify the causes of diseases affecting the musculoskeletal system, along with their signs and symptoms. - To understand the field medical rehabilitation and its role in treating musculoskeletal system diseases. - To lear about therapeutic methods and the rehabilitation program for musculoskeletal system diseases.

❖ Teaching and Learning Strategies

- ✓ Cooperative education strategy.
- ✓ Brainstorming education strategy.
- ✓ Education strategy collaborative concept planning.
- ✓ Real-time feedback education strategy
- ✓ Education Strategy Notes Series.
- ✓ The strategy of education by exchanging views and discussing.
- ✓ Education strategy by presenting information.
- ✓ Education strategy by training and presentation of scientific developments.

❖ Course Structure

Evaluation method	Learning method	Unit or subject name	Required Learning Outcomes	Total Hours	The week
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Cervical pain: Definition, Acute and Chronic, Etiology, Clinical presentation, Physiotherapy		5	1
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Adhesive capsulitis: Definition, Etiology, Pathology, Clinical presentation, Physiotherapy		5	2
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Rotator cuff tendonitis and tear: Definition, Etiology, Pathology, Clinical presentation, Physiotherapy.		5	3
For daily, oral and written exams, reports discussions.	Theoretically and Practical	Lateral and medial epicondylitis: Definition, Etiology, Pathology, Clinical presentation, Physiotherapy.		5	4
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Carpal tunnel syndrome: Definition, Etiology, Pathology, Clinical presentation, Physiotherapy	**153**	5	5
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	De Quervains tenosynovitis, Trigger finger, Dupuytren's contracture: Definition,		5	6

		Etiology, Clinical presentation, Physiotherapy.			
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Low back pain: Definition, Etiology, Pathology, Clinical presentation, Physiotherapy.		5	7
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Scoliosis: Definition, Etiology, Pathology, Clinical presentation, Physiotherapy		5	8
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Coccydynia: Definition, Etiology, Pathology, Clinical presentation, Physiotherapy		5	9
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Diffuse Idiopathic Skeletal Hyperostosis: Definition, Etiology, Pathology, Clinical presentation, Physiotherapy		5	10
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Plantar fasciitis: Definition, Etiology, Pathology, Clinical presentation, Physiotherapy.		5	11
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Patellofemoral pain syndrome: Definition, Etiology, Pathology, Clinical presentation, Physiotherapy		5	12
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Meralgia Paresthetica: Definition, Etiology, Pathology, Clinical		5	13

		presentation,Physiotherapy.			
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Bursitis and anserine bursitis: Definition, Etiology, Pathology, Clinical presentation, Physiotherapy.		5	14
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Metatarsalgia: Definition, Etiology, Pathology, Clinical presentation, Physiotherapy.		5	15

❖ Course Evaluation

Striving: Theory:25 –Practical 15 / Final: Theory:35- Practical: 25

❖ Learning and Teaching Resources

	Required textbooks (methodology)
1. Primer on the Rheumatic Diseases / Edition 13 by John H. Klippel, John H. Stone, L eslie J. Crofford, Patience H. White. 2. Handbook of Physical Medicine and Rehabilitation Hardcover – October, 1982 by F.H. Krusen (Editor), etc. (Editor), F.J. Kottke (Editor). 3. Management of Common Musculoskeletal Disorder by: Hertling, D, and Kessler RM Physical Therapy Principles and Methods. 3rd ed. Philadelphia.PA: WB Sunders. 4. Orthopaedic Physical Therapy By: Donatelli & Michael J. Wooden 4th Edition. 5. Physiotherapy in Orthopedics, A problem-solving approach By: Atkinson, Coutts & Hassenkamp 2nd Edition. 6. Physical Rehabilitation's Assessments and Treatment". By Susan B,O'Sullivan &Thomas J. Schmitz , 4th edition. ;	Main references (sources)

	Recommended supporting books references (Scientific journals, reports...)
	Electronic References, Websites

Course Description of Physiotherapy for Spinal Cord Injuries

❖ Course Name

Physiotherapy for Spinal Cord Injuries

❖ Course Code

ATU.CHM.PT313

❖ Semester / Year

First Semester / Third Year

❖ The history of preparation of this description

2025\9\15

❖ Available Attendance Forms

Came

❖ Number of Credit Hours (Total) / Number of Units (Total)

5\3

❖ Course administrator's name (if more than one name)

Name: Assist lecturer: Salam Khalif Jaber (Theory) Name: Alaa Shadhan(Practical)

❖ Course Objectives

General Objective: To understand the anatomy, physiology, and function of the spinal cord, as well as the most important injuries it may sustain.

Specific Objectives:- To identify spinal cord injuries and diseases that affect it.- To recognize the main pathological causes of diseases and disorders affecting the spinal cord.- To understand the clinical symptoms, differential diagnosis, and evaluation of disorders affecting the spinal cord.- To become familiar with medical treatments and surgical interventions for managing these injuries.- To understand the role of physical

therapy and necessary medical rehabilitation in treating various injuries using appropria therapeutic methods and exercises for rehabilitation of these injuries.

❖ Teaching and Learning Strategies

- ✓ Cooperative education strategy.
- ✓ Brainstorming education strategy.
- ✓ Education strategy collaborative concept planning.
- ✓ Real-time feedback education strategy
- ✓ Education Strategy Notes Series.
- ✓ The strategy of education by exchanging views and discussing.
- ✓ Education strategy by presenting information.
- ✓ Education strategy by training and presentation of scientific developments.

❖ Course Structure

Evaluation method	Learning method	Unit or subject name	Required Learning Outcomes	Total Hours	The week
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Introduction to the rehabilitation of SCI , effective system of SCI care, types of paralysis in		5	1
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	SCI, etiology, complications, causes of death, aim of rehabilitation, rehabilitation team work,team work members, functions of team member.		5	2
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Anatomy and physiology of spinal column and spinal cord: the spinal curvature functions, the		5	3
For daily, oral and written exams, reports discussions.	Theoretically and Practical	spinal ligaments & disks functions, spinal column functions, spinal cord functions, spinal		5	4

Daily, oral and written exams, reports, discussions.	Theoretically and Practical	circulation & meninges functions, spinal cord vascular anatomy, relation of vertebrae to the		5	5
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	spinal cord.		5	6
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	ASIA classification and definitions: ASIA classification system basic definitions of		5	7
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	completeness with sacral sparing, sensory exam, motor exam, neurological level of injury,		5	8
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	ASIA impairment scale.		5	9
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	ASIA motor index score and guide: manual muscle testing, purposes of muscle test, factors		5	10
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	affecting 'strength, preparation and information, assessment, contraindication and precautions,	**158**	5	11
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	grading system in SCI, 10 key muscles		5	12
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	ASIA sensory index score and guide: types of sensory receptors , sensory nerves pathways,		5	13

Daily, oral and written exams, reports, discussions.	Theoretically and Practical	dermatome – sensory level, dermatomes distribution.		5	14
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	SCI management at the scene of the accident: general rules , the unconscious patient: position		5	15

❖ Course Evaluation

Striving: Theory:25 –Practical 15 / Final: Theory:35- Practical: 25

❖ Learning and Teaching Resources

	Required textbooks (methodology)
1. Handbook of Physical Medicine and Rehabilitation Hardcover – October, 1982 2. Neurological Rehabilitation, 6e (Umphreds Neurological Rehabilitation) 6th Edition 3. Neurological Physiotherapy: A Problem-Solving Approach, 2ePaperback – 8 Oct 2001 4. Physical Management in Neurological Rehabilitation, 2e (Physiotherapy Essentials) 2nd Edition 5. Brain's Diseases of Nervous System 6. Textbook of Neurology- Victor Adams 7. Neurology & Neuro surgery By Lindsay	Main references (sources)
	Recommended supporting books references (Scientific journals, reports...)
	Electronic References, Websites

Course Description of Physiotherapy for Sport Injuries

❖ Course Name

Physiotherapy for Sport Injuries

❖ Course Code

ATU.CHM.PT312

❖ Semester / Year

First Semester / Third Year

❖ The history of preparation of this description

2025\9\15

❖ Available Attendance Forms

Came

❖ Number of Credit Hours (Total) / Number of Units (Total)

3\2

❖ Course administrator's name (if more than one name)

Name: Assist lecturer: Mohammed Abd Alhussien (Theory)

Name: Ali Mohasen Alawi (Practical)

❖ Course Objectives

General Objective: To identify sports injuries and their treatment methods.

Specific Objectives: -- To understand the basic sciences to provide knowledge about aspects related to sports injuries.- To identify various sports injuries that affect joints, muscles, and ligaments.- To understand medical topics and terminology, as well as the physiological variables of sports injuries.- Clinical evaluation and comparison of contemporary and traditional interventions and the impact of advanced technology in th field.- To determine suitable rehabilitation programs for each medical condition using available therapeutic methods and exercises.

❖ Teaching and Learning Strategies

- ✓ Cooperative education strategy.
- ✓ Brainstorming education strategy.
- ✓ Education strategy collaborative concept planning.
- ✓ Real-time feedback education strategy
- ✓ Education Strategy Notes Series.
- ✓ The strategy of education by exchanging views and discussing.
- ✓ Education strategy by presenting information.
- ✓ Education strategy by training and presentation of scientific developments.

❖ Course Structure

Evaluation method	Learning method	Unit or subject name	Required Learning Outcomes	Total Hours	The week
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Introduction to sport injury management , physiological effects of exercise.		3	1
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Shoulder injuries in sport, Shoulder Separation, Shoulder Dislocation,	**161**	3	2
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Shoulder injuries in sport, rotator cuff tendonitis and supraspinatus tendonitis.		3	3
For daily, oral and written exams, reports discussions.	Theoretically and Practical	The elbow and forearm, tennis and golfer elbow (medial and lateral epicondylitis),		3	4

Daily, oral and written exams, reports, discussions.	Theoretically and Practical	The elbow and forearm, Little League Elbow, Anterior Interosseous Nerve Syndrome		3	5
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	(Kiloh Nevin Syndrome), Triceps Tendinitis		3	6
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Hand and Wrist Injuries , De Quervain's Tenosynovitis, Wrist Sprain		3	7
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Hand and Wrist Injuries, Trigger Finger (Flexor Tenosynovitis), Jersey Finger		3	8
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Hip Injuries, Acetabular Labral Tears, Groin Strain or Hip Adductor Strain		3	9
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Hip Injuries Piriformis Syndrome, Hamstring Strain, Greater Trochanter Bursitis		3	10
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Knee injuries, Anterior and posterior Cruciate Ligaments injuries		3	11
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Knee injuries, Medial and lateral Collateral Ligament injuries.		3	12
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Knee injuries Medial and Lateral Meniscus, Osgood-Schlatter Disease		3	13
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Ankle and foot injuries, Ankle Sprains, Achilles Tendon Rupture Plantar Fasciitis		3	14

Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Ankle and foot injuries, Tibialis Anterior Tendinopathy, Tibialis Posterior Tendon Injuries.		3	15

❖ Course Evaluation

Striving: Theory:25 –Practical 15 / Final: Theory:35- Practical: 2

❖ Learning and Teaching Resources

	Required textbooks (methodology)
1. Sports Injury Prevention and Rehabilitation: Integrating Medicine and Science for Performance Solutions 1st Edition by David Joyce (Editor), Daniel Lewindon (Editor). 2. Sports Injuries Prevention, Diagnosis, Treatment and Rehabilitation Editors: Doral, M.N., Tandoğan, R.N., Mann, G., Verdonk, R. (Eds),2012 3. Rehabilitation of Sports Injuries Current Concepts Editors: Puddu, G., Giombini, A., Selvanetti, A. (Eds.),2001 4. Textbook of Sports Medicine: Basic Science and Clinical Aspects of Sports Injury and 5. Physical Activity Michael Kjaer, Michael Krogsgaard, Peter Magnusson, Lars Engebretsen, Harald Roos, Timo Takala, Savio L-Y. Woo 6. SPORTS MEDICINE Just the Facts by Francis G. O'Connor,Robert E. Sallis ,Robert P. Wilder ,Patrick St. Pierre. 7. .Essential sports medicine. HERRERA, Joseph E., et al. New York: Humana Press, 2008.	Main references (sources)
	Recommended supporting books references (Scientific journals, reports...)
	Electronic References, Websites

Course Description of Prostheses and Orthotics
❖ Course Name
Prostheses and Orthotics
❖ Course Code
ATP.CHM.PT316
❖ Semester / Year
First Semester / Third Year
❖ The history of preparation of this description
2025\9\15
❖ Available Attendance Forms
Came
❖ Number of Credit Hours (Total) / Number of Units (Total)
5\3
❖ Course administrator's name (if more than one name)

Name: Assist lecturer: Mohammed Abd Alhussien (Theory)

Name: Saif Mahdi Saleh (Practical)

❖ Course Objectives

General Objective: 1. To understand the types of amputation and how to rehabilitate amputee patients.2. To understand the types of prosthetic limbs and their usage.

Specific Objectives:1. To recognize the types of amputation, the causes leading to amputation, its complications, and how to rehabilitate the remaining limb and ensure its proper use.2. To be aware of the errors that occur due to the use of prosthetic limbs and how to address them.3. To have complete knowledge of the stages of prosthetic limb fabrication and how the patient uses it.4. To train amputees on using the prosthetic limb and walking with it.

❖ Teaching and Learning Strategies

- ✓ Cooperative education strategy.
- ✓ Brainstorming education strategy.
- ✓ Education strategy collaborative concept planning.
- ✓ Real-time feedback education strategy
- ✓ Education Strategy Notes Series.
- ✓ The strategy of education by exchanging views and discussing.
- ✓ Education strategy by presenting information.
- ✓ Education strategy by training and presentation of scientific developments.

❖ Course Structure

Evaluation method	Learning method	Unit or subject name	Required Learning Outcomes	Total Hours	The week
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Introduction, Rehabilitation, the handicap, concept, taking care, psychological effect of the handicap.	**165**	5	1
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Psychological effect of the handicap, the amputee, causes of amputation, level of amputation in the lower limbs.		5	2

Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Training program for amputee, nursing after operation, nursing before prosthesis.		5	3
For daily, oral and written exams, reports discussions.	Theoretically and Practical	Importance of stump, muscular exercise, nursing during prosthesis, temporary prosthesis & management.		5	4
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Normal gait &its analysis, gait deviation & its treatment		5	5
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Early management (Clinic Team Approach to Rehabilitation, Amputation Surgery: Osteomyoplastic Reconstructive Technique, Postoperative Management		5	6
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Early management (Pain Management, Skin Disorders and Their Management, Psychological Consequences of Amputation.		5	7
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Rehabilitation of adults with lower limb amputation (Partial Foot and Syme's Amputations and Prosthetic Designs)	**166**	5	8
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Rehabilitation of adults with lower limb amputation (Transtibial Prosthetic design		5	9

Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Rehabilitation of adults with lower limb amputation (Transfemoral Prosthetic Designs)		5	10
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Rehabilitation of adults with lower limb amputation (Hip Disarticulations and Trans pelvic Prosthetic Designs, Basic Lower-Limb Prosthetic Training).		5	11
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Rehabilitation of adults with upper limb amputation (Body-Powered Upper-Limb Prosthetic Designs)		5	12
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Rehabilitation of adults with upper limb amputation (Upper-Limb Externally Powered Prosthetic Designs)		5	13
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Rehabilitation of adults with upper limb amputation (Training Patients with upper limb amputation)		5	14
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Revision	**167**	5	15

❖ Course Evaluation

Striving: Theory:25 –Practical 15 / Final: Theory:35- Practical: 25

❖ Learning and Teaching Resources

	Required textbooks (methodology)
1. Essentials of Prosthetics and Orthotics Kindle Edition by AK Agarwal (Author), 1st edition 2. Orthotics and Prosthetics in Rehabilitation,2nd Edition by Michelle M. Lusardi PhD PT (Author), Caroline C. Nielsen PhD (Author). 3. Prosthetics & Orthotics in Clinical Practice, Bella J. May, Margery A. Lockard 4. Lower-Limb Prosthetics and Orthotics: Clinical Concepts, Joan Edelstein, MA, PT, FISPO, CPed ; Alex Moroz, MD, FACP,2011 5. Orthotic Intervention for the Hand and Upper Extremity: Splinting Principles and Process By (author) Marylynn A. Jacobs , By (author) Noelle M. Austin	Main references (sources)
	Recommended supporting books references (Scientific journals, reports...)
	Electronic References, Websites

Course Description of Therapeutic Equipment 3

❖ Course Name

Therapeutic Equipment 3

❖ Course Code

ATM.CHU.PT315

❖ Semester / Year

First Semester / Third Year

❖ The history of preparation of this description

2025\9\15

❖ Available Attendance Forms

Came

❖ Number of Credit Hours (Total) / Number of Units (Total)

6\4

❖ Course administrator's name (if more than one name)

Name: Assist lecturer: Salam Khalif Jaber (Theory) Name: Alaa Shadhan(Practical)

❖ Course Objectives

General Objective: To know the devices used in physical therapy in general.

Specific Objectives:1. To introduce the student to each electrical device used in physica therapy.2. To introduce the student to the operating principles of each device.3. To understand the physiological and therapeutic effects of each device.4. To know the indications and contraindications for using devices in physical therapy.5. To learn the methods and application techniques of each physical therapy device.6. To understand th standards of dosages, intensity, and treatment frequency using physical therapy devices.

❖ Teaching and Learning Strategies

- ✓ Cooperative education strategy.
- ✓ Brainstorming education strategy.
- ✓ Education strategy collaborative concept planning.
- ✓ Real-time feedback education strategy
- ✓ Education Strategy Notes Series.
- ✓ The strategy of education by exchanging views and discussing.
- ✓ Education strategy by presenting information.
- ✓ Education strategy by training and presentation of scientific developments.

❖ Course Structure

Evaluation method	Learning method	Unit or subject name	Required Learning Outcomes	Total Hours	The week

Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Components of electrical currents(ions, electrical potentials, electrons, electrical currents, ampere,		6	1
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	coulomb, volt, voltage) electrotherapeutic currents (types of current {monophasic, biphasic,		6	2
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	pulsatile}) definition the transcutaneous electrical stimulators, neuromuscular electrical stimulator,		6	3
For daily, oral and written exams, reports discussions.	Theoretically and Practical	micro current electrical nerve stimulator, Low-intensity stimulator, frequency		6	4
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Waveforms (Waveform Shape, amplitude, duration, pulse, phases, cycle, interphase Interval,		6	5
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	interpulse interval, Pulse Amplitude, pulse charge, rate of rise, decay time, accommodation, Pulse		6	6
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Duration, Pulse Frequency, placement of electrode	170	6	7
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Nerve Muscle Physiology: Action Potential, Resting membrane potential, Propagation of Action		6	8

Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Potential, depolarization, Motor unit, synapse, Accommodation, Stimulation of Healthy Muscle,		6	9
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Stimulation of Denervated Muscle, and Stimulation for Tissue Repair.		6	10
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Therapeutic uses of E.S. induce muscle contraction, effect of non-contractile stimulation on edema		6	11
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Stimulation of denervated muscle, treatment parameters for stimulation of denervated muscle		6	12
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Faradic Current.: Definition, Modifications, Techniques of Application of Individual, Muscle and		6	13
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Group Muscle stimulation, Physiological & Therapeutic effects of Faradic Current, Precautions,	**171**	6	14
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Indications & Contra-Indications, Dangers.		6	15

❖ Course Evaluation

Striving: Theory:25 –Practical 15 / Final: Theory:35- Practical: 25

❖ Learning and Teaching Resources	
	Required textbooks (methodology)
1. Clayton's Electrotherapy (Physiotherapy Essentials) Paperback – Import, 24 Nov 1995 by Sheila Kitchen MSc PhD DipTP MCSP Professor (Author), Sarah Bazin MCSP (Author) 2. 8TPhysical Agents : Theory and Practice8T,7T3rd Edition ,7T8Barbara J. Behrens8T 7TPTA, MS7T ,8THolly Beinert8T 7TPT, MPT 3. Physical Agents in Rehabilitation: From Research to Practice ,Fourth Edition, by Michelle H. Cameron, MD, PT, OCS 4. Therapeutic Modalities For Sports Medicine and Athletic Training, Sixth Edition by William E. Prentice , Ph.D., A.T.C., P.T. 5. Textbook of Electrotherapy Kindle Edition by Singh Jagmohan (Author) 6. Practical Electrotherapy: A Guide to Safe Application 7.T,by 7.T John Fox and Tim Sharp8T,8T 2007	Main references (sources)
	Recommended supporting books references (Scientific journals, reports...)
	Electronic References, Websites

Course Description of Therapeutic Exercises 3

❖ Course Name

Therapeutic Exercises 3

❖ Course Code

ATM.CHM.PT314

❖ Semester / Year

First Semester / Third Year

❖ The history of preparation of this description

2025\9\15

❖ Available Attendance Forms

Came

❖ Number of Credit Hours (Total) / Number of Units (Total)

5\3

❖ Course administrator's name (if more than one name)

Name: Assist lecturer: Salam Khalif Jaber (Theory) Name: Maytham Alaa Abas(Practical)

❖ Course Objectives

General Objective: To become familiar with all traditional and modern physiotherapy exercise techniques used in the specialty.

Specific Objectives:1. To know the manual manipulation techniques for all body joints. To understand the Maitland and Mulligan principles in joint manual manipulation techniques.3. To understand the stages of injury and therapeutic exercises for treating so tissue injuries.

❖ Teaching and Learning Strategies

- ✓ Cooperative education strategy.
- ✓ Brainstorming education strategy.
- ✓ Education strategy collaborative concept planning.

- ✓ Real-time feedback education strategy
- ✓ Education Strategy Notes Series.
- ✓ The strategy of education by exchanging views and discussing.
- ✓ Education strategy by presenting information.
- ✓ Education strategy by training and presentation of scientific developments.

❖ Course Structure

Evaluation method	Learning method	Unit or subject name	Required Learning Outcomes	Total Hours	The week
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	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		5	1
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Joint mobilization: indications, contraindications and precautions, procedures for applying passive joint Mobilization technique:-		5	2

		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			
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Joint mobilization peripheral joint, Principles, Manipulation techniques M.W.M define, principle, indication, contraindication		5	3
For daily, oral and written exams, reports discussions.	Theoretically and Practical	joint mobilization of shoulder joint complex:- the mechanical movement of joint, accessory joint (A.C joint, C.S joint, SUB scapular joint, methods of application to increase all physiological movement of shoulder joint:- flexion, extension, hyperextension, abduction….extra	**175**	5	4

Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Joint mobilization of elbow joint complex, mechanical movement of joint, methods of application joint mobilization to increase all physiological movement of the elbow joint, flexion, extension, accessory joint radioulnar joint for supination and pronation movements.		5	5
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Joint mobilization of wrist joint and hand complex, mechanical movement of joint, methods of application mechanical movement of the joint, wrist joint, phalangeal joints.		5	6
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Joint mobilization of knee joint complex, mechanical movement of joint, methods of application mechanical movement of the joint		5	7

Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Joint mobilization of the ankle joint complex & foot, mechanical movement of joint methods of application mechanical movement of the joint		5	8
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Joint mobilization for an axial part, define, Mulligan Principles, Manipulation techniques M.W.M& NAGs, SNAGs, indication, contraindication		5	9
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Joint mobilization of the cervical spine, M.W.M& NAGs, SNAGs • Joint mobilization of lumbar spine, M.W.M& NAGs, SNAGs		5	10
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Positional Release Technique: Introduction Keywords, three further PRT related modalities – each with a different fascial connection – are outlined:	**177**	5	11

		• Strain–counterstrain (SCS), • •Facilitated positional release (FPR)			
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Mechanisms that may explain SCS effects Neurological changes • General SCS guidelines for achieving tender-point ease		5	12
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Myofascial Release technique: define, properties of soft tissue, mechanical and neurophysiologic properties of connective tissue, • Myofascial Release technique: indication & contraindication, , type and effect of stretching, precautions, general applications of stretching technique	**178**	5	13
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Myofascial Release technique for trigger points.		5	14
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Myofascial Release technique for axial part.		5	15
❖ Course Evaluation					

Striving: Theory:25 –Practical 15 / Final: Theory:35- Practical: 25	
❖ Learning and Teaching Resources	
	Required textbooks (methodology)
1 .Maitland's Peripheral Manipulation /2014 2 .Manual Of Mulligan Concept/2014 3 .Fascial Dysfunction Manual Therapy Approaches 4 .Muscle Energy Techniques 5 . Umphred's NEUROLOGICAL REHABILITATION/2020 6 .Physical Rehabilitation/2019 7. Positional Release Technique/2(	Main references (sources)
	Recommended supporting books references (Scientific journals, reports...)
	Electronic References, Websites

Course Description of Amputee Rehabilitation

❖ Course Name
Amputee Rehabilitation
❖ Course Code
ATM.CHM.PT325
❖ Semester / Year
Second Semester / Third Year
❖ The history of preparation of this description
2025\9\15
❖ Available Attendance Forms
Came
❖ Number of Credit Hours (Total) / Number of Units (Total)
4\2
❖ Course administrator's name (if more than one name)

Name: Assist lecturer: Mohammed Abd Al Hussein (Theory)

❖ Course Objectives

General Objective: The student should get to know the types of physical disabilities, rehabilitate patients with ptosis, and also understand the types of supports and their use.

Specific Objectives:1. Learn how to use supports according to the medical condition.2. Understand the stages of manufacturing the support.3. Identify the types of deformities that require supports.4. Rehabilitate patients after receiving the supports.

❖ Teaching and Learning Strategies

- ✓ Cooperative education strategy.
- ✓ Brainstorming education strategy.
- ✓ Education strategy collaborative concept planning.
- ✓ Real-time feedback education strategy
- ✓ Education Strategy Notes Series.
- ✓ The strategy of education by exchanging views and discussing.
- ✓ Education strategy by presenting information.
- ✓ Education strategy by training and presentation of scientific developments.

❖ Course Structure

Evaluation method	Learning method	Unit or subject name	Required Learning Outcomes	Total Hours	The week
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Introduction to orthotics (Basic Terminology, Historical Background, Factors in Prescription Orthotics, Nomenclature of Orthotics	**180**	4	1
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Introduction to orthotics (Biomechanical Principles, Materials Used in Orthotics Manufacturing,		4	2

		Methods of Construction).			
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Foot orthoses Shoe (Style Parts of Shoes, Special Purpose Shoes, Foot Examination		4	3
For daily, oral and written exams, reports discussions.	Theoretically and Practical	Ankle foot orthoses (Plastic Ankle Foot Orthoses, Lather Metal Ankle Foot Orthoses, Composite Materials, Weight Relieving Ankle Foot Orthoses, Support (Fabric, Leather, Gel And Air) ,Contracture Reducing Ankle Foot Orthoses ,Guidelines for Prescription Ankle Foot Orthoses).		4	4
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Knee ankle foot orthoses and knee orthoses (Plastic Metal Knee Ankle Foot Orthoses, Knee Immobilizer, Supra- Condylar Knee Ankle Foot Orthoses, Weight Relieving Orthoses, Fracture Orthoses)	**181**	4	5
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Knee ankle foot orthoses and knee orthoses (Lather Metal Knee Ankle Foot Orthoses, Knee Orthoses, Guidelines for		4	6

		Prescription Knee Ankle Foot Orthoses).			
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Orthoses for paraplegia and hip disorder (Paraplegia Standing Frames		4	7
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Orthoses for paraplegia and hip disorder (Orthoses Designed for Ambulation, Functional Electrical Stimulation		4	8
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Trunk and cervical orthoses (Trunk Orthoses, Trunk Orthoses Evaluation, Scoliosis and Kyphosis Orthoses)		4	9
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Trunk and cervical orthoses(Scoliosis And Kyphosis Orthoses Evaluation, Cervical Orthoses ,Cervical Orthoses Evaluation, Guideline For Prescription).		4	10
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Upper limb orthoses (Hand And Wrist Hand Orthoses, Forearm And Elbow Orthoses)		4	11
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Upper limb orthoses (Shoulder Orthoses, Fabrication Option, Upper limb Orthoses, Evaluation (Hand, Wrist, Fingers, Shoulder and Elbow) Guideline for Prescription.		4	12

Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Orthoses for burn and other soft tissue disorders (Importance of Orthoses for Burns and Other Soft Tissue Disorders,		4	13
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Orthoses for burn and other soft tissue disorders (Orthoses for Burn Management orthoses for Patients with Soft Tissues Problem Associated with Neuromuscular Disorders.		4	14
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	General revision		4	15

❖ Course Evaluation

Striving: Theory:25 –Practical 15 / Final: Theory:35- Practical: 25

❖ Learning and Teaching Resources

	Required textbooks (methodology)
1. Essentials of Prosthetics and Orthotics Kindle Edition by AK Agarwal (Author), 1st edition 2. Orthotics and Prosthetics in Rehabilitation,2nd Edition by Michelle M. Lusardi PhD PT (Author), Caroline C. Nielsen PhD (Author). 3. Prosthetics & Orthotics in Clinical Practice, Bella J. May, Margery A. Lockard 4. Lower-Limb Prosthetics and Orthotics: Clinical Concepts, Joan Edelstein, MA, PT,FISPO, CPed ; Alex Moroz, MD, FACP,2011 5. Orthotic Intervention for the Hand and Upper Extremity: Splinting Principles and Process By (author) Marylynn A. Jacobs , By (author) Noelle M. Austin	Main references (sources) **183**

Course Description of Methodology

❖ Course Name

Methodology

❖ Course Code

ATU.CHM.PT326

❖ Semester / Year

Second Semester / Third Year

❖ The history of preparation of this description

2025\9\15

❖ Available Attendance Forms

Came

❖ Number of Credit Hours (Total) / Number of Units (Total)

2\2

❖ Course administrator's name (if more than one name)

Name: Assist lecturer: Ghassan Zahir Mohammed

❖ Course Objectives

General Objective: To understand the basic research methodology. Specific Objective -1. To understand scientific research, its objectives, types of research, different methods, and the criteria for good research.2. To understand research design, the basic principles of research design, and research problems.3. To understand data collection methods, how to process and analyze data, and hypothesis testing.4. To understand the applications of computers in scientific research.

❖ Teaching and Learning Strategies

✓ Cooperative education strategy.

✓ Brainstorming education strategy.

- ✓ Education strategy collaborative concept planning.
- ✓ Real-time feedback education strategy
- ✓ Education Strategy Notes Series.
- ✓ The strategy of education by exchanging views and discussing.
- ✓ Education strategy by presenting information.
- ✓ Education strategy by training and presentation of scientific developments.

❖ Course Structure

Evaluation method	Learning method	Unit or subject name	Required Learning Outcomes	Total Hours	The week
Daily, oral and written exams, reports, discussions.	Theoretically	**Osteoarthritis:** Definition, Epidemiology, Etiology, Primary and Secondary, Pathophysiology.		2	1
Daily, oral and written exams, reports, discussions.	Theoretically	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.		2	2
Daily, oral and written exams, reports, discussions.	Theoretically	Research problem: Statement of research problem., Statement of purpose and objectives of research problem, Necessity of defining the problem	**185**	2	3
For daily, oral and written exams, reports discussions.	Theoretically	Research design: Meaning of research design, Need for research design, Features for good design, Different research designs, Basic principles of research design		2	4

Daily, oral and written exams, reports, discussions.	Theoretically	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		2	5
Daily, oral and written exams, reports, discussions.	Theoretically	the Same lecture as the last week		2	6
Daily, oral and written exams, reports, discussions.	Theoretically	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.		2	7
Daily, oral and written exams, reports, discussions.	Theoretically	the Same lecture as the last week		2	8
Daily, oral and written exams, reports, discussions.	Theoretically	Methods of data collection: collection of primary data, collection data through questionnaires & Schedules, Difference between questionnaires & schedules.	**186**	2	9
Daily, oral and written exams, reports, discussions.	Theoretically	Sampling fundamentals, need for sampling & some fundamental definitions, Important sampling distributions		2	10

Daily, oral and written exams, reports, discussions.	Theoretically	Processing & analysis of data: Processing operations, problems in processing, Types of analysis, Statistics in research, Measures of central tendency, Dispersion, Asymmetry, relationship.		2	11
Daily, oral and written exams, reports, discussions.	Theoretically	Testing of hypothesis: What is hypothesis? Basic concepts concerning testing of hypothesis, Procedure of hypothesis testing, measuring the power of hypothesis test, Tests of hypothesis, limitations of the tests of hypothesis		2	12
Daily, oral and written exams, reports, discussions.	Theoretically	The same lecture of the last week		2	13
Daily, oral and written exams, reports, discussions.	Theoretically	Computer technology: Introduction to Computers, computer application in research, computers & researcher.		2	14
Daily, oral and written exams, reports, discussions.	Theoretically	General Revision		2	15

❖ Course Evaluation

Striving: 30 / Final: 70

❖ Learning and Teaching Resources

	Required textbooks (methodolog
1. Elements of Health Statistics: Rao.N.S.N 2. An introduction of Biostatistics: Sunder Rao.P.S.S. 3. Methods in Bio-Statistics 6th Edn. 1997: B.K. Mahajan	Main references (sources)

4. Biostatistics: A manual of Statistics Methods: K. Visweswara Rao 5. Elementary Statistics 1st Edn, 1990. in Medical Workers: Inderbir Singh 6. Statistics in Psychology and education: Great and Henry 7. An Introduction to Gupta C.B. Statistical Methods, 1972: Ram Prasad & Sons 8. Basic Statistics, 3rd Edn.: Simpsory G. Kaftha. P 9. Research; Principles and Methods:L Denise F. Poli & Hungler Fundamentals of Research, 4th Edn.: David J. fox	

Course Description of Physiotherapy for General Surgery 2

❖ Course Name

Physiotherapy for General Surgery 2

❖ Course Code

ATM.CHM.PT321

❖ Semester / Year

Second Semester / Third Year

❖ The history of preparation of this description

2025\9\15

❖ Available Attendance Forms

Came

❖ Number of Credit Hours (Total) / Number of Units (Total)

4\3

❖ Course administrator's name (if more than one name)

Name: Assist lecturer: Mohammed Abd Al Hussein (Theory)

❖ Course Objectives

General goal: To identify the types of surgical procedures that require physical therapy. Specific goals: 1. To recognize the general complications associated with surgical operations.2. To learn about physical therapy after surgical operations.

❖ Teaching and Learning Strategies

- ✓ Cooperative education strategy.
- ✓ Brainstorming education strategy.
- ✓ Education strategy collaborative concept planning.
- ✓ Real-time feedback education strategy
- ✓ Education Strategy Notes Series.
- ✓ The strategy of education by exchanging views and discussing.
- ✓ Education strategy by presenting information.
- ✓ Education strategy by training and presentation of scientific developments.

❖ Course Structure

Evaluation method	Learning method	Unit or subject name	Required Learning Outcomes	Total Hours	The week
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Thoracic surgeries: Definition, Indications, Types of Incisions with cutting muscles, Procedures, Complications.		4	1
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Thoracic surgeries: Physical therapy management.		4	2
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Chest Injuries: Etiology, Clinical Presentation, Management, Physical therapy management.		4	3
For daily, oral and written exams, reports discussions.	Theoretically and Practical	Open and closed heart surgery: indications, types, assessment, pre and post-operative Physical therapy management.	**189**	4	4
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Traumatic Brain Injury: Definition, Causes, Mechanism of Injury, Clinical Presentation, Glasgow Coma Scale, Complications, Medical		4	5

		Management, Surgical Interventions,			
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Physiotherapy Management of Moderate to Severe Traumatic Brain Injury.		4	6
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Brain Tumor Surgery: Indications, Types, Physical therapy management.		4	7
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Cervical spinal surgery: Indications, Types, Physical therapy management		4	8
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Lumbar spinal surgery: Indications, Types, Physical therapy management.		4	9
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Pelvic surgery: Indications, Types, Physical therapy management		4	10
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Peripheral vascular diseases (Buergers Disease, Varicose Veins): Etiology, Clinical Presentation, Treatment, Physical therapy management.		4	11
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Cesarean Section: Related anatomy, Indications, Types, Complications, Physiotherapy.,		4	12
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Hysterectomy and common gynecological procedures: Indications, Complications, Physical therapy management.		4	13

Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Bariatric Surgeries: Indications, Types, Physical therapy management.		4	14
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	General Revision		4	15

❖ Course Evaluation

Striving: Theory:25 –Practical 15 / Final: Theory:35- Practical: 25

❖ Learning and Teaching Resources

	Required textbooks (methodology)
6. Bailey & Love's Short Practice of Surgery, 26th Edition 27th Edition. By P. Ronan O'Connell (Editor), Andrew McCaskie (Editor), Norman S. Williams (Editor). 7. Handbook of Physical Medicine and Rehabilitation Hardcover – October, 1982 by F.H. Krusen (Editor), etc. (Editor), F.J. Kottke (Editor). 8. Management of Common Musculoskeletal Disorder by: Hertling, D, and Kessler RM Physical Therapy Principles and Methods. 3rd ed. Philadelphia.PA: WB Sunders. 9. Orthopaedic Physical Therapy By: Donatelli & Michael J. Wooden 4th Edition. 10. Physiotherapy in Orthopedics, A problem-solving approach By: Atkinson, Coutts & Hassenkamp 2nd Edition. 11. Physical Rehabilitation's Assessments and Treatment". By Susan B,O'Sullivan &Thomas J. Schmitz , 4th edition. Tidy's Physiotherapy by Thomas A Skinner & Piercy	Main references (sources)
	Recommended supporting books references (Scientific journals, reports...)
	Electronic References, Websites

Course Description of Physiotherapy for Medical Diseases

❖ Course Name

Physiotherapy for Medical Diseases

❖ Course Code

ATM.CHU.PT329

❖ Semester / Year

Second Semester / Third Year

❖ The history of preparation of this description

2025\9\15

❖ Available Attendance Forms

Came

❖ Number of Credit Hours (Total) / Number of Units (Total)

4\3

❖ Course administrator's name (if more than one name)

Name: Assist lecturer: Mohammed Abd Al Husseien Jabar

❖ Course Objectives

General objective: To identify the types of diseases that affect some human body systen

Specific objectives:1. To become familiar with medical terms related to internal diseases.2. To recognize the causes, signs, and symptoms of internal diseases.3. Physica therapy for internal diseases.

❖ Teaching and Learning Strategies

- ✓ Cooperative education strategy.
- ✓ Brainstorming education strategy.
- ✓ Education strategy collaborative concept planning.
- ✓ Real-time feedback education strategy
- ✓ Education Strategy Notes Series.
- ✓ The strategy of education by exchanging views and discussing.
- ✓ Education strategy by presenting information.
- ✓ Education strategy by training and presentation of scientific developments.

❖ Course Structure

Evaluation method	Learning method	Unit or subject name	Required Learning Outcomes	Total Hours	The week
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Introduction		4	1

Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Hypertension: Definition, Etiology, Pathophysiology, Signs & symptoms, Prevention, Effects of exercises on blood pressure.		4	2
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Human deficiency syndrome: Definition, Epidemiology, Etiology, Pathophysiology, Staging, Signs & symptoms, Prevention, Complications, Role of physiotherapy.		4	3
For daily, oral and written exams, reports discussions.	Theoretically and Practical	Human deficiency syndrome: Definition, Epidemiology, Etiology, Pathophysiology, Staging, Signs & symptoms, Prevention, Complications, Role of physiotherapy.		4	4
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Hepatitis: Definition, Etiology, Classification, Pathophysiology, Signs & symptoms, Prevention, Complications.		4	5
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Anemia: Definition, Epidemiology, Etiology, Signs & symptoms, Prevention, Complications.	**193**	4	6
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Leukemia: Definition, Etiology, Classification, Staging, Signs & symptoms, Complications, Role of physiotherapy.		4	7

Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Multiple myeloma and lymphoma: Definition, Etiology, Pathophysiology, Signs & symptoms, Complications, Role of physiotherapy.		4	8
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Deep venous thrombosis: Definition, Etiology, Pathophysiology, Signs & symptoms, Prevention, Physiotherapy.		4	9
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Renal failure: Definition, Etiology, Classification, Signs & symptoms, Complications, Physiotherapy.		4	10
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Gastroesophageal reflux, irritable bowel syndrome: Definition, Etiology, Signs & symptoms, Prevention, Physiotherapy.		4	11
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Liver cirrhosis: Definition, Etiology, Pathophysiology, Signs & symptoms, Complications, Physiotherapy.		4	12
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Hypo and hyperthyroidism: Definition, Etiology, Signs & symptoms, Complications, Physiotherapy.		4	13
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Adrenal gland disorders: Definition, Etiology, Signs & symptoms,		4	14

		Complications, Physiotherapy.			
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Revision		4	15

❖ Course Evaluation

Striving: Theory:25 –Practical 15 / Final: Theory:35- Practical: 25

❖ Learning and Teaching Resources

	Required textbooks (methodology)
1. Primer on the Rheumatic Diseases / Edition 13 by John H. Klippel, John H. Stone, L eslie J. Crofford, Patience H. White. 2. Handbook of Physical Medicine and Rehabilitation Hardcover – October, 1982 by F.H. Krusen (Editor), etc. (Editor), F.J. Kottke (Editor). 3. Management of Common Musculoskeletal Disorder by: Hertling, D, and Kessler RM Physical Therapy Principles and Methods. 3rd ed. Philadelphia.PA: WB Sunders. 4. Orthopaedic Physical Therapy By: Donatelli & Michael J. Wooden 4th Edition. 5. Physiotherapy in Orthopedics, A problem-solving approach By: Atkinson, Coutts & Hassenkamp 2nd Edition. 6. Physical Rehabilitation's Assessments and Treatment". By Susan B,O'Sullivan &Thomas J. Schmitz , 4th edition. 7. Tidy's Physiotherapy by Thomas A Skinner & Piercy.	Main references (sources)
	Recommended supporting books & references (Scientific journals, reports...)

Course Description of Physiotherapy for Neurological Diseases 1

❖ Course Name

Physiotherapy for Neurological Diseases 1
❖ Course Code
ATM.CHM.PT322
❖ Semester / Year
Second Semester / Third Year
❖ The history of preparation of this description
2025\9\15
❖ Available Attendance Forms
Came
❖ Number of Credit Hours (Total) / Number of Units (Total)
5\3
❖ Course administrator's name (if more than one name)
Name: Assist lecturer: Mohammed Abd Al Hussein (Theory)
❖ Course Objectives
General Objective: To know the types of diseases affecting the central and peripheral nervous system. Specific Objectives:1. To learn about neurology and neurological diseases.2. To learn about acquired neurological diseases in adults.3. To understand pathophysiology, examination and assessment, and the impact of technology in this field.4. Physical therapy for neurological diseases.
❖ Teaching and Learning Strategies
✓ Cooperative education strategy. ✓ Brainstorming education strategy. ✓ Education strategy collaborative concept planning. ✓ Real-time feedback education strategy ✓ Education Strategy Notes Series. ✓ The strategy of education by exchanging views and discussing. ✓ Education strategy by presenting information. ✓ Education strategy by training and presentation of scientific developments.
❖ Course Structure

Evaluation method	Learning method	Unit or subject name	Required Learning Outcomes	Total Hours	The week
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Medical terminology regarding neurological system, Anatomy and Physiology of the nervous system (Brain, CNS Support Structures, Neurons, PNS, Spinal Level Reflexes)., ,		5	1
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Neurological assessment (Higher mental function, assessment of brain , evaluation of cranial nerves and evaluation of autonomic nervous system		5	2
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Investigations (principles, methods, views, normal/abnormal values/features of following investigative procedures in brief- skull x-ray, CT, MRI, evoked potentials, lumbar puncture, EMG, NCV		5	3
For daily, oral and written exams, reports discussions.	Theoretically and Practical	Cerebro-vascular diseases :Define stroke, TIA, stroke in evolution, Lacunar infarct, Classification of stroke – Ischemic, hemorrhagic, venous infarcts.	**197**	5	4
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Cerebro-vascular diseases : Early warning Sign & Prevention. Risk factors, causes of		5	5

		ischemic stroke, causes of hemorrhagic stroke, Classification of hemorrhagic stroke, classification of stroke, stroke syndrome, investigations			
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Cerebro-vascular diseases: complications, medical and surgical management, Physical Therapy Management.		5	6
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Facial palsy, Bell's palsy : Causes, Clinical features, Physical therapy management.		5	7
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Multiple sclerosis : pathophysiology, causes, clinical presentation, physical therapy management.		5	8
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Parkinson's disease: pathophysiology, causes, clinical presentation, physical therapy management.		5	9
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Trigeminal neuralgia: pathophysiology, causes, clinical presentation, physical therapy management.	**198**	5	10
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Higher cortical, neuro psychological and neurobehavioral disorders: Causes of blackouts, Neural basis of consciousness, causes and investigations of Coma.		5	11

		Perceptual disorders and Speech disorders.			
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Movement disorders : Definition, etiology, risk factors, Pathophysiology, classification, clinical signs & symptoms, investigations, medical management, surgical management and physical therapy management, complications of following disorders , Dystonia, Chorea, Athetosis, Myoclonus and Wilson's disease.		5	12
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Movement disorders : Definition, etiology, risk factors, Pathophysiology, classification, clinical signs & symptoms, investigations, medical management, surgical management and 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	**199**	5	13

Daily, oral and written exams, reports, discussions.	Theoretically and Practical	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.		5	14
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	General Revision		5	15

❖ Course Evaluation

Striving: Theory:25 –Practical 15 / Final: Theory:35- Practical: 25

❖ Learning and Teaching Resources

	Required textbooks (methodology)
1. Handbook of Physical Medicine and Rehabilitation Hardcover – October, 1982 by 2. Neurological Rehabilitation, 6e (Umphreds Neurological Rehabilitation) 6th Edition 3. Neurological Physiotherapy: A Problem-Solving Approach, 2ePaperback – 8 Oct 2001 (Editor) 4. Physical Management in Neurological Rehabilitation, 2e (Physiotherapy Essentials) 2nd Edition 5. Davidson's Principles and Practice of Medicine 6. Brains Clinical Neurology.	Main references (sources) **200**
	Recommended supporting books references (Scientific journals, reports...)

	Electronic References, Websites

Course Description of Therapeutic Equipment 4

❖ Course Name

Therapeutic Equipment 4

❖ Course Code

ATM.CHU.PT324

❖ Semester / Year

Second Semester / Third Year

❖ The history of preparation of this description

2025\9\15

❖ Available Attendance Forms

Came

❖ Number of Credit Hours (Total) / Number of Units (Total)

5\4

❖ Course administrator's name (if more than one name)

Name: Assist lecturer: Salam Khalif Jaber (Theory) Name: Alaa Shadhan(Practical)

❖ Course Objectives

General Objective: To know the devices used in physical therapy in general.

Specific Objectives:1. To introduce the student to each electrical device used in physica therapy.2. To introduce the student to the operating principles of each device.3. To

understand the physiological and therapeutic effects of each device.4. To know the indications and contraindications for using devices in physical therapy.5. To learn the methods and application techniques of each physical therapy device.6. To understand th standards of dosages, intensity, and treatment frequency using physical therapy devices.

❖ Teaching and Learning Strategies

- ✓ Cooperative education strategy.
- ✓ Brainstorming education strategy.
- ✓ Education strategy collaborative concept planning.
- ✓ Real-time feedback education strategy
- ✓ Education Strategy Notes Series.
- ✓ The strategy of education by exchanging views and discussing.
- ✓ Education strategy by presenting information.
- ✓ Education strategy by training and presentation of scientific developments.

❖ Course Structure

Evaluation method	Learning method	Unit or subject name	Required Learning Outcomes	Total Hours	The week
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Traction: definition, the physiological effects of traction		5	1
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Traction: Clinical indication for the use of spinal traction, Contraindications and Precautions for Use of Spinal Traction		5	2
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Adverse Effects of Spinal Traction, Application Techniques (Mechanical Lumbar Traction)	**202**	5	3
For daily, oral and written exams, reports discussions.	Theoretically and Practical	Application Techniques (Mechanical cervical Traction) intermittent versus sustained traction		5	4

Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Cryotherapy, physiological effects of cold, Indication and contra indication and precaution of cold therapy		5	5
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Application technique cold packs or ice packs, Application technique ice massage		5	6
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Application technique cold compression unit and Vapocoolant Sprays and brief		5	7
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Application technique Cold Whirlpool. Application technique ice immersion		5	8
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Hydrotherapy: Physical Principles and Properties of Water		5	9
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Hydrotherapy: Physiological Effects of Hydrotherapy, uses of hydrotherapy, Contraindications and Precautions for Hydrotherapy		5	10
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Hydrotherapy: application technique general hydrotherapy	**203**	5	11
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Hydrotherapy: application technique Whirlpool		5	12
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Hydrotherapy: method of application Hubbard tank		5	13

Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Hydrotherapy: method of application exercise pool		5	14
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Revision		5	15

❖ Course Evaluation

Striving: Theory:25 –Practical 15 / Final: Theory:35- Practical: 25

❖ Learning and Teaching Resources

	Required textbooks (methodology)
1. Clayton's Electrotherapy (Physiotherapy Essentials) Paperback – Import, 24 Nov 1995 by Sheila Kitchen MSc PhD DipTP MCSP Professor (Author), Sarah Bazin MCSP (Author) 2. Physical Agents : Theory and Practice,3rd Edition ,Barbara J. Behrens PTA, MS ,Holly Beinert PT, MPT 3. Physical Agents in Rehabilitation: From Research to Practice ,Fourth Edition, by Michelle H. Cameron, MD, PT, OCS 4. Therapeutic Modalities For Sports Medicine and Athletic Training, Sixth Edition by William E. Prentice , Ph.D., A.T.C., P.T. 5. Textbook of Electrotherapy Kindle Edition by Singh Jagmohan (Author) 6. Practical Electrotherapy: A Guide to Safe Application ,by John Fox and Tim Sharp, 2007	Main references (sources)
	Recommended supporting books references **204** (Scientific journals, reports...)
	Electronic References, Websites

Course Description of Therapeutic Exercises 4

❖ Course Name

Therapeutic Exercises 4

❖ Course Code

ATM.CHM.PT323

❖ Semester / Year

Second Semester / Third Year

❖ The history of preparation of this description

2025\9\15

❖ Available Attendance Forms

Came

❖ Number of Credit Hours (Total) / Number of Units (Total)

5\3

❖ Course administrator's name (if more than one name)

Name: Assist lecturer: Salam Khalif Jaber (Theory) Name: Maytham Alaa Abas(Practical)

❖ Course Objectives

General Objective: To become familiar with all traditional and modern physiotherapy exercise techniques used in the specialty.

Specific Objectives:1. To know the manual manipulation techniques for all body joints. To understand the Maitland and Mulligan principles in joint manual manipulation techniques.3. To understand the stages of injury and therapeutic exercises for treating sc tissue injuries.

❖ Teaching and Learning Strategies

- ✓ Cooperative education strategy.
- ✓ Brainstorming education strategy.
- ✓ Education strategy collaborative concept planning.
- ✓ Real-time feedback education strategy
- ✓ Education Strategy Notes Series.
- ✓ The strategy of education by exchanging views and discussing.
- ✓ Education strategy by presenting information.
- ✓ Education strategy by training and presentation of scientific developments.

❖ Course Structure

Evaluation method	Learning method	Unit or subject name	Required Learning Outcomes	Total Hours	The week
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	MUSCLE ENERGY TECHNIQUE(MET) Definition, properties of soft tissue, mechanical and		5	1
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Muscle energy technique for neck muscles, principle, indication, contraindication	**206**	5	2
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Muscle energy technique for trunk muscles, principle, indication, contraindication		5	3

For daily, oral and written exams, reports discussions.	Theoretically and Practical	Kensiotapping technique:- Definition, properties of soft tissue, mechanical and neurophysiologic properties of connective tissue,		5	4
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Kensiotapping technique theory,		5	5
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Postural Drainage, Exercises to mobilize the chest, Manual Technique used in Postural Drainage, Postural Drainage Positions, Modified Postural Drainage.		5	6
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Physiotherapy tests for lower limp, hip joint, knee joint, ankle & foot		5	7
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Physiotherapy tests for upper limp, shoulder joint, elbow joint, wrist & hand,		5	8
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Physiotherapy tests for axial parte, cervical &lumbar spine		5	9
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Neurodynamic technique, define, effect, Indications and Contra indications, precaution, side effects	**207**	5	10
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Neurodynamic technique, for brachial plexus, Radial N, Median N, Ulna N ,Axial N.		5	11

Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Neurodynamic technique, for lumber plexus, sciatic N., femoral. ,Perennial N.		5	12
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Acupuncture: Definitions, Principles, General direction , Mechanism of action , Acupuncture points		5	13
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Acupuncture: Assessment and examination, Insertion of the needles		5	14
Daily, oral and written exams, reports, discussions.	Theoretically and Practical	Acupuncture: Techniques, Physiological and Therapeutic effects, Indications and Contra indications, precaution, side effects		5	15

❖ Course Evaluation

Striving: Theory:25 –Practical 15 / Final: Theory:35- Practical: 25

❖ Learning and Teaching Resources

	Required textbooks (methodology)
1- Chaitow_Leon_-_Muscle_energy_techniques / 2014 2- Joint Mobilization and manipulation / 2017 3- Neurological Exam made easy 6th/2020 4- Therapeutic Exercise for Physical Therapist Assistants/2014 5- Butler book for neurodynamic technique/2012	Main references (sources) **208**
	Recommended supporting books references (Scientific journals, reports...)
	Electronic References, Websites