

**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

2025/2024

Academic Program Description Form

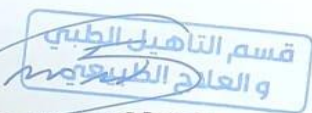
- **University Name:** Al-Furat Al-Awsat Technical University
- **Faculty/Institute:** College of Health & Medical Technique /Kufa
- **Scientific Department:** Medical Rehabilitation & Physiotherapy
- **Academic or Professional Program Name:** Medical rehabilitation and physical therapy techniques
- **Final Certificate Name:** Bachelor's degree in medical rehabilitation and physical therapy
- **Academic System:** Course
- **Description Preparation Date:** 1/10/2024
- **File Completion Date:** 1/10/2024

Signature:

Head of Department Name:

Assist.Prof.Dr. Murtadha Muhammed Jawad

Date: 1/10/2024



Signature:

Scientific Associate Name:

Assist.Prof.Dr. Raad Ajam Sail

Date:

The file is checked by:

Department of Quality Assurance and University Performance

Director of the Quality Assurance and University Performance Department:

Assist lecturer, Enas Kadim Abd Alamir

Date: 1/10/2024

Signature:

Approval of the Dean

Prof.Dr. Angham Jasim Mohammed Ali

Leadership and excellence in the field of technical education and scientific research and attention to its quality to build a knowledge society.

2. Program Mission

Providing an educational and technical research environment that stimulates education and creativity that contributes to preparing highly qualified graduates, achieving effective local and international scientific twinning, and strengthening partnerships with sectors of society and international institutions in relevant fields.

3. Program Objectives

- Enabling students to obtain knowledge and understanding of human anatomy and physiology.
- Enabling students to obtain knowledge and understanding of internal, neurological and surgical diseases.
- Enabling students to obtain knowledge and understanding of children's illnesses, psychological illnesses, and cases of hearing and speech impairment.
- Enabling students to obtain knowledge of physical therapy methods and therapeutic devices.

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 Higher Education and Scientific Research

6. Program Structure

Program Structure	Number of Courses	Credit hours	Percentage	Reviews*
Institution Requirements	8	17	100%	
College Requirements				
Department Requirements	49	158	100%	
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	1	2
	PT117	Democracy and Human rights	2	–
	PT118	English	2	–
	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
	PT127	Computer Applications 2	1	2
	PT128	Arabic	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
	PT211	Pathology	1	2
	PT222	Therapeutic Exercises 2	2	4
	PT223	Therapeutic Equipment 2	2	4
	PT224	Physiotherapy for Musculoskeletal Diseases 2	2	4
	PT225	Physiotherapy for General Surgery 1	2	4
	PT226	Human Anatomy 4	2	4
	PT227	Pharmacology	1	-
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	-
	PT318	Computer Applications 3	1	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	-
	PT328	Computer Applications 4	1	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

- | | |
|--|--|
| <ul style="list-style-type: none"> – Enabling students to obtain knowledge and understanding of human anatomy and physiology. | <ul style="list-style-type: none"> –The student uses physical therapy methods to treat internal, neurological and surgical diseases |
|--|--|

Skills	
–Enabling students to obtain knowledge and understanding of children’s illnesses, psychological illnesses, and cases of hearing and speech impairment – Enabling students to obtain knowledge and understanding of internal, neurological and surgical diseases	–The student uses the skills to rehabilitate psychological and mental illnesses .It helps the student in rehabilitating the hearing and speech impaired –The student uses physical therapy methods to treat cases of paralysis that accompany cerebrovascular injuries, cerebral palsy injuries, and spinal cord injuries.
Ethics	
Enabling students to obtain knowledge of physical therapy methods and therapeutic devices.	Training students on the use and methods of physical therapy and medical rehabilitation in treating medical conditions

9. Teaching and Learning Strategies

- Applying the materials taught theoretically on the practical level and for all medical cases
- Training students on the use of physical therapy and medical rehabilitation methods in treating medical conditions
- Clinical application of physical therapy methods and methods in hospitals and rehabilitation centers.
- Conducting workshops and seminars.

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	
Lec.Dr. Hasanain Fadel	Pathological analyses	Physiology			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	
Assist. Lec Muhammad Haider	Medical rehabilitation, physiotherapy	Orthopedics			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

Developing students' abilities by encouraging them to apply what they have learned and employing that in the field of work, encouraging them to visit the library weekly, and reviewing Sources, books, and magazines as a source of information.

12. Acceptance Criterion

- Central according to the acceptance of the Ministry of Higher Education and Scientific Research
- Collimated
- The distinguished ones
- Developing health staff
- Top 10%

13. The most important sources of information about the program

Refer to the college website and the university website.

14. Program Development Plan

Knowing and understanding what physical therapy is and the role of physical therapy in dealing with all medical conditions.

Program Skills Outline															
				Required program Learning outcomes											
Year/Level	Course Code	Course Name	Basic or optional	Knowledge				Skills				Ethics			
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
First	B101	Biomechanics	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	HA102	Human anatomy 1	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	HP103	Human physiology 1	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	MM104	Medical microbiology	optional	√	√	√	√	√	√	√	√	√	√	√	√
	CB105	Clinical biochemistry	optional	√	√	√	√	√	√	√	√	√	√	√	√
	CA106	Computer applications 1	optional	√	√	√	√	√	√	√	√	√	√	√	√
	HR107	Democracy and Human rights	optional	√	√	√	√	√	√	√	√	√	√	√	√
	EN108	English	optional	√	√	√	√	√	√	√	√	√	√	√	√
	K109	Kinesiology	Basic	√	√	√	√	√	√	√	√	√	√	√	√

	HA1010	Human anatomy 2	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	HP1011	Human physiology 2	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	IP1012	Introduction to physiotherapy	optional	√	√	√	√	√	√	√	√	√	√	√	√
	NF1013	Basic nursing and first aids	optional	√	√	√	√	√	√	√	√	√	√	√	√
	MP1014	Medical physics	optional	√	√	√	√	√	√	√	√	√	√	√	√
	CA1015	Computer applications 2	optional	√	√	√	√	√	√	√	√	√	√	√	√
	AL1016	Arabic language	optional	√	√	√	√	√	√	√	√	√	√	√	√
Second	TH EX2011	Therapeutic exercises 1	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	TE209	Therapeutic equipment 1	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	MD206	Physiotherapy for Musculoskeletal Diseases 1	Basic	√	√	√	√	√	√	√	√	√	√	√	√

	ORTH208	Physiotherapy for Orthopedics	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	HA201	Human anatomy 3	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	PA203	Pathology	optional	√	√	√	√	√	√	√	√	√	√	√	√
	CR207	The crimes of the Baath regime in Iraq	optional	√	√	√	√	√	√	√	√	√	√	√	√
		Therapeutic exercises 2	Basic	√	√	√	√	√	√	√	√	√	√	√	√
		Therapeutic equipment 2	Basic	√	√	√	√	√	√	√	√	√	√	√	√
		Physiotherapy for Musculoskeletal Diseases 2	Basic	√	√	√	√	√	√	√	√	√	√	√	√
		Physiotherapy for General Surgery 1	Basic	√	√	√	√	√	√	√	√	√	√	√	√
		Human anatomy 4	Basic	√	√	√	√	√	√	√	√	√	√	√	√

Activate Windows

		Pharmacology	optional	√	√	√	√	√	√	√	√	√	√	√	√
		Curriculum Training	Basic	√	√	√	√	√	√	√	√	√	√	√	√
Third		Medical Rehabilitation(2)	Basic	√	√	√	√	√	√	√	√	√	√	√	√
		Neurological Rehabilitation (2)	Basic	√	√	√	√	√	√	√	√	√	√	√	√
		Surgical Rehabilitation (2)	Basic	√	√	√	√	√	√	√	√	√	√	√	√
		Therapeutic Methods(2)	Basic	√	√	√	√	√	√	√	√	√	√	√	√
		Electrotherapy (2)	Basic	√	√	√	√	√	√	√	√	√	√	√	√
		Prosthesis and Splint	Basic	√	√	√	√	√	√	√	√	√	√	√	√
		Biostatistics and Methodology	optional	√	√	√	√	√	√	√	√	√	√	√	√
		Computer Application	optional	√	√	√	√	√	√	√	√	√	√	√	√

		Curriculum Training	Basic	√	√	√	√	√	√	√	√	√	√	√	√
		ENGLISH	optional	√	√	√	√	√	√	√	√	√	√	√	√
Fourth		Medical Rehabilitation(3)	Basic	√	√	√	√	√	√	√	√	√	√	√	√
		Neurological Rehabilitation (3)	Basic	√	√	√	√	√	√	√	√	√	√	√	√
		Surgical Rehabilitation (3)	Basic	√	√	√	√	√	√	√	√	√	√	√	√
		Therapeutic Methods(3)	Basic	√	√	√	√	√	√	√	√	√	√	√	√
		Speech and Hearing Rehabilitation	Basic	√	√	√	√	√	√	√	√	√	√	√	√
		Psychological Rehabilitation	Basic	√	√	√	√	√	√	√	√	√	√	√	√
		Pediatric Rehabilitation	Basic	√	√	√	√	√	√	√	√	√	√	√	√
		Project	Basic	√	√	√	√	√	√	√	√	√	√	√	√
		ENGLISH	optional	√	√	√	√	√	√	√	√	√	√	√	√

Computer Course Description 1

❖ Course Name	
Computer1	
❖ Course Code	
ATU.CHM. PT116	
❖ Semester / Year	
First Semester / First Year	
❖ The history of preparation of this description	
2024/09/16	
❖ Available Attendance Forms	
Came	
❖ Number of Credit Hours (Total) / Number of Units (Total)	
2/3	
❖ Course administrator's name (if more than one name)	
Name: Assist.Lec. Ashwaq Mutashar / Assist.Lec. Ahmed Younis	
Email : Ashwaqhabeeb66@gmail.com	
❖ Course Objectives	
<u>General Objective</u> : 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. <u>Special Objective</u> : 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		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)		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,	practical	Training the student to deal with computer		2	5

discussions.		security.			
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...)		

Course Description Biomechanics

❖ Course Name

Biomechanics					
❖ Course Code					
ATU.CHM. PT111					
❖ Semester / Year					
First Semester / First Year					
❖ The history of preparation of this description					
2024/09/16					
❖ 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					
<u>General Objective</u> : To know the types and analysis of movement in the human body. <u>Special Objective:</u> 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	Hours	The week

			Outcomes		
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)		3	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)		3	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)		3	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		3	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		3	5
Daily, oral and written exams, reports, discussions.	Theoretical	Elasticity - Definition, stress, strain, HOOKE'S Law		3	6
Daily, oral and written exams, reports,	Theoretical	Muscular System: Definition, properties of muscle, muscular contraction,		3	7

discussions.		structural classification, action of muscle in moving bone, direction of pull, angle of pull, functional classification, coordination of muscular system.			
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.		3	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.		3	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.		3	10
Daily, oral and written exams, reports, discussions.	Theoretical	Joint Structure and Function: Classify joints: Synarthrosis, amphiarthrosis, diarthrosis, sub classification of synovial joints.		3	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.		3	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.		3	13
Daily, oral and written exams, reports, discussions.	Theoretical	Gait – kinematics and kinetics of gait, gait in running and stair climbing.		3	14
Daily, oral and written exams, reports, discussions.	Theoretical	REVISION		3	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. 5. 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

Course Description Clinical Chemistry

❖ Course Name
Clinical Chemistry

❖ Course Code	
ATU.CHM. PT115	
❖ Semester / Year	
First Semester / First Year	
❖ The history of preparation of this description	
2024/09/16	
❖ Available Attendance Forms	
Came	
❖ Number of Credit Hours (Total) / Number of Units (Total)	
4/6	
❖ Course administrator's name (if more than one name)	
Name: Dr. Ithmar Hameed Blowa / Assist.Lec. Haneen Tahseen Ali	
Email :	
❖ Course Objectives	
<u>General Objective:</u> Study the basic concepts of biological interactions within the body and show their relationship to the field of physical therapy. <u>Special Objective:</u> ✓ 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	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 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, Fibrous proteins (collagens and elastins) & Globular proteins		6	3
Daily, oral and written exams, reports, discussions	Theoretical and practical	BIOMOLECULES: AMINO ACIDS, PEPTIDES		6	4

		& 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			
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.		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 and Complex Lipids, Classification & Functions of Eicosanoids, Cholesterol: Chemistry, Functions & Clinical Significance, Bile		6	7

		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,		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 & Chloride, Metabolism of Iron, Cu, Zn, Mg, Mn, Se, I, F.		6	11
Daily, oral and written exams, reports, discussions	Theoretical and practical	VITAMINS: Sources, RDA, Biochemical Functions & Clinical Significance of Fat		6	12

		Soluble Vitamins, Sources, RDA, Biochemical Functions & Clinical Significance of Water Soluble Vitamins.			
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 of the Law and Democracy course

❖ Course Name
Rights and Democracy
❖ Course Code

ATU.CHM. PT117					
❖ Semester / Year					
First Semester / First Year					
❖ The history of preparation of this description					
2024/09/16					
❖ 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,	Theoretical	Forms and generations of human rights (individual and		2	9

discussions.		collective rights)			
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)		2	15

❖ Course Evaluation

Striving: : 30 / Final: 70

❖ Learning and Teaching Resources

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

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: English Language

1: Course Title
English Language
2: Course Code
ATU.CHM. PT118

3: Semester/Year					
First Semester / First Year					
4: Date of Preparing this Description					
2024/09/16					
5: Available Attendance Formats					
In person					
6: Total Study Hours (Overall) / Total Units (Overall)					
3/3					
7: Course Coordinator					
Assistant Lecturer Haneen Tahseen Ali and Aqeel Salam					
:Email					
8:Course Objectives					
Teaching students methods of dialogue, writing, and listening in the English language, as well as the .main English grammar rules					
9:Teaching and Learning Strategies					
Cooperative Learning Strategy .1 Brainstorming Strategy .2 Concept Mapping Cooperative Strategy .3 Real-Time Feedback Strategy .4 Observation Chain Strategy .5 Exchange of Opinions and Discussion Strategy .6 Presentation of Information Strategy .7 Training and Presentation of Scientific Developments Strategy .8					
10:Course Structure					
Evaluation Method	Learning Method	Unit or Topic Title	Learning Outcomes	hours	Week
Daily, Oral, and Written Exams; Reports; Discussions	Theory			3	1
11:Course Assessment					
Continuous Assessment: 30% / Final Exam: 70%					
12:Learning and Teaching Resources					
			Prescribed Textbooks (Curricular)		
			Main References (Sources)		

	commended Supplementary Books and References (Scientific Journals, Reports...)
	Electronic References, Websites

Human Anatomy Course Description 1

❖ Course Name
Human Anatomy 1
❖ Course Code
ATU.CHM. PT112

❖ Semester / Year					
First Semester / First Year					
❖ The history of preparation of this description					
2024/09/16					
❖ Available Attendance Forms					
Came					
❖ Number of Credit Hours (Total) / Number of Units (Total)					
4/6					
❖ Course administrator's name (if more than one name)					
Name: Assist. lec Hussain Al Morshedy					
Email :					
❖ Course Objectives					
<u>General Objective:</u> Learn the importance of anatomy and the location of organs for the student in his field of specialization. <u>Special Objective:</u> 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	Introduction: Define Anatomy and mention its sub-divisions, Name regions, cavities and	The student's knowledge of the subject Scientific and Skills Perception	6	1

	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	systems of the body.	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	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 of the subject Scientific and Skills Perception Scientific, mental and applied	6	2
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	Osteology: Anatomical positions of the body, axes, planes, common anatomical terminologies (grooves, tuberosity, trochanters etc) Connective tissue classification,	The student's knowledge of the subject Scientific and skill perception Scientific and mental and development Vetch	6	3

	includes virtual anatomy in addition to models				
For 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	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 of 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 addition to models	Arthrology: Definitions, Classification of joints, Construction of joints, Motions of joints, Structure of fibrous, cartilaginous joints,	The student's knowledge of the subject Scientific and Skills Perception Scientific, mental and applied	6	5
Daily, oral and written exams, reports, discussions.	Face-to-face instruction in the classroom that includes a scientific	Arthrology: Blood supply and nerve supply of joints, Articulations – articular surfaces, types	The student's knowledge of the subject Scientific and Skills Perception Scientific, mental and	6	6

	lecture that contains pictures and explanatory videos, and there is also a practical aspect that includes virtual anatomy in addition to models	of joints, motions of upper and lower extremities, trunk, head	applied		
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 of the subject Scientific and Skills Perception Scientific and mental and applied	6	7
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	Upper extremity Pectoral region, Outline the features of pectoral region, Name and identify the sternum, clavicle, scapula and humerus. Outline the main features of the bones of shoulder girdle, Identify the parts, borders and surfaces of	The student's knowledge of the subject Scientific and Skills Perception Scientific, mental and applied	6	8

	aspect that includes virtual anatomy in addition to models	sternum. Identify the ends, surfaces, curvatures and other features of clavicle. Identify the borders, angles, surfaces, processes, fossae and other features of scapula			
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 in 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 aspect that includes virtual anatomy in addition to models	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
Daily, oral and written	Face-to-face	Shoulder Girdle,	The student's knowledge	6	11

exams, reports, discussions.	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	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 subject Scientific and Skills Perception Scientific, mental and applied		
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	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 explanatory videos, and	Upper Arm, Name and identify the muscles at the front and back of the upper arm. Name and identify the ends, borders, surfaces and features of the humerus. Identify the head, anatomical neck, tubercles,	The student's knowledge the subject Scientific and Skills Perception Scientific, mental and applied	6	13

	there is also a practical aspect that includes virtual anatomy in addition to models	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..			
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	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 there is also a practical aspect that includes virtual anatomy in	REVISION	The student's knowledge the subject Scientific and Skills Perception Scientific and mental and applied	6	15

	addition to models				
❖ Course Evaluation					
Striving: 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 and references (Scientific journals, reports...)		
			Electronic References, Websites		

Course Description Medical Microbiology

❖ Course Name
Medical Microbiology
❖ Course Code
ATU.CHM. PT114
❖ Semester / Year

First Semester / First Year					
❖ The history of preparation of this description					
2024/09/16					
❖ Available Attendance Forms					
Came					
❖ Number of Credit Hours (Total) / Number of Units (Total)					
4/6					
❖ 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 the 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 scientific developments.					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- Introduction & microscope, precaution waste disposal		6	1
Daily, oral and written	Theoretical	Classification of Micro-		6	2

exams, reports, discussions.	+ Practical	organisms & morphology Bacteria			
Daily, oral and written exams, reports, discussions.	Theoretical + Practical	Sterilization & disinfection [basic concepts] hospital acquired infection, universal 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		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,	Theoretical + Practical	Malaria - Filaria - Toxoplasma –		6	12

discussions.		Cystiscercosis			
Daily exams Oral, written 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		

Medical Physics Course Description

❖ Course Name
Medical Physics
❖ Course Code
ATU.CHM. PT126
❖ Semester / Year

Second Semester / First Year
❖ The history of preparation of this description
2024/09/16
❖ Available Attendance Forms
Came
❖ Number of Credit Hours (Total) / Number of Units (Total)
2/3
❖ 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		1	3

		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.	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		1	5

		current ,			
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 faradic coil , Super imposed current and their graphical representation.		1	6
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		1	10

		transfer effect of , impurities on melting and boiling points.			
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, 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).		1	11
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		1	13

		ionizing and non-ionizing radiation's, Internal and external hazards , Main principle to control external hazard , Distance and shielding.			
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 electrical methods, To calibrate a thermo couple and an unknown temperature, To find the acceleration due to gravity by simple pendulum		1	14
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,		2	2

		Construction, Units, Arrangement of Capacitors in series and parallel, Charging and discharging of capacitors, Oscillating Discharge of Capacitors.			
Daily, oral and written exams, reports, discussions.	practical	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, Electronic tubes, Diodes and Triodes.		2	3
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		2	4

		and types, Static and auto Transformer, Dynamo, construction, A.C & D.C Dynamo.			
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 metal rectifier, Surging of current ,		2	5
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		2	9

		velocities, Ultrasonic, Reflection and refraction of sound waves ,Characteristics of tone resonance and beats , Interference of sound waves.			
	practical	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.		2	10
	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		2	12

		and precaution, Effect of electric current on human body, Techniques to reduce the effect of electric shock Earth shocks and precaution against earth shocks.			
	practical	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.		2	13
	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)
1. <u>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.</u> 2. <u>Advances in Medical Physics ,0 Anthony B. Wolbarst, Andrew Karellas, Elizabeth A. Krupinski, and William R. Hendee, Editors</u>	Main references (sources)
	Recommended supporting books references (Scientific journals, reports...)
	Electronic References, Websites

Computer Course Description 2

❖ Course Name
Computer 2
❖ Course Code
ATU.CHM. PT127
❖ Semester / Year

Second Semester / First Year					
❖ The history of preparation of this description					
2024/09/16					
❖ Available Attendance Forms					
Came					
❖ Number of Credit Hours (Total) / Number of Units (Total)					
2/3					
❖ Course administrator's name (if more than one name)					
Name: Assist .Lec. Ashwaq Mutashar / Assist. Lec. Ahmed Younis					
Email : Ashwaqhabeeb66@gmail.com					
❖ Course Objectives					
<u>General Objective:</u> At the end of the academic year, the student should be able to: Providing the student with the skills of dealing with basic office applications and creating library files and documents. And the use of the operating system as well as the basics of working within the digital environment. <u>Special Objective :</u> The student shall be able to: Providing the student with knowledge in the management and use of various computer applications.					
❖ 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	Vocabulary details		1	1
Daily, oral and written exams, reports, discussions.	Theoretical	Microsoft Word 2010 Run Microsoft Word 2010		1	2
Daily, oral and written exams, reports, discussions.	Theoretical	Microsoft Word 2010 interface		1	3
Daily, oral and written exams, reports, discussions.	Theoretical	File tab, Home tab		1	4
Daily, oral and written exams, reports, discussions.	Theoretical	Page Layout tab, View tab		1	5
Daily, oral and written exams, reports, discussions.	Theoretical	Insert objects in Microsoft Word 2010		1	6
Daily, oral and written exams, reports, discussions.	Theoretical	Insert Tab Pages Collection		1	7
Daily, oral and written exams, reports, discussions.	Theoretical	Tables		1	8
Daily, oral and written exams, reports, discussions.	Theoretical	Tables		1	9
Daily, oral and written exams, reports, discussions.	Theoretical	Collection of illustrations		1	10
Daily, oral and written exams, reports, discussions.	Theoretical	Link group, Header & Footer group		1	11
Daily, oral and written exams, reports, discussions.	Theoretical	Text Set, Symbols Set		1	12

Daily, oral and written exams, reports, discussions.	Theoretical	Additional tasks for Microsoft Word 2010		1	13
Daily, oral and written exams, reports, discussions.	Theoretical	Microsoft PowerPoint 2010 Open a new file and store it on your desktop. - Add and edit slides (title slide, title with content, subtitle, two contents, comparison, title only, blank slide, content with comment, image with comment).		1	14
Daily, oral and written exams, reports, discussions.	Theoretical	Add a theme theme. -Master views main display group - Add movements, time control and repetition for the entire slides and differently for each slide.		1	15
Evaluation method	Learning method	Practical vocabulary titles	Required Learning Outcomes	Hours	The week
Daily, oral and written exams, reports, discussions.	practical	- Writing many texts and training the student to conduct these events.		2	1
Daily, oral and written exams, reports, discussions.	practical	- Train the student to make texts in different formats and drag them on the printer.		2	2
Daily, oral and written exams, reports, discussions.	practical	- Practical exercises on texts within the document. - Give names to companies or students and train the student to search for a specific name and		2	3

		replace it.			
Daily, oral and written exams, reports, discussions.	practical	Train the student on page layout, text writing practice presentation tab		2	4
Daily, oral and written exams, reports, discussions.	practical	Give practical examples of inserting objects Training to write texts in a more professional way		2	5
Daily, oral and written exams, reports, discussions.	practical	Give practical examples of a set of tab insertion pages		2	6
Daily, oral and written exams, reports, discussions.	practical	Give practical examples of the set of tables		2	7
Daily, oral and written exams, reports, discussions.	practical	Give other practical examples Tables set		2	8
Daily, oral and written exams, reports, discussions.	practical	Training the student on a set of illustrations		2	9
Daily, oral and written exams, reports, discussions.	practical	- Include a specific photo and assign the student to conduct these events.		2	10
Daily, oral and written exams, reports, discussions.	practical	- Training the student to write texts that include currency symbols, special letters, scientific symbols, and others.		2	11
Daily, oral and written exams, reports, discussions.	practical	- Training the student to write equations that include addition, multiplication and raising formulas for exponents and matrices in different forms . - Training the student to create different tables with		2	12

		data entry			
Daily, oral and written exams, reports, discussions.	practical	- Training to open a new file and store it on the desktop. - Add and edit slides (title slide, title with content, subtitle, two contents, comparison, title only, blank slide, content with comment, image with comment). - Add and edit content segment types (table, graph, shapes and charts, images, images from the Internet, video files).		2	13
Daily, oral and written exams, reports, discussions.	practical	- Training on deleting, moving and rearranging slides. - Add theme theme. - Apply the effectiveness of Master slide - Add movements, time control and repetition for the entire slides and differently for each slide.		2	14
Daily, oral and written exams, reports, discussions.	practical	- In addition to each part of the slide, entry movement, stability, exit and other movements, with adjustment of repetition, time and the rest of the options. Save the presentation file as Adobe PDF.		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 of the Introduction to Physical Therapy course

❖ Course Name
Introduction to Physical Therapy
❖ Course Code
ATU.CHM. PT124
❖ Semester / Year
Second Semester / First Year
❖ The history of preparation of this description
2024/09/16
❖ Available Attendance Forms

Came					
❖ Number of Credit Hours (Total) / Number of Units (Total)					
4/6					
❖ 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					
<u>General Objective :</u> Introducing students to the profession of physical therapy and directing them to it. <u>Special Objective:</u> 1. The importance of applying physiotherapy to improve human health . 2. Describe the basic elements of the physiotherapy process and apply them to pathological condition 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					
✓ 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 + Practical	History of physiotherapy.		6	1
Daily, oral and written exams, reports, discussions.	Theoretical + Practical	Terminology in physiotherapy.		6	2
Daily, oral and written	Theoretical	Definition and epidemiology		6	3

exams, reports, discussions.	+ Practical	of disability, impairment and handicap. Process of disability.			
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.		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,	Theoretical + Practical	Introduction to occupational therapy.		6	12

discussions.					
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: 25					
❖ 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 Physiotherapy 4th Edition 2019. By: Gwendolyn Jull.			Main references (sources)		
			Recommended supporting books references (Scientific journals, reports...)		
			Electronic References, Websites		

Course Description Kinesiology

❖ Course Name
Kinesiology
❖ Course Code
ATU.CHM. PT121
❖ Semester / Year
Second Semester / First Year
❖ The history of preparation of this description
2024/09/16
❖ 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					
<u>General Objective</u> : To know the types and analysis of movement in the human body. <u>Special Objective:</u> 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	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;		2	2

		mobility and stability of the elbow complex; the effects of immobilization and injury.			
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		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,		2	7

		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			
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		2	9
Daily, oral and written exams, reports, discussions.	Theoretical	Temporomandibular Joint: General features, structure, function and dysfunction		2	10
Daily, oral and written 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		2	11

		and distance parameters of gait.			
Daily, oral and written exams, reports, discussions.	Theoretical	Gait: Joint motion at the hip, knee and ankle 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 ankle during the stance phase.		2	12
Daily, oral and written exams, reports, discussions.	Theoretical	Gait: Muscle activity at the hip, knee and ankle throughout the gait cycle, including why, and when a particular muscle is active and the type of contraction required. The role of each of the determinants of gait		2	13
Daily, oral and written 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 written 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			Main references (sources)		

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

Description of the Physiology Course 2

❖ Course Name
Physiology2
❖ Course Code
ATU.CHM. PT123
❖ Semester / Year
Second Semester / First Year
❖ The history of preparation of this description
2024/09/16
❖ Available Attendance Forms
Came
❖ Number of Credit Hours (Total) / Number of Units (Total)
2/3
❖ 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		1	1

		and their functions, spermatogenesis.			
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. Degeneration and regeneration in peripheral nerves – Wallerian degeneration of electro tonus and Pflagers Law.		1	6
Daily, oral and written exams, reports,	Theoretical	Muscle: : 1. Type of muscles and their gross structure, stimulus		1	7

discussions.		chronaxie, strength duration curve. 2. Structure of sarcomere – Basis of muscle contraction, Starling's Law and changes during muscle contraction.			
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.		1	10
Daily, oral and written exams, reports, discussions.	Theoretical	Nervous System: 3. Tracts of Spinal Cord. 4. Descending, Pyramidal and Extra pyramidal Tracts.		1	11
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		1	12

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

Human Anatomy Course Description 2

❖ Course Name
Human Anatomy 2
❖ Course Code
ATU.CHM. PT122
❖ Semester / Year
Second Semester / First Year
❖ The history of preparation of this description
2024/09/16
❖ Available Attendance Forms
Came
❖ Number of Credit Hours (Total) / Number of Units (Total)
4/6
❖ 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 contains pictures and explanatory videos, and there is also a practical aspect 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 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	The student's knowledge of the subject Scientific and Skills Perception Scientific, mental and appl	6	1

	includes virtual anatomy in addition to models	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 of the subject Scientific and Skills Perception Scientific, mental and appl	6	2
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	Wrist, Name and identify the carpal bones, metacarpal 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	The student's knowledge of the subject Scientific and skill percepti T Scientific and mental and development Vetch	6	3

	aspect that includes virtual anatomy in addition to models	supply 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	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 of the subject Scientific and Skills Perception Scientific, mental and appl	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	Lower Extremity Pelvis State the main features, sub-divisions, boundaries, walls and floor of pelvis. Mention the features of the pubic symphysis and sacroiliac joints. Compare the major differences between the male and female pelvis. Identify the	The student's knowledge of the subject Scientific and Skills Perception Scientific, mental and appl	6	5

	aspect that includes virtual anatomy in addition to models	muscles of the pelvic floor and mention their attachments, actions and nerve supply, Mention the structure of the urogenital diaphragm.			
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 of the subject Scientific and Skills Perception Scientific, mental and appl	6	6
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	Knee 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	The student's knowledge of the subject Scientific and Skills Perception Scientific, mental and appl	6	7

	aspect that includes virtual anatomy in addition to models	and anomalies			
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 of the subject Scientific and Skills Perception Scientific, mental and appl	6	8
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	Foot , Mention the type, articular surface, ligaments, movements, chief muscles for the movement, axes of movements and applied anatomy of subtalar joints, tarsals, metatarsals and phalanges joints.	The student's knowledge of the subject Scientific and Skills Perception Scientific, mental and appl	6	9

	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	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 of the subject Scientific and Skills Perception Scientific, mental and appl	6	10
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	Neck Identify the general feature of atypical cervical vertebra atlas, axis and seventh cervical vertebra. Identify the erector spinae, sternomastoid and scalenei muscles. Mention their attachments, actions and nerve supply.	The student's knowledge of the subject Scientific and Skills Perception Scientific, mental and appl	6	11

	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	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 of the subject Scientific and Skills Perception Scientific, mental and applied	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 explanatory videos, and there is also a practical aspect that includes virtual anatomy in addition to models	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 muscles producing them	The student's knowledge of the subject Scientific and Skills Perception Scientific, mental and applied	6	13

	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	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 of 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 there is also a practical aspect that includes virtual anatomy in addition to models	Revision	The student's knowledge of the subject Scientific and Skills Perception Scientific and mental and applied	6	15

	❖ 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 <u>Margaret</u> <u>Matt</u> (Author), <u>Joe Ziemian</u> (Author) 6.Atlas of Human Anatomy (<u>Netter Basic Science</u>)by Frank H. Netter,2006	Main references (sources)
		Recommended supporting books references (Scientific journals, reports...)
		Electronic References, Websites

Arabic Course Description

❖ Course Name
Arabic Language
❖ Course Code
ATU.CHM. PT128
❖ Semester / Year
Second Semester / First Year
❖ The history of preparation of this description
2024/09/16
❖ 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					
✓ 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	Introduction to Linguistic Errors – T The tethered - the long and the open t		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,	Theoretical	Punctuation		2	5

discussions.					
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 references (Scientific journals, reports...)
	Electronic References, Websites

Pathology

1. Course Name:
Pathology
2. Course Code:
ATU.CHM. PT216
3. Semester / Year:
Semester First/2024-2025
4. Description Preparation Date:
1-9-2024
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	Introduction: Aims and objects of study of pathology. Definitions of health, disease, causes of disease, Cell injury- causes, mechanism & toxic injuries with special reference to Physical, Chemical, & ionizing radiation		2	1
Daily, oral and written . examinations, reports,	Theoretically	Inflammation & Repair (Acute		2	2

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

		changes			
Daily, oral and written . examinations, reports, discussions	Theoretically	Neoplasia: General outline, classification, characteristics of benign and malignant tumors, spread of tumors, systemic effects.		2	6
Daily, oral and written examinations, reports, discussions	Theoretically	Bone & Joints - fracture healing - Osteomyelitis - rickets – Osteomalacia, Bone tumors Osteoporosis Spondylosis,		2	7
Daily, oral and written . examinations, reports, discussions	Theoretically	Bone & Joints P.I.D- Scoliosis - Haemarthrosis - Gout - T.B. Arthritis - degenerative - inflammatory - RA-Ankylosing spondylitis, Tenosynovitis.		2	8
Daily, oral and written . examinations, reports, discussions	Theoretically	Muscle diseases - Muscular dystrophy- hypertrophy- Pseudo- hypertrophy- atrophy Polio- myelitis ,Myositis ossificance, necrosis. Regeneration- Myotonia.		2	9
Daily, oral and written . examinations, reports, discussions	Theoretically	Neuro - muscular junction - Myasthenia gravis - Myasthenic syndrome.		2	10

		myopathies, genetically determined neuromuscular diseases.			
Daily, oral and written . examinations, reports, discussions	Theoretically	G. I. T. System- Gastric/ duodenal ulcer, enteric fever, TB, enteritis, Gastritis (related to consumption of NSAID)		2	11
Daily, oral and written . examinations, reports, discussions	Theoretically	Urinary - commonly encountered in paralytic bladder, common urinary tract infections (brief) - urinary calculi.		2	12
Daily, oral and written . examinations, reports, discussions	Theoretically	Deficiency disorders - Vitamins A, B, C, D.		2	13
Daily, oral and written examinations, reports, discussions	Theoretically	Growth Disturbance Atrophy-malformation, agenesis, dysplasia, Neoplasia classification, histogenesis, biologic behaviour, difference between benign & malignant tumour		2	14
Daily, oral and written examinations, reports, discussions	Theoretically	Endocrine - Hyperthyroidism - Diabetes, Hepatic diseases - Cirrhosis - emphasis on systemic effects		2	15

		of portal hypertension. Infections - cutaneous TB, Soleroderma. SLE, Leprosy Alopacia.			
11.ACourse evaluation					
Striving: 40/ Final: 60					
12.Learning and teaching resources					
			Required textbooks (methodology)		
			Recommended supporting books and references		
			(Scientific journals, reports....)		

Therapeutic Equipment's 1

1. Course Name:
Therapeutic Equipments 1
2. Course Code:
ATU.CHM. PT212
3. Semester / Year:
Semester First/2024-2025
4. Description Preparation Date:
1-9-2024
5. Available Attendance Forms:
Came
6. Number of Credit Hours (Total) / Number of Units (Total)
4/6
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	Electromagnetic Waves: Electromagnetic spectrum, physical properties of Electromagnetic radiations reflection, refraction, absorption, grothus law, cosine law inverse square law and its practical application.		2	1
Daily, oral and written . examinations, reports, discussions	Theoretically	Managing Pain with Therapeutic Modalities, Types of Pain (Acute versus Chronic,		2	2

		referred, Radiating, Deep Somatic Pain), The Gate Control Theory of Pain			
Daily, oral and written examinations, reports, discussions	Theoretically	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.		2	3
Daily, oral and written examinations, reports, discussions	Theoretically	Infra-Red Radiation: technique of application, duration and frequency of treatment		2	4
Daily, oral and written examinations, reports, discussions	Theoretically	Moist Heat Therapy: Hydro collator packs – in brief, Therapeutic uses, Indications & Contraindications.		2	5
Daily, oral and written . examinations, reports, discussions	Theoretically	Moist Heat Therapy: Methods of application, technique of application		2	6
Daily, oral and written examinations, reports, discussions	Theoretically	Wax Therapy: Structure of the bath, composition of wax and mineral oils, Principle of Wax Therapy application – latent Heat, Composition		2	7

		of Wax Bath Therapy unit, Physiological & Therapeutic			
Daily, oral and written . examinations, reports, discussions	Theoretically	Wax Therapy: Methods of application of Wax, technique of application		2	8
Daily, oral and written . examinations, reports, discussions	Theoretically	Contrast Bath: Therapeutic uses, Indications, Contraindications. Methods of applications, technique of application		2	9
Daily, oral and written . examinations, reports, discussions	Theoretically	Fluid therapy: Construction, Therapeutic uses, Indications & Contraindications.		2	10
Daily, oral and written . examinations, reports, discussions	Theoretically	Fluid therapy: Methods of applications, technique of application		2	11
Daily, oral and written . examinations, reports, discussions	Theoretically	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. R. Erythema, differen		2	12
Daily, oral and written . examinations, reports, discussions	Theoretically	LASER: Define, Types, Principles of Production. Production of LASER by various methods, Physiological &Therapeutic		2	13

		effects, Dangers and contraindications			
Daily, oral and written examinations, reports, discussions	Theoretically	LASER: Methods of application, technique of application		2	14
Daily, oral and written examinations, reports, discussions	Theoretically	General Revision		2	15
11. Course evaluation					
Striving: 40/ Final: 60					
12. Learning and teaching resources					
			Required textbooks (methodology)		
1. Clayton's Electrotherapy (Physiotherapy Essentials) 2. <i>Physical Agents : Theory and Practice</i> 8 th , 7 th 3 rd Edition , 7 th 8 th Barbara J. Behrens 8 th 7 th PTA, MS 7 th , 8 th Holly Beinert 8 th 7 th TPT, 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 8 th , by 8 th John Fox and Tim Sharp 8 th , 8 th 2007					
			Recommended supporting books and references		
			(Scientific journals, reports....)		

Physiotherapy for Orthopedics

1. Course Name:
physiotherapy for Orthopedics
2. Course Code:
ATU.CHM. PT214
3. Semester / Year:
Semester First/2024-2025
4. Description Preparation Date:
1-9-2024
5. Available Attendance Forms:
Came
6. Number of Credit Hours (Total) / Number of Units (Total)
4/6
7. Course administrator's name (mention all, if more than one name)
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	Anatomy of bone: upper limb, lower limb, vertebrae, pelvis.		6	1
Daily, oral and written . examinations, reports, discussions	Theoretically	Fractures: Definition, Types of Bone Fracture, Pathophysiology of Bone Healing.		6	2
Daily, oral and written examinations, reports, discussions	Theoretically	Fractures: Clinical Features, Factors affecting healing, Radiological features.		6	3
Daily, oral and written examinations, reports, discussions	Theoretically	Fractures: Outlines of treatment and Prognosis.		6	4
Daily, oral and written examinations, reports, discussions	Theoretically	Fractures: Assessment, Physiotherapy.		6	5
Daily, oral and written . examinations, reports,	Theoretically	Fractures: Complications,		6	6

discussions		Rehabilitation.			
Daily, oral and written examinations, reports, discussions	Theoretically	Specific fractures and dislocations.		6	7
Daily, oral and written . examinations, reports, discussions	Theoretically	Total knee replacement: Definition, Indications, Complications, Pre-operative assessment, Pre-surgical Physiotherapy.		6	8
Daily, oral and written . examinations, reports, discussions	Theoretically	Total knee replacement: Post-surgical Physiotherapy, Outcome Measures.		6	9
Daily, oral and written . examinations, reports, discussions	Theoretically	Total hip replacement: Definition, Indications, Complications, Surgical Approaches, Pre-operative assessment, Pre-surgical Physiotherapy		6	10
Daily, oral and written . examinations, reports, discussions	Theoretically	Total hip replacement: Post-surgical Physiotherapy, Outcome Measures.		6	11
Daily, oral and written . examinations, reports, discussions	Theoretically	Shoulder instabilities: Definition, Etiology, Complications, Post-surgical Physiotherapy.		6	12
Daily, oral and written . examinations, reports, discussions	Theoretically	Shoulder joint: Total shoulder		6	13

		replacement and Hemi-replacement post-operative, Definition, Indications, Complications, physiotherapy management			
Daily, oral and written examinations, reports, discussions	Theoretically	Deformities of lower limb: Definition, Etiology, Classifications, Clinical presentation, Physical therapy Management		6	14
Daily, oral and written examinations, reports, discussions	Theoretically	Benign and malignant bone tumor: Definition, Etiology, Classifications, Clinical presentation, Physical therapy Management.		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, Leslie 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 Saunders. 4. Orthopaedic Physical Therapy By: Donatelli & Michael J. Wooden 4th Edition. 5. Physiotherapy in Orthopedics, A problem-solving	Scientific journals, reports....)

approach By: Atkinson, Coutts & Hassenkamp 2nd Edition.	
	Recommended supporting books and references

Physiotherapy for General Surgery 1

1. Course Name:
physiotherapy for General Surgery 1
2. Course Code:
ATU.CHM. PT224
3. Semester / Year:
Semester First/2024-2025
4. Description Preparation Date:
1-9-2024
5. Available Attendance Forms:
Came
6. Number of Credit Hours (Total) / Number of Units (Total)
3/5
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	Introduction: Definition, Indications for surgery, Methods of Surgery, Effect of Anesthesia, Hemorrhage, Shock, Water & Electrolyte imbalance.		5	1
Daily, oral and written . examinations, reports, discussions	Theoretically	Postoperative complications.		5	2
Daily, oral and written examinations, reports, discussions	Theoretically	Infection and Inflammation – Definition, acute & chronic, Causes, Signs and symptoms, Resolution, Complications, Management		5	3
Daily, oral and written examinations, reports, discussions	Theoretically	Wounds / ulcers - classification, healing process,		5	4

		staging, factors affecting healing, management			
Daily, oral and written examinations, reports, discussions	Theoretically	Complications of immobilization		5	5
Daily, oral and written . examinations, reports, discussions	Theoretically	Abdominal surgeries for gastrointestinal tract: Surgical anatomy, Approaches, Common abdominal procedures, Scar during surgical approach, Scar management , Postoperative activity		5	6
Daily, oral and written examinations, reports, discussions	Theoretically	Genito-urinary system surgeries: Surgical anatomy, Approaches, Common procedures, Scar during surgical approach, Scar management , Postoperative activity.		5	7
Daily, oral and written . examinations, reports, discussions	Theoretically	Breast cancer and mastectomy : Epidemiology, Classification, Staging, Metastases, Clinical Presentation, Surgical management , Post-Mastectomy Pain Syndrome		5	8
Daily, oral and written . examinations, reports,	Theoretically	Mastectomy: Physical therapy		5	9

discussions		management, Post-surgical physical activity			
Daily, oral and written . examinations, reports, discussions	Theoretically	Burn: Definition, Types, Classification, Local and systemic effects, Complications, Assessment, Specific site of burn.		5	10
Daily, oral and written . examinations, reports, discussions	Theoretically	Burn: Immediate Care, Physical therapy management.		5	11
Daily, oral and written . examinations, reports, discussions	Theoretically	Skin grafting: Indications, Types, Post-operative care of plastic surgery with specific role of physiotherapy.		5	12
Daily, oral and written . examinations, reports, discussions	Theoretically	Tendon repair: Procedure, Recovery, Complications, Pre-operative and post-operative physical therapy management.		5	13
Daily, oral and written examinations, reports, discussions	Theoretically	Reconstructive surgery of peripheral nerves.		5	14
Daily, oral and written examinations, reports, discussions	Theoretically	Revision		5	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....)
--	-----------------------------------

Physiotherapy for Musculoskeletal Diseases 1

1. Course Name:
Physiotherapy for Musculoskeletal Diseases 1
2. Course Code:
ATU.CHM. PT213
3. Semester / Year:
Semester First/2024-2025
4. Description Preparation Date:
1-9-2024
5. Available Attendance Forms:
Came
6. Number of Credit Hours (Total) / Number of Units (Total)
4/6
7. Course administrator's name (mention all, if more than one name)
8. Course Objectives
<u>Overall goal.</u> Knowing the types of diseases that affect the musculoskeletal system. <u>Own goals.</u> 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	Medical terminology regarding musculoskeletal system, Principles and concepts of musculoskeletal evaluation and assessment		6	1
Daily, oral and written . examinations, reports, discussions	Theoretically	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	Musculoskeletal Signs and Symptoms: Monoarticular Joint Disease, Polyarticular Joint		6	3

		Disease, Neck and Back Pain.			
Daily, oral and written examinations, reports, discussions	Theoretically	Rheumatoid Arthritis: Definition, Epidemiology, Pathology, and Pathogenesis, Clinical and Laboratory Manifestations.		6	4
Daily, oral and written examinations, reports, discussions	Theoretically	Rheumatoid Arthritis: Assessment and Physical Therapy Management.		6	5
Daily, oral and written . examinations, reports, discussions	Theoretically	Ankylosing Spondylitis: Definition, Epidemiology, Pathology, Clinical presentation, Assessment, Physical Therapy Management.		6	6
Daily, oral and written examinations, reports, discussions	Theoretically	Psoriatic Arthritis: Definition, Epidemiology, Pathology, Clinical presentation, Physical Therapy Management.		6	7
Daily, oral and written . examinations, reports, discussions	Theoretically	Reactive Arthritis: Definition, Epidemiology, Pathology, Clinical presentation, Physical Therapy Management.		6	8
Daily, oral and written . examinations, reports, discussions	Theoretically	Systemic lupus Erythematosus: Definition, Epidemiology, Pathology, Clinical presentation, Physical Therapy		6	9

		Management.			
Daily, oral and written . examinations, reports, discussions	Theoretically	Systemic Sclerosis: Definition, Epidemiology, Pathology, Clinical presentation, Physical Therapy Management..		6	10
Daily, oral and written . examinations, reports, discussions	Theoretically	Polymyalgia Rheumatica: Definition, Etiology, Pathology, Clinical presentation, Physical Therapy Management.		6	11
Daily, oral and written . examinations, reports, discussions	Theoretically	Gout: Definition, Epidemiology, Pathology, Clinical presentation, Physical Therapy Management..		6	12
Daily, oral and written . examinations, reports, discussions	Theoretically	Pseudo gout: Definition, Epidemiology, Pathology, Clinical presentation, Physical Therapy Management.		6	13
Daily, oral and written examinations, reports, discussions	Theoretically			2	14
Daily, oral and written examinations, reports, discussions	Theoretically	General Revision		2	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:
Semester First/2024-2025
4. Description Preparation Date:
1-9-2024
5. Available Attendance Forms:
Came
6. Number of Credit Hours (Total) / Number of Units (Total)
4/6
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
<u>Overall goal.</u> Knowledge of the general principles used in therapeutic exercises. <u>Own goals.</u> -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	INTRODUCTION TO EXERCISE THERAPY		6	1
Daily, oral and written . examinations, reports, discussions	Theoretically	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	• Disability models – ICIDH model of disability, Nagi model of disability, ICF model		6	3
Daily, oral and written examinations, reports, discussions	Theoretically	• Exercise physiology – effect of exercise in various systems –		6	4

		musculoskeletal, neuromuscular, cardiovascular, respiratory system			
Daily, oral and written examinations, reports, discussions	Theoretically	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	classification, indications, contra indications, advantages, limitations, techniques - emphasize PROM to upper, lower, neck and trunk muscles		6	6
Daily, oral and written examinations, reports, discussions	Theoretically	• 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	STARTING POSITIONS:- • Fundamental starting positions. • Derived positions. • Muscle work -		6	8

		effects and uses.			
Daily, oral and written . examinations, reports, discussions	Theoretically	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	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	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	• Mobility aids – crutches, canes, walk		6	12
Daily, oral and written . examinations, reports, discussions	Theoretically	Measurement of limb length, girth		6	13
Daily, oral and written	Theoretically	SUSPENSION		2	14

examinations, reports, discussions		THERAPY:- • Definition and concepts of suspension. • Points of suspension. • Types of suspension. • Joint range or muscle power.			
Daily, oral and written examinations, reports, discussions	Theoretically	RELAXATION:- • Types & Techniques. • Effects & Use		2	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 4. Therapeutic Exercise Prescription/2019			Scientific journals, reports....)		
			Recommended supporting books and references		

Human Anatomy 3

1. Course Name:
Human Anatomy 3
2. Course Code:
ATU.CHM. PT215
3. Semester / Year:
Semester First/2024-2025
4. Description Preparation Date:
1-9-2024
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):
Dr. Hassnien Fadhel
8. Course Objectives
<u>Overall goal.</u> Identify the central nervous system <u>Own goals.</u> 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	Nervous system: Central Nervous System: Disposition, Parts and Functions, Brain stem (Pons, Medulla, and Mid Brain).		2	1
Daily, oral and written . examinations, reports, discussions	Theoretically	Nervous system: Cerebrum, Cerebellum, Thalamus, Hypothalamus, Internal Capsule, Blood Supply of Brain		2	2
Daily, oral and written examinations, reports, discussions	Theoretically	Nervous system: Stroke and its types ,Ventricles of Brain, CSF circulation and Hydrocephalus ,Meninges of brain .		2	3
Daily, oral and written examinations, reports, discussions	Theoretically	Nervous system: Neural pathways (Neural Tracts) ,Pyramidal and Extra pyramidal System (Ascending and Descending tracts)		2	4

		,Functional significance of Spinal cord level			
Daily, oral and written examinations, reports, discussions	Theoretically	Nervous system: Cranial Nerves with special emphasis upon IV, V, VII, XI, XII (their course, distribution, and palsies).		2	5
Daily, oral and written . examinations, reports, discussions	Theoretically	Nervous system, Autonomic nervous system, its components, Nerve receptors		2	6
Daily, oral and written examinations, reports, discussions	Theoretically	Spinal cord: Gross appearance, Structure of spinal cord ,Grey and white matter (brief description).		2	7
Daily, oral and written . examinations, reports, discussions	Theoretically	Spinal cord: Meninges of spinal cord ,Blood supply of spinal cord ,Autonomic Nervous system.		2	8
Daily, oral and written . examinations, reports, discussions	Theoretically	Thoracic region, Thoracic Wall: Bones: Ribs, Sternum, Thoracic Vertebrae, Joints, Muscles, Nerves, Blood, Vessels, Lymphatics,		2	9
Daily, oral and written . examinations, reports, discussions	Theoretically	. 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,		2	10

		reproductive system male, female. Perineum: Male, Female, Anatomy of family planning.			
Daily, oral and written . examinations, reports, discussions	Theoretically	Back: Vertebral column, Curvatures, Movements, Muscles of Back, Thoracolumbar Fascia, Spinal cord & Meninges – (Tracts, Blood supply), Posture & Gait, line of gravity, center of gravity.		2	11
Daily, oral and written . examinations, reports, discussions	Theoretically	. Endocrine System: List the endocrine organs and mention their positions, Mention the hormones produced by each endocrine organ		2	12
Daily, oral and written . examinations, reports, discussions	Theoretically	Endocrine System: List the endocrine organs and mention their positions, Mention the hormones produced by each endocrine organ.		2	13
Daily, oral and written examinations, reports, discussions	Theoretically	. Embryology: Ovum, Spermatozoa, fertilization and formation of the Germ layers and their derivations. Development of skin, Fascia, blood vessels, lymphatic,		2	14
Daily, oral and written examinations, reports, discussions	Theoretically	Embryology: Development of bones, axial and appendicular skeleton and muscles, Neural tube, brain vessels and spinal cord,		2	15

		Development of brain and brain stem structures.			
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) 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:
Semester First/2024-2025
4. Description Preparation Date:
1-9-2024
5. Available Attendance Forms:
Came
6. Number of Credit Hours (Total) / Number of Units (Total)
2/2
7. Course administrator's name (mention all, if more than one name):
Assist. Lec Hawraa Hussien
8. Course Objectives
<u>Overall goal.</u> Knowledge of medications used in physical therapy <u>Own goals.</u> 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.		2	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		2	2
Daily, oral and written	Theoretically	, Drugs Affecting the		2	3

examinations, reports, discussions		Autonomic Nervous system cholinergic Agonist cholinergic Antagonists - Adrenergic Agonists - Adrenergic Antagonists.			
Daily, oral and written examinations, reports, discussions	Theoretically	Drugs Affecting the central Nervous system - Anxiolytic and hypnotic analgesic Drugs (Opioids)		2	4
Daily, oral and written examinations, reports, discussions	Theoretically	General anesthetics: (inhaled) and (Intravenous) - Local anesthesia		2	5
Daily, oral and written . examinations, reports, discussions	Theoretically	Drugs affecting the endocrine system, hormones of the pituitary and thyroid - Insulin and oral hypoglycemic drugs		2	6
Daily, oral and written examinations, reports, discussions	Theoretically	Review		2	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 – antifileutents.		2	8
Daily, oral and written . examinations, reports, discussions	Theoretically	Drugs acting on respiratory system: Antitussives – expectorants – bronchodilators – drugs used in treatment of asthma.		2	9
Daily, oral and written . examinations, reports,	Theoretically	Analgesics (non-opioids) – anti-		2	10

discussions		inflammatory drugs – SAIDs and NSAIDs.			
Daily, oral and written . examinations, reports, discussions	Theoretically	ntibiotics and antibacterial agents – classification – spectrum – therapeutic uses – side effects. Antiseptic and disinfectants: types and uses		2	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		2	12
Daily, oral and written . examinations, reports, discussions	Theoretically	a. ntiviral Agents - Antifungal - Antiparasitic Agents: Cancer Chemotherapy and immunopharmacolog y		2	13
Daily, oral and written examinations, reports, discussions	Theoretically	toxicology: toxic doses – lethal doses – therapeutic index.		2	14
Daily, oral and written examinations, reports, discussions	Theoretically	Revision		2	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:
Semester First/2024-2025
4. Description Preparation Date:
1-9-2024
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):
Dr. Hassnien Fadhel
8. Course objectives
<u>Overall goal.</u> Identifying different organs in the body <u>Own goals.</u>

- 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	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.		2	1
Daily, oral and written . examinations, reports, discussions	Theoretically	Cardio-Vascular system: Mention the Internal features of the chambers of the		2	2

		heart, State the basic features of the blood supply and nerve supply of the heart State the basic arrangement of the pericardium,			
Daily, oral and written examinations, reports, discussions	Theoretically	. Cardio-Vascular system: Identify the coronary arteries and coronary sinus, Name the parts of the conducting system of heart,		2	3
Daily, oral and written examinations, reports, discussions	Theoretically	Lymphatic system: Comprehend the general and regional arrangements of the lymphatic System, Name the lymphatic organs and mention their location, Illustrate the basic structural features of lymphatic vessels, lymph nodes, thymus, spleen and tonsils.		2	4
Daily, oral and written examinations, reports, discussions	Theoretically	Lymphatic system: State the position and immediate relations of spleen. Assign functions to the lymphatic system, lymph nodes, thymus, spleen and tonsils.		2	5
Daily, oral and written . examinations, reports, discussions	Theoretically	Respiratory system, List the parts of respiratory system, Comprehend the functional anatomy of the parts of the respiratory system. Mention the basic features of		2	6

		innervation of bronchi and lungs.			
Daily, oral and written examinations, reports, discussions	Theoretically	Respiratory system, State the position, extent and gross and microscopic structure of the parietal pleura, Comprehend the arrangements of pleurae		2	7
Daily, oral and written . examinations, reports, discussions	Theoretically	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.		2	8
Daily, oral and written . examinations, reports, discussions	Theoretically	Digestive system: List the parts of the digestive system, Mention the boundaries and features of the mouth, Classify teeth		2	9
Daily, oral and written . examinations, reports, discussions	Theoretically	Digestive system: state the position, course and extent of oesophagus. Identify oesophagus in the specimen		2	10
Daily, oral and written . examinations, reports, discussions	Theoretically	Genito-urinary system: Comprehend the basic functional implications and the basic structure of the kidney and ureters		2	11
Daily, oral and written . examinations, reports, discussions	Theoretically	Genito-urinary system: State the anatomy of the bladder and urethra, Mention the position, shape, size and		2	12

		surfaces of the bladder, Indicate the immediate relations of the bladder, Mention the basic innervation of the bladder,			
Daily, oral and written . examinations, reports, discussions	Theoretically	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 spermatic cord, Mention the position of the inguinal canal, Name the component structures and parts of the penis.		2	13
Daily, oral and written examinations, reports, discussions	Theoretically	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		2	14
Daily, oral and written examinations, reports, discussions	Theoretically	Revision		2	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) 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:
Semester First/2024-2025
4. Description Preparation Date:
1-9-2024
5. Available Attendance Forms:
Came
6. Number of Credit Hours (Total) / Number of Units (Total)
3/5
7. Course administrator's name (mention all, if more than one name)
Assist lec. Mohammed Abd Al-Hussien
8. Course objectives
<u>Overall goal.</u> Knowing the types of diseases that affect the musculoskeletal system. <u>Own goals.</u> 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	Osteoarthritis: Definition, Epidemiology, Etiology, Primary and Secondary, Pathophysiology.		5	1
Daily, oral and written . examinations, reports, discussions	Theoretically	Knee, Hip, Ankle Osteoarthritis: Clinical presentation, Outcome Measures, Physical therapy management.		5	2
Daily, oral and written examinations, reports, discussions	Theoretically	Shoulder, Elbow, Hand Osteoarthritis: Clinical presentation, Outcome Measures, Physical therapy management		5	3
Daily, oral and written examinations, reports,	Theoretically	Osteoporosis: Definition,		5	4

discussions		Epidemiology, Pathology and Pathophysiology, Risk Factors, Classification.			
Daily, oral and written examinations, reports, discussions	Theoretically	Osteoporosis: Clinical presentation, Physical therapy management.		5	5
Daily, oral and written . examinations, reports, discussions	Theoretically	Sacrophenia: Definition, Etiology, Pathology, Clinical presentation, Physical therapy management.		5	6
Daily, oral and written examinations, reports, discussions	Theoretically	Osteonecrosis: Definition, Etiology, Pathology, Clinical presentation, Physical Therapy Management		5	7
Daily, oral and written . examinations, reports, discussions	Theoretically	Septic Arthritis: Definition, Etiology, Pathology, Clinical presentation, Physical Therapy Management.		5	8
Daily, oral and written . examinations, reports, discussions	theoretically	Brucellosis: Definition, Etiology, Pathology, Clinical presentation, Physical Therapy Management		5	9
Daily, oral and written . examinations, reports, discussions	theoretically	Tuberculosis Arthritis: Definition, Etiology, Pathology, Clinical presentation, Physical Therapy Management		5	10
Daily, oral and written . examinations, reports, discussions	theoretically	Spondylodiscitis: Definition, Etiology, Pathology, Clinical presentation, Physical Therapy Management..		5	11

Daily, oral and written . examinations, reports, discussions	theoretically	Benign Joint Hypermobility Syndrome, Ehlers–Danlos Syndrome, Marfan Syndrome, Osteogenesis Imperfecta: Definition, Etiology, Clinical presentation, Physical Therapy Management.		5	12
Daily, oral and written . examinations, reports, discussions	theoretically	Paget’s Disease of Bone: Etiology, Pathology, Clinical presentation, Physical therapy management.		5	13
Daily, oral and written examinations, reports, discussions	theoretically	. Neoplasms of the Joint (etiology, pathology, clinical presentation, Physical therapy management).		5	14
Daily, oral and written examinations, reports, discussions	theoretically	General Revision		5	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 Saunders. 4. Orthopaedic Physical Therapy By: Donatelli & Michael J. Wooden 4th Edition. 5. Physiotherapy in Orthopedics, A problem-solving	Scientific journals, reports....)

approach By: Atkinson, Coutts & Hassenkamp 2nd Edition.	
	Recommended supporting books and references

Therapeutic Equipment 2

1. Course Name:
Therapeutic Equipment 2
2. Course Code:
ATU.CHM. PT222
3. Semester / Year:
Semester First/2024-2025
4. Description Preparation Date:
1-9-2024
5. Available Attendance Forms:
Came
6. Number of Credit Hours (Total) / Number of Units (Total)
3/5
7. Course administrator's name (mention all, if more than one name)
Assist. Lec. Salam Khalif Jaber
8. Course Objectives
<u>Overall goal.</u> Knowledge of the devices used in physical therapy in general. <u>Own goals.</u> 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	Ultrasound therapy: Define, Production of US, Coupling Media, Thermal effects, Non thermal effects . Uses of US,Indications & Contraindications, Dangers of Ultrasound		5	1
Daily, oral and written . examinations, reports, discussions	Theoretically	Ultrasound therapy: Frequency, Treatment Dosage parameters: Continuous & Pulsed mode, Intensity, US Fields: Near field, Far field, Half value distance, Attenuation, Principles & Application of US:		5	2

		Direct contact, Water bag, Water bath, Solid sterile gel pack method for wound.			
Daily, oral and written examinations, reports, discussions	Theoretically	Phonophoresis: Define, Methods of application, Commonly used drugs, Uses. Dosages of US		5	3
Daily, oral and written examinations, reports, discussions	Theoretically	Micro Wave Diathermy: Define Wave length & Frequency, Physiological & Therapeutic effects, Indications & Contraindications, Dangers of MWD.		5	4
Daily, oral and written examinations, reports, discussions	Theoretically	Micro Wave Diathermy: Methods of applications, technique of application, Dosage Parameters		5	5
Daily, oral and written . examinations, reports, discussions	Theoretically	Continuous Short - Wave Diathermy: Define, Frequency & Wavelength of SWD, Principle of Production of SWD, Physiological & Therapeutic, effects, Indications & Contraindications, Dangers,		5	6
Daily, oral and written examinations, reports, discussions	Theoretically	Continuous Short - Wave Diathermy Methods of Heat Production by SWD treatment, Types of SWD Electrode, Placement & Spacing of Electrodes, Tuning,		6	7

		Testing of SWD Apparatus, Factors influence field distribution in short wave diathermy, Therapeutic variation in the field distribution			
Daily, oral and written . examinations, reports, discussions	Theoretically	Pulse Short -Wave Diathermy Definition, Chrematistics, Mechanism of work, physiological effects & therapeutic effects, indications, principle of treatment and contra-indications. Technique of Application		5	8
Daily, oral and written . examinations, reports, discussions	Theoretically	Pulsed Electro Magnetic Energy: Principles, Production & Parameters of PEME, Uses of PEME. Methods of applications, technique of application		5	9
Daily, oral and written . examinations, reports, discussions	Theoretically	Compression Effects of External Compressions, Clinical indications for the Use of External Compression, Contraindications and Precautions of External Compression,		5	10
Daily, oral and written . examinations, reports, discussions	Theoretically	COMPRESSION: Contraindications for the Use of Intermittent or Sequential		5	11

		Compression Pumps, Precautions for the Use of Intermittent or Sequential Compression Pumps, Adverse Effects of External Compression,			
Daily, oral and written . examinations, reports, discussions	Theoretically	COMPRESSION: Methods of applications, technique of application		5	12
Daily, oral and written . examinations, reports, discussions	Theoretically	Extracorporeal Shock Wave Therapy , physical characteristic of ESWT, indication, contraindication		5	13
Daily, oral and written examinations, reports, discussions	Theoretically	Extracorporeal Shock Wave Therapy Methods of applications, technique of application		5	14
Daily, oral and written examinations, reports, discussions	Theoretically	General Revision		5	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. Physical Agents : Theory and Practice 8 th , 7 th 3 rd Edition , 7 th 8 th Barbara J. Behrens 8 th 7 th PTA, MS 7 th , 8 th Holly Beinert 8 th 7 th TPT, 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			Scientific journals, reports....)		

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	
	Recommended supporting books and references

Therapeutic exercises 2

1. Course Name:
Therapeutic exercises 2
2. Course Code:
ATU.CHM. PT221
3. Semester / Year:
Semester First/2024-2025
4. Description Preparation Date:
1-9-2024
5. Available Attendance Forms:
Came
6. Number of Credit Hours (Total) / Number of Units (Total)
3/5
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
<u>Overall goal.</u> Learn about various therapeutic procedures. <u>Own goals.</u> 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	MAT EXERCISES:- • Principles. • Equilibrium/balancing exercises. • Transfer activities. • Indications and contraindications.		5	1
Daily, oral and written . examinations, reports, discussions	Theoretically	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.		5	2
Daily, oral and written examinations, reports, discussions	Theoretically	Resisted exercise: Definition – strength, power, endurance.		5	3

		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			
Daily, oral and written examinations, reports, discussions	Theoretically	- 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.		5	4

Daily, oral and written examinations, reports, discussions	Theoretically	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		5	5
Daily, oral and written . examinations, reports, discussions	Theoretically	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..		5	6
Daily, oral and written examinations, reports, discussions	Theoretically	AEROBIC EXERCISE : • Definitions, Physiological response to Aerobic Exercise • Evaluation of aerobic capacity – exercise testing, Determinant of		5	7

		Aerobic Exercise. • Physiological Changes with Aerobic Training, Aerobic Exercise Program, Applications of Aerobic Program in patients with chronic illness			
Daily, oral and written . examinations, reports, discussions	Theoretically	Co-ordination • Define balance (static and dynamic). • Explain the mechanism of neuromuscular co-ordination., Balance control, Components of balance, Balance Impairment, Examination of Impaired Balance, Balance training Exercises		5	8
Daily, oral and written . examinations, reports, discussions	Theoretically	Posture: • Normal Postural Control, Postural Alignment, Postural Stability, Postural Impairment and Mal-Alignment, Postural Training.		5	9
Daily, oral and written . examinations, reports, discussions	Theoretically	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.		5	10

Daily, oral and written . examinations, reports, discussions	Theoretically	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)		5	11
Daily, oral and written . examinations, reports, discussions	Theoretically	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		5	12
Daily, oral and written .	Theoretically	Hydrotherapy:		5	13

examinations, reports, discussions		Definitions, Goals and Indications, Precautions and Contraindications, Properties • of water, Therapeutic Exercises in Hydrotherapy, Special equipments used			
Daily, oral and written examinations, reports, discussions	Theoretically	Transfers training:- selection of transfers ,levels ,amount of assist transfer ,belt of transfers		5	14
Daily, oral and written examinations, reports, discussions	Theoretically	Proprioceptive Neuromuscular Facilitation : Introduction, responses of NM mechanism, basis techniques of PNF patterns of arm, leg, neck, head and trunk (emphasis on straight patterns),		5	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....)

