Ministry education High And search Scientific

Device Supervision And reinforcement Scientific

Circle a guarantee Quality Trust Academic

Kind of Accreditation

البرنامج وصف دليل والمقرر الأكاديمي الدراسي

2024

introduction:

The educational program is considered a coordinated and organized package of academic courses that includes procedures and experiences organized in the form of academic vocabulary, the main purpose of which is to build and refine the skills of graduates, making them qualified to meet the requirements of the labor market. It is reviewed and evaluated annually through internal or external audit procedures and programs such as the external examiner program.

The description of the academic program provides a brief summary of the main features of the program and its courses, indicating the skills that students are working to acquire based on the objectives of the academic program. The importance of this description is evident because it represents the cornerstone of obtaining program accreditation, and the teaching staff participates in writing it under the supervision of the scientific committees in the scientific departments.

This guide, in its second edition, includes a description of the academic program after updating the vocabulary and paragraphs of the previous guide in light of the latest developments in the educational system in Iraq, which included a description of the academic program in its traditional form (annual, quarterly), in addition to adopting the description of the academic program circulated according to the book of the Department of Studies, 3/2906. On 5/3/2023 with regard to programs that adopt the Bologna Process as a basis for their work.

In this area, we can only emphasize the importance of writing descriptions of academic programs and courses to ensure the smooth conduct of the educational process.

Concepts and terminology:

provides **Description of the academic program:** The academic program description a brief summary of its vision, mission, and objectives, including an accurate description of the targeted learning outcomes according to specific learning strategies.

Course description: It provides a necessary summary of the most important characteristics of the course and the learning outcomes that the student is expected to achieve, demonstrating whether he has made the most of the available learning opportunities. It is derived from the program description.

Program vision: An ambitious picture for the future of the academic program to be an advanced, inspiring, motivating, realistic and applicable program.

Program message: It briefly explains the objectives and activities necessary to achieve them, and also identifies the program's development paths and directions.

Program objectives: They are statements that describe what the academic program intends to achieve within a specific period of time and are measurable and observable.

Curriculum structure: All courses/study subjects included in the academic program according to the approved learning system (semester, annual, Bologna track), whether it is a requirement (ministry, university, college, or scientific department), along with the number of study units.

Learning outcomes: A compatible set of knowledge, skills, and values that the student has acquired after successfully completing the academic program. The learning outcomes for each course must be determined in a way that achieves the program objectives.

Teaching and learning strategies: They are the strategies used by the faculty member to develop the student's teaching and learning, and they are plans that are followed to reach the learning goals. That is, it describes all curricular and extracurricular activities to achieve the learning outcomes of the programme.

Model Description Academic Program

University :AL-Furat Al-Awsat Technical University
College /Institute : Samawa Technical Institute
Scientific Department :Dialysis Techniques
Name of the academic or professional program :Diploma in medical technology
Name of the final certificate :Technical Diploma
Academic system : semester
Date the description was prepared: 14/2/2024
Date of filling the file :14/2/2024

Signature
Department Head : Shaimaa J. Hussein
Date : 14/2/2024

Signature
Scientific assistant: Lecturer .ALaa Abd Ali
Date : 14/2/2024

The file was checked by

Division of Quality Assurance and University Performance

Name of the Director of the Quality Assurance & University Performance Division : Ahmed Abdel Mohsen

Signature :
Date : 14/2/2024

Authentication of the Dean

See the program .1
Graduating medical cadres with a high degree of scientific competence to help patients with kidney failure and providing health and medical services to them during their studies and practical training, and achieving the highest degrees of scientific competence for graduate students who are qualified to work in hospitals in general and dialysis units in particular. .

Program message .2
The Dialysis Technology Department seeks to be the first leader in Iraq in graduating qualified medical personnel to work in specialized hospital units, namely, dialysis units, in order to provide the best high-tech therapeutic services to serve our beloved governorate and meet the requirements of the current labor market.

Program objectives .3
١ - Graduating qualified students in order to provide dialysis services to patients with kidney failure of the highest quality. ٢ - Providing kidney patients with all ideal and integrated health services. ٣ -Effective contribution to providing urological surgical services to patients with kidney failure by involving them in surgical operations. ٤ - Providing awareness-raising services for patients with kidney failure through educational seminars to limit the spread of the disease and ways to prevent it. ٥ - Advanced professional training in order to achieve high levels of expertise in the field of dialysis.

Program accreditation .4
nothing

Other external influences .5
nothing

Program structure .6				
Program structure	Number of courses	Study unit	Percentage	comments *
Enterprise requirements				Semester system
College requirements				
Department requirements	31	129	100%	Semester system
Summer training				Interpolation
Other				

* Notes may include whether the course is core or elective.

Program description .7				
Credit hours		Name of the course or course	Course or course code	Year/level
practical	theoretical			
4	2	Nursing basics		The first/first semester
4	2	Internal nursing		
2	2	anatomy		
2	2	Microbiology		
2	2	Biochemistry		
–	2	Medical terms		
2	1	Computer applications 1		
–	2	Human rights and democracy		
4	2	Surgical nursing		First/second semester
4	2	Health assessment		
2	2	Organ functions		
2	2	Medical viruses and parasites		
–	2	Life statistics		
2	2	Clinical chemistry		
2	1	Computer applications 2		
–	2	English language		

Credit hours		Name of the course or course	Course or course code	Year/level
practical	theoretical			
4	2	Kidney disease		Second/first semester
4	2	Renal nutrition		
4	2	Basics of sterilization and health management		
4	2	Principles of psychiatric nursing		
2	2	Infection control		
2	2	Immunology		
2	–	Search procedures		
–	2	Baath crimes		
4	2	Medical devices		The second / second semester
2	2	Medical dialysis techniques		
2	2	Blood diseases		
2	2	Psychiatric and mental health nursing		
2	2	pathology		
2	2	Pharmaceuticals		
–	2	Professional ethics		
2	–	Project		

8. Expected learning outcomes of the program
Knowledge
Full knowledge of the types of devices for dialysis -1 Familiarity with how to deal with blood samples and methods of diagnosing them -2 Full knowledge of clinical chemistry and its tests -3 Full knowledge of all tests required for dialysis patients -4
Skills
1 - Use and maintain medical devices designated for diagnosis, treatment, and care for them. 2- He has experience in determining the correct time to start dialysis, the required number, and how to install a dialysis machine 3- Learn how to dissect the kidney, in addition to giving appropriate medications to dialysis patients

Values
1-The student should pay attention to the calm and order of the classroom.
2-The student should not interrupt his colleagues while discussing an issue.
3- That the student recognizes the impact of science and scientists on life.

Teaching and learning strategies .1
Lectures -1
Computer-supported teaching and subject presentation data show. -2
Assigning the student to some research and seminars -3
Laboratories -4
Summer training -5

Evaluation methods .2
Daily and monthly tests -1
Scientific research -2
Conducting discussion sessions for students -3

Faculty .3					
Faculty members					
Preparing the teaching staff		Special requirements/skills (if any)	Specialization		Scientific rank
lecturer	angel		special	general	
1		nothing	explanation	Veterinary medicine	assistant professor
	1	nothing	Calculators	Calculators	teacher

	3	nothing	Faslja Molecular biology office	Life sciences Life sciences Administration and economy	Assistant teacher

Professional development
Orienting new faculty members
They are guided through a meeting and clarification of the controls and instructions for university service employees.
Professional development for faculty members
Teachers participate in courses, workshops, and seminars of general and specific specialization.

Acceptance standard .4
The department receives graduates of preparatory school/scientific branch according to the central admission requirements every year.

The most important sources of information about the program .5
1-The Internet
2-Methodological books.

Program development plan .6
Developing 10% of the curricula according to the Ministry's directives to keep pace with the labor market.

Program skills chart															
Learning outcomes required from the programme															
Values				Skills				Knowledge				Essential or optional?	Course name	Course code	Year/level
C4	C3	C2	C1	B4	B3	B2	B1	A4	A3	A2	A1				
√			√			√	√	√	√			basic	Nursing basics		First year/first semester
√					√		√	√	√	√	√	basic	Internal nursing		
√			√				√		√	√	√	help	anatomy		
√			√		√	√	√	√			√	help	Microbiology		
√			√		√		√				√	help	Biochemistry		
√					√		√				√	help	Medical terms		
√					√		√				√	General	Computer applications 1		
			√				√	√	√	√		General	Human rights and democracy		
			√				√				√	basic	Surgical nursing		First year/second semester
		√				√					√	basic	Health assessment		
		√				√					√	help	Organ functions		
		√				√					√	help	Medical viruses and parasites		
		√				√			√		√	help	Life statistics		
		√				√			√		√	help	Clinical chemistry		
		√				√			√		√	General	Computer applications 2		

		√				√			√			General	English language		
		√				√			√			basic	Kidney disease		Second year/first semester
		√				√			√			basic	Renal nutrition		
		√				√			√			basic	Basics of sterilization and health management		
		√				√					√	basic	Principles of psychiatric nursing		
		√				√					√	basic	Infection control		
	√	√				√					√	help	Immunology		
	√	√				√					√	help	Search procedures		
	√	√				√					√	General	Baath crimes		
	√	√				√					√	basic	Medical devices		Second year/second semester
	√	√		√		√			√		√	basic	Medical dialysis techniques		
				√			√		√		√	basic	Blood diseases		
				√			√		√		√	basic	Psychiatric and mental health nursing		
				√			√		√		√	help	pathology		
				√			√		√		√	help	Pharmaceuticals		
				√			√		√		√	help	Professional ethics		
							√				√	help	Project		

Boxes corresponding to the individual learning outcomes from the program being assessed

Course description form

1. Course name/Fundamentals of Nursing
2. Course code
3. First semester/first year
4. The date this description was prepared 02/18/2024
5. Available attendance formats: Lecture
6. Number of study hours (2) / Number of units (6)

7. Name of the course administrator (if more than one name is mentioned)
Name: Haider MazharFanjan Email: Haider.Mozher1202a@conursing.uobaghdad.edu.iq
8. Course objectives

1--Definition of nursing, the nurse, acute and chronic diseases.	**Objectives of the study subject**
2- Identifying the functions that a nurse performs, such as caring for the patient	

3-Explaining the ethics of the nursing profession	

Teaching and learning strategies .8

	Strategy

Course structure .10					
Evaluation method	**Teaching method**	**Name of the unit or topic**	**Required learning outcomes**	**Watches**	**week**
Daily, quarterly and annual tests	**The lecture**	**First aid in laboratories**	**Understand and apply the lecture**	2	**the first**
Daily, quarterly and annual tests	**The lecture**	**Management and discharge of the patient from the hospital**	**Understand and apply the lecture**	2	**the second**
Daily, quarterly and annual tests	**The lecture**	**Patient position, patient elevation and risks.**	**Understand and apply the lecture**	2	**the third**
Daily, quarterly and annual tests	**The lecture**	**Vital signs**	**Understand and apply the lecture**	2	**Fourth**

Daily, quarterly and annual tests	**The lecture**	**Medication administration, medication identification, medication type, and injection**	**Understand and apply the lecture**	2	**Fifth**
Daily, quarterly and annual tests	**The lecture**	**Intravenous infusion, giving fluids and blood by infusion into a vein**	**Understand and apply the lecture**	2	**Sixth**
Daily, quarterly and annual tests	**The lecture**	**Bandages and dressings. Wounds and bleeding.**	**Understand and apply the lecture**	2	**Seventh**
Daily, quarterly and annual tests	**The lecture**	**Classification of sutures, suture techniques, suture principles, suture removal.**	**Understand and apply the lecture**	2	**Eighth**
Daily, quarterly and annual tests	**The lecture**	**Body mechanics – body posture, principle of body mechanics, importance of exercises, common risks of immobility.**	**Understand and apply the lecture**	2	**Ninth**
Daily, quarterly and annual tests	**The lecture**	**Infection (stages and types).**	**Understand and apply the lecture**	2	**tenth**
Daily, quarterly and annual tests	**The lecture**	**Body hygiene, purpose, bathing. Pressure ulcers (bed sores).**	**Understand and apply the lecture**	2	**eleven**
Daily, quarterly and annual tests	**The lecture**	**Blood transfusion The role of the nurse in blood transfusion, indications and contraindications, the purpose of blood transfusion.**	**Understand and apply the lecture**	2	**twelve**
Daily, quarterly and annual	**The lecture**	**O2 administration, types of O2 administration, goals, nursing intervention, equipment,**	**Understand and apply the lecture**	2	**thirteen**

tests		**ventilator.**			
Daily, quarterly and annual tests	**The lecture**	**Enteral feeding - types of feeding tube, its goals, indications and contraindications for its use.**	**Understand and apply the lecture**	2	**Fourteen**
Daily, quarterly and annual tests	**The lecture**	**Definition of urinary catheterization, tracheostomy, pre- and post-operative care. Complications of surgical and nursing care for cardiac arrest and complications.**	**Understand and apply the lecture**	2	**fifteen**

11. Course evaluation

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

12. Learning and teaching resources

Course books, others	Required textbooks (methodology, if any)
Internet sites	Main references (sources)
	Recommended supporting books and references (scientific journals, reports….)
	Electronic references, Internet sites

1. Course name: internal nursing

2. Course code
3. First semester/first year
4. Date this description was prepared: 02/18/2024
5. Available attendance/lecture formats
6. Number of study hours (2) / Number of units (6)

7. Name of the course administrator (if more than one name is mentioned)
Name: Ahmed Hussein Salman Email:
8. Course objectives

1-Providing nursing care for patients before and after surgery	**Objectives of the study subject**
2-Nursing care for patients suffering from gastrointestinal diseases	
3-Providing nursing care in the CCU and Intensive Care Unit	

9. Teaching and learning strategies

	Strategy

10. Course structure

Evaluation method	Teaching method	Name of the unit or topic	Required learning outcomes	Watches	week

Daily, quarterly and annual tests	**The lecture**	Concept of health and disease / medical terminology.	**Understand and apply the lecture**	2	**the first**
Daily, quarterly and annual tests	**The lecture**	Cardiovascular system, physical assessment, diagnostic tests, type of angina.	**Understand and apply the lecture**	2	**the second**
Daily, quarterly and annual tests	**The lecture**	Myocardial infarction / causes / signs and symptoms / diagnosis Testing/treatment/nursing intervention.	**Understand and apply the lecture**	2	**the third**
Daily, quarterly and annual tests	**The lecture**	Heart failure, causes, signs and types of left heart failure Shortness of breath, signs of right heart failure.	**Understand and apply the lecture**	2	**The fourth**
Daily, quarterly and annual tests	**The lecture**	Respiratory disorders/chronic obstructive pulmonary disease Chronic bronchitis/bronchitis	**Understand and apply the lecture**	2	**Fifth**
Daily, quarterly and annual tests	**The lecture**	Neurological disorders/stroke (C.V.A). Sign and symptoms	**Understand and apply the lecture**	2	**Sixth**
Daily, quarterly and annual tests	**The lecture**	Endocrine system, physical, evaluation and diagnostic tests,	**Understand and apply the lecture**	2	**Seventh**
Daily, quarterly and annual tests	**The lecture**	Viral hepatitis, its types, causes and symptoms	**Understand and apply the lecture**	2	**Eighth**
Daily, quarterly and annual tests	**The lecture**	Pancreatitis Causes Signs and Symptoms / Treatment / Nursing Care	**Understand and apply the lecture**	2	**Ninth**
Daily, quarterly and annual tests	**The lecture**	Blood diseases / types of anemia, its causes and symptoms / treatment /	**Understand and apply the**	2	**tenth**

		nursing care and education	**lecture**		
Daily, quarterly and annual tests	**The lecture**	Blood diseases/leukemia, their types, causes and symptoms/treatment/nursing care and education	**Understand and apply the lecture**	2	**eleven**
Daily, quarterly and annual tests	**The lecture**	Renal and urinary tract, physical assessment and diagnosis	**Understand and apply the lecture**	2	**twelve**
Daily, quarterly and annual tests	**The lecture**	Chronic kidney failure / causes / diagnosis / treatment / nursing care.	**Understand and apply the lecture**	2	**thirteen**
Daily, quarterly and annual tests	**The lecture**	Immune disorders/acquired immunodeficiency syndrome (AIDS). Signs and symptoms / Treatment / Nursing care.	**Understand and apply the lecture**	2	**Fourteen**
Daily, quarterly and annual tests	**The lecture**	Introduction to cancer basics / main risk factors / cancer screening.	**Understand and apply the lecture**	2	**fifteen**

11. Course evaluation

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

12. Learning and teaching resources

Methodical books	Required textbooks (methodology, if any)
Internet	Main references (sources)
	Recommended supporting books and references (scientific journals, reports….)
	Electronic references, Internet sites

1. Course name: Anatomy
2. Course code
3. First semester/first year
4. The date this description was prepared 02/18/2024
5. Available lecture attendance formats

6. Number of study hours (2) / Number of units (4)

7. Name of the course administrator (if more than one name is mentioned)
Name: Dr. Khaled Hadi Email: dr-kh8195@mu.edu.iq

8. Course objectives	
1-	**Objectives of the study subject**
2-	
3-	

Teaching and learning strategies .9	
	Strategy

10. Course structure

Evaluation method	Teaching method	Name of the unit or topic	Required learning outcomes	Watches	week

Daily, quarterly and annual tests	**The lecture**	**Anatomical directions**	**Understand and apply the lecture**	2	**the first**
Daily, quarterly and annual tests	**The lecture**	**Superficial anatomy of the lungs**	**Understand and apply the lecture**	2	**the second**
Daily, quarterly and annual tests	**The lecture**	**Anatomy of the stomach -Intestinal anatomy -Anatomy of the appendix**	**Understand and apply the lecture**	2	**the third**
Daily, quarterly and annual tests	**The lecture**	**Skeletal anatomy: classification of the central skeletal system: skull – spine**	**Understand and apply the lecture**	2	**The fourth**
Daily, quarterly and annual tests	**The lecture**	**Anatomy of the upper extremity: The shoulder bones appear on the skeleton, which is the scapula and clavicle. Showing the arm bones (humerus).**	**Understand and apply the lecture**	2	**Fifth**
Daily, quarterly and annual tests	**The lecture**	**Anatomy of the forearm - Showing the forearm bones: (ulna and radius). - Showing the bones of the hand: (carpal bones, carpal metatarsals, and phalanges).**	**Understand and apply the lecture**	2	**Sixth**
Daily, quarterly and annual tests	**The lecture**	T**Lower extremity slice: Pelvic bones: The pelvic bones are identified, which are: (the ilium, the ischium, the pubis, and the sacrum). Femur: Shows the skeletal structure of the femur Lower and upper extremities**	**Understand and apply the lecture**	2	**Seventh**

Daily, quarterly and annual tests	**The lecture**	**Leg bones: The bones appear: (tibia and fibula) Extracting the femur and foot bone. Foot bones: describes the bones, which are: (wrist, metatarsals, phalanges).**	**Understand and apply the lecture**	2	**Eighth**
Daily, quarterly and annual tests	**The lecture**	**Anatomy of the musculoskeletal system Shoulder muscle: The model shows them all the shoulder muscles Anatomy of the chest wall: giving the types and numbers of ribs and declaring the sternum**	**Understand and apply the lecture**	2	**Ninth**
Daily, quarterly and annual tests	**The lecture**	**Chest and abdominal muscles: Give the name of the muscles of the chest wall and abdominal wall. Back and glutes: Show the requesting back and glutes**	**Understand and apply the lecture**	2	**tenth**
Daily, quarterly and annual tests	**The lecture**	**Anatomy of the cardiovascular system: Describes the anatomy and structure of the heart and the major arteries and veins around the body.**	**Understand and apply the lecture**	2	**eleven**
Daily, quarterly and annual tests	**The lecture**	**Anatomy of the Digestive System: Shows them a model of the organs of the digestive system. With the exaltation of the uterus and prostate.**	**Understand and apply the lecture**	2	**twelve**
Daily, quarterly and annual tests	**The lecture**	**Respiratory system: shows the lungs, bronchi, and bronchi.**	**Understand and apply the lecture**	2	**thirteen**

Daily, quarterly and annual tests	**The lecture**	**Genitourinary system: Show them the kidneys and urinary bladder**	**Understand and apply the lecture**	2	**Fourteen**
Daily, quarterly and annual tests	**The lecture**	**Central nervous system: describes the brain, cerebellum, medulla oblongata, and spinal cord.**	**Understand and apply the lecture**	2	**fifteen**

Methodical book	Required textbooks (methodology, if any)
Internet	Main references (sources)
	Recommended supporting books and references (scientific journals, reports….)
	Electronic references, Internet sites

1. Course name: Microbiology
2. Course code
3. First semester/first year
4. The date this description was prepared 02/18/2024
5. Available attendance formats: Lecture

6. Number of study hours (2) / Number of units (4)

7. Name of the course administrator (if more than one name is mentioned)
Name: Email:

8. Course objectives	
1-	**Objectives of the study subject**
2-	
3-	

9. Teaching and learning strategies	
	Strategy

10. Course structure

Evaluation method	Teaching method	Name of the unit or topic	Required learning outcomes	Watches	week
Daily, quarterly and annual tests	**The lecture**	**History of biosafety microbiology and molecular biology Biosafety levels Personal protective equipment**	**Understand and apply the lecture**	2	**the first**
Daily, quarterly and annual tests	**The lecture**	T**Classification of microorganisms. Skin, venereal, gastrointestinal, hepatic and viral hemorrhagic diseases (clinical manifestations, diagnosis and treatment)**	**Understand and apply the lecture**	2	**the second**

Daily, quarterly and annual tests	**The lecture**	**- General introduction to bacteriology - General structure of bacteria. - Sterilization and disinfection**	**Understand and apply the lecture**	2	**the third**
Daily, quarterly and annual tests	**The lecture**	**- The effect of environmental conditions on bacterial growth -Stages of bacterial growth, inhibiting bacterial growth**	**Understand and apply the lecture**	2	**The fourth**
Daily, quarterly and annual tests	**The lecture**	**Medical bacteria: Staphylococcus group, Staphylococcus aureus, skin, spores, general characteristics, toxins, pathological treatment.**	**Understand and apply the lecture**	2	**Fifth**
Daily, quarterly and annual tests	**The lecture**	**Group Streptococci, Streptococcus pneumoniae:- General structure. Diseases, cause and treatment S.viridans, S.faccalis, S.pyogens general structure, culture medium, pathogenesis**	**Understand and apply the lecture**	2	**Sixth**
Daily, quarterly and annual tests	**The lecture**	**Neisseria group: general, meningococci, general structure, disease.**	**Understand and apply the lecture**	2	**Seventh**
Daily, quarterly and annual tests	**The lecture**	**Clostridia (anaerobes): General Figures, Clostridium tetani: description, disease factors promoting growth in wounds, prevention and treatment.**	**Understand and apply the lecture**	2	**Eighth**
Daily, quarterly and annual tests	**The lecture**	**Gas gangrene (Clostridial myonecrosis): description, disease, treatment, food, Clostridia poisoning, toxins secreted in foods, symptoms, treatment. Bacillus anthracis: description, disease, and treatment**	**Understand and apply the lecture**	2	**Ninth**

Daily, quarterly and annual tests	**The lecture**	**Types of intestinal bacteria, their medical importance, general characteristics, and cultures identification. Pathogenic intestinal bacteria Salmonella group: symptoms, poisoning and treatment**	**Understand and apply the lecture**	2	**tenth**
Daily, quarterly and annual tests	**The lecture**	**Shigella disease: treatment, shigella food poisoning, symptoms, proteus, Disorder, culture**	**Understand and apply the lecture**	2	**eleven**
Daily, quarterly and annual tests	**The lecture**	**Brucella: general figures, disease, diagnosis, treatment. bordetella, Disorder of morphology, culture, disease and treatment**	**Understand and apply the lecture**	2	**twelve**
Daily, quarterly and annual tests	**The lecture**	**Cholera, general characteristics, disease, definition, treatment**	**Understand and apply the lecture**	2	**thirteen**
Daily, quarterly and annual tests	**The lecture**	**Spiral: Diagnostic examination of public figures. Leptospirosis: Characters, diagnosis, treatment**	**Understand and apply the lecture**	2	**Fourteen**
Daily, quarterly and annual tests	**The lecture**	**Immunity, infection, inflammation and resistance are natural and non-specific Defense, acquired immunity.**	**Understand and apply the lecture**	2	**fifteen**

11. Course evaluation

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

12. Learning and teaching resources

Methodical book	Required textbooks (methodology, if any)
Internet	Main references (sources)

	Recommended supporting books and references (scientific journals, reports….)
	Electronic references, Internet sites

1. Course name: Biochemistry
2. Course code

3. First semester/first year
4. The date this description was prepared 02/18/2024
5. Available attendance/lecture formats
6. Number of study hours (2) / Number of units (4)

7. Name of the course administrator (if more than one name is mentioned)	
Name: Yasmine Salam Email: Yasmine.ali@atu.edu.iq	
8. Course objectives	
1-	**Objectives of the study subject**
2-	
3-	
9. Teaching and learning strategies	
	Strategy
Course structure .10	

Evaluation method	Teaching method	Name of the unit or topic	Required learning outcomes	Watches	week
Daily, quarterly and annual tests	The lecture	General chemistry - Chemical reactions (oxidation, reduction, hydrolysis) - Measurements in chemistry (qualitative and quantitative measurements of matter)	Understand and apply the lecture	2	the first
Daily, quarterly and annual tests	The lecture	Firstly . History and scope of biochemistry secondly. Cell Biochemistry - Subcellular Organelles and Cell Membranes (Structure and Functions) PH regulation mechanisms, acid-base balance, homeostasis mechanisms, transport through the biological cell	Understand and apply the lecture	2	the second
Daily, quarterly and annual tests	The lecture	Water and electrolyte balance and imbalance - Disturbance and balance - Intake and excretion of water	Understand and apply the lecture	2	the third
Daily, quarterly and annual tests	The lecture	Amino acids and proteins	Understand and apply the lecture	2	The fourth
Daily, quarterly and annual tests	The lecture	Proteins • Protein structure, properties and classification • Protein function • Catabolism and nitrogen balance • Urea cycle	Understand and apply the lecture	2	Fifth
Daily, quarterly and annual tests	The lecture	- Except enzymes	Understand and apply the lecture	2	Sixth
Daily, quarterly and annual tests	The lecture	Carbohydrates • Definition, classification and biological importance, glycosidic bond	Understand and apply the lecture	2	Seventh

Daily, quarterly and annual tests	**The lecture**	**• Carbohydrate metabolism - Glycolysis and gluconeogenesis - Glycogenolysis and gluconeogenesis • Metabolism of disaccharides and disaccharides • Vitality of the metabolic cycle**	**Understand and apply the lecture**	2	**Eighth**
Daily, quarterly and annual tests	**The lecture**	**Fat❖ Classification - structure - characteristics - function❖ Neutral lipids (TAG) - storage, hydrolysis**	**Understand and apply the lecture**	2	**Ninth**
Daily, quarterly and annual tests	**The lecture**	**❖ Metabolism ❖ Cholesterol function and metabolism ❖ Lipoprotein structure**	**Understand and apply the lecture**	2	**tenth**
Daily, quarterly and annual tests	**The lecture**	Hormone Definition and function Mechanism of action of the hormone	**Understand and apply the lecture**	2	**eleven**
Daily, quarterly and annual tests	**The lecture**	The effect and properties of some hormones	**Understand and apply the lecture**	2	**twelve**
Daily, quarterly and annual tests	**The lecture**	**- Nucleotides**	**Understand and apply the lecture**	2	**thirteen**
Daily, quarterly and annual tests	**The lecture**	**▪ Antioxidants (definition and types) - The role of antioxidants in the body**	**Understand and apply the lecture**	2	**Fourteen**
Daily, quarterly and annual tests	**The lecture**	**Vitamin and minerals First: vitamins Definition, classification, sources, structure, deficiency and excess secondly. Metals**	**Understand and apply the lecture**	2	**fifteen**

11. Course evaluation

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

12. Learning and teaching resources	
Methodical book	Required textbooks (methodology, if any)
Internet	Main references (sources)
	Recommended supporting books and references (scientific journals, reports….)
	Electronic references, Internet sites

1. Course name/medical terminology
2. Course code
3. First semester/first year
4. The date this description was prepared 02/18/2024
5. Available attendance formats: Lecture

6. Number of study hours (2) / Number of units (2)

7. Name of the course administrator (if more than one name is mentioned)
Name: Shaimaa Jabbar Hussein Email: Shaimaa.jabbar@atu.edu.iq

8. Course objectives	
1-	**Objectives of the study subject**
2-	
3-	

9. Teaching and learning strategies	
	Strategy

10. Course structure

Evaluation method	Teaching method	Name of the unit or topic	Required learning outcomes	Watches	week
Daily, quarterly and annual tests	**The lecture**	**Introduction to medical terminology Definition and history**	**Understand and apply the lecture**	2	**the first**

Daily, quarterly and annual tests	**The lecture**	**Basic elements of the medical word. Examples of the plural root word**	**Understand and apply the lecture**	2	**the second**
Daily, quarterly and annual tests	**The lecture**	**Common prefix and suffix**	**Understand and apply the lecture**	2	**the third**
Daily, quarterly and annual tests	**The lecture**	**Overview of anatomy and physiology**	**Understand and apply the lecture**	2	**The fourth**
Daily, quarterly and annual tests	**The lecture**	**Anatomical position, body levels and body cavities**	**Understand and apply the lecture**	2	**Fifth**
Daily, quarterly and annual tests	**The lecture**	**Clinical, radiological and diagnostic procedures**	**Understand and apply the lecture**	2	**Sixth**
Daily, quarterly and annual tests	**The lecture**	**Digestive system**	**Understand and apply the lecture**	2	**Seventh**
Daily, quarterly and annual tests	**The lecture**	**Diet**	**Understand and apply the lecture**	2	**Eighth**
Daily, quarterly and annual tests	**The lecture**	**Musculoskeletal system**	**Understand and apply the lecture**	2	**Ninth**
Daily, quarterly and annual tests	**The lecture**	**Reproduction**	**Understand and apply the lecture**	2	**tenth**
Daily, quarterly and annual tests	**The lecture**	**Respiratory system**	**Understand and apply the lecture**	2	**eleven**

Daily, quarterly and annual tests	**The lecture**	**Urinary system**	**Understand and apply the lecture**	2	**twelve**
Daily, quarterly and annual tests	**The lecture**	**Cardiovascular system**	**Understand and apply the lecture**	2	**thirteen**
Daily, quarterly and annual tests	**The lecture**	**Blood, lymph and immune system**	**Understand and apply the lecture**	2	**Fourteen**
Daily, quarterly and annual tests	**The lecture**	**Nervous system**	**Understand and apply the lecture**	2	**fifteen**

11. Course evaluation

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

12. Learning and teaching resources

	Required textbooks (methodology, if any)
Internet	Main references (sources)
	Recommended supporting books and references (scientific journals, reports…).
	Electronic references, Internet sites

1. Course name/computer applications 1
2. Course code
3. First semester/first year
4. Date this description was prepared: 02/18/2024
5. Available attendance formats: Lecture
6. Number of study hours (1)/number of units (3)

7. Name of the course administrator (if more than one name is mentioned)
Name: Ruwaida Fadel Email: ins.rod@atu.edu.iq
8. Course objectives

1-	**Objectives of the study subject**
2-	
3-	

9. Teaching and learning strategies

	Strategy

10. Course structure

Evaluation method	Teaching method	Name of the unit or topic	Required learning outcomes	Watches	week
Daily, quarterly and annual tests	**The lecture**	**Computer basics Computer concept, stages of the computer life cycle, development of computer generations**	**Understand and apply the lecture**	1	**the first**
Daily, quarterly and annual tests	**The lecture**	**The computer and its areas of use. Computer classification in terms of purpose, size, and type of data**	**Understand and apply the lecture**	1	**the second**
Daily, quarterly and annual tests	**The lecture**	**Computer components computer components Computer components The physical parts of the computer and software licenses**	**Understand and apply the lecture**	1	**the third**
Daily, quarterly and annual tests	**The lecture**	**Your personal computer, the concept of computer security and software licenses**	**Understand and apply the lecture**	1	**The fourth**
Daily, quarterly and annual tests	**The lecture**	**Computer security and software licenses**	**Understand and apply the lecture**	1	**Fifth**
Daily, quarterly and annual tests	**The lecture**	**Types of violations of computer security and computer privacy**	**Understand and apply the lecture**	1	**Sixth**

Daily, quarterly and annual tests	**The lecture**	**Computer software licenses and their types, intellectual property, electronic hacking, malware, the most important steps needed to protect against hacking operations, computer harm to health.**	**Understand and apply the lecture**	1	**Seventh**
Daily, quarterly and annual tests	**The lecture**	**Operating systems Definition of operating system Functions Objectives Classification Examples of some operating systems.**	**Understand and apply the lecture**	1	**Eighth**
Daily, quarterly and annual tests	**The lecture**	**Operating Systems Operating Systems Windows 7**	**Understand and apply the lecture**	1	**Ninth**
Daily, quarterly and annual tests	**The lecture**	**Desktop Components Start Menu Taskbar**	**Understand and apply the lecture**	1	**tenth**
Daily, quarterly and annual tests	**The lecture**	**Folders, files and icons**	**Understand and apply the lecture**	1	**eleven**
Daily, quarterly and annual tests	**The lecture**	**Performing operations on windows desktop backgrounds**	**Understand and apply the lecture**	1	**twelve**
Daily, quarterly and annual tests	**The lecture**	**Control panel.**	**Understand and apply the lecture**	1	**thirteen**
Daily, quarterly and annual tests	**The lecture**	**From the Defragment control panel, organize files inside the computer, install and delete programs**	**Understand and apply the lecture**	1	**Fourteen**
Daily, quarterly and annual tests	**The lecture**	**Some common computer situations and habits, managing the printer, setting the time and date, maintaining the initial disks.**	**Understand and apply the lecture**	1	**fifteen**

11. Course evaluation

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

12. Learning and teaching resources	
	Required textbooks (methodology, if any)
Internet	Main references (sources)
	Recommended supporting books and references (scientific journals, reports….)
	Electronic references, Internet sites

1. Course name: Human rights and democracy
2. Course code
3. First semester/first year
4. Date this description was prepared: 02/18/2024
5. Available attendance formats: Lecture
6. Number of study hours (2) / Number of units (2)

7. Name of the course administrator (if more than one name is mentioned)
Name: Alaa Saad Muhammad Email: Almusawialaa769@gmail.com

8. Course objectives	
1-	Objectives of the study subject
2-	
3-	
9. Teaching and learning strategies	
	Strategy

10. Course structure					
Evaluation method	Teaching method	Name of the unit or topic	Required learning outcomes	Watches	week
Daily, quarterly and annual tests	The lecture	Human rights - their definition - their goals The roots of human rights and their development in human history, human rights in ancient civilizations	Understand and apply the lecture	1	the first
Daily, quarterly and annual tests	The lecture	Human rights in ancient civilizations, especially the Mesopotamian civilization Human rights in divine laws, with a focus on human rights in Islam	Understand and apply the lecture	2	the second
Daily, quarterly and annual tests	The lecture	Non-governmental organizations and human rights (International Committee of the Red Cross - Amnesty International - Human	Understand and apply the lecture	2	the third

		Rights Watch - Arab Human Rights Organizations).			
Daily, quarterly and annual tests	**The lecture**	**Human rights in Iraqi constitutions between theory and reality. – The Iraqi Constitution**	**Understand and apply the lecture**	2	**The fourth**
Daily, quarterly and annual tests	**The lecture**	**The relationship between human rights and public freedoms: 1- In the Universal Declaration of Human Rights. 2- In regional charters and national constitutions.**	**Understand and apply the lecture**	2	**Fifth**
Daily, quarterly and annual tests	**The lecture**	**Modern human rights: Economic, social and cultural human rights and civil and political human rights**	**Understand and apply the lecture**	2	**Sixth**
Daily, quarterly and annual tests	**The lecture**	**Guarantees of respect and protection of human rights at the national and international levels. - The role of non-governmental organizations in respecting and protecting human rights.**	**Understand and apply the lecture**	2	**Seventh**
Daily, quarterly and annual tests	**The lecture**	**The general theory of freedoms: the origin of rights and freedoms - the project's position on declared rights and freedoms - the use of the term general freedoms.**	**Understand and apply the lecture**	2	**Eighth**
Daily, quarterly and annual tests	**The lecture**	**Equality: the historical development of the concept of equality: - The modern development of the idea of equality - Gender equality - equality between individuals according to their beliefs and race.**	**Understand and apply the lecture**	2	**Ninth**
Daily, quarterly and annual tests	**The lecture**	**Democracy. Definition. Its types**	**Understand and apply the lecture**	2	**tenth**
Daily, quarterly and annual tests	**The lecture**	**Democratic systems in the world**	**Understand and apply the lecture**	2	**eleven**

Daily, quarterly and annual tests	**The lecture**	**The crime of genocide**	**Understand and apply the lecture**	2	**twelve**
Daily, quarterly and annual tests	**The lecture**	**The concept of freedoms, classification of public freedoms: - Fundamental freedoms, intellectual freedoms, economic and social freedoms**	**Understand and apply the lecture**	2	**thirteen**
Daily, quarterly and annual tests	**The lecture**	**Freedom of security and feeling of reassurance - freedom to come and go**	**Understand and apply the lecture**	2	**Fourteen**
Daily, quarterly and annual tests	**The lecture**	**Gender equality, equality between individuals according to their beliefs**	**Understand and apply the lecture**	2	**fifteen**

11. Course evaluation

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

12. Learning and teaching resources

	Required textbooks (methodology, if any)
Internet	Main references (sources)
	Recommended supporting books and references (scientific journals, reports….)
	Electronic references, Internet sites

1. Course name: surgical nursing

2. Course code
3. Second semester/first year
4. The date this description was prepared is 02/18/2024
5. Available attendance/lecture formats
6. Number of study hours (2) / Number of units (6)

7. Name of the course administrator (if more than one name is mentioned)	
Name: Email:	
8. Course objectives	
1-	**Objectives of the study subject**
2-	
3-	
9. Teaching and learning strategies	
	Strategy

10. Course structure					
Evaluation method	**Teaching method**	Name of the unit or topic	**Required learning outcomes**	**Watches**	**week**
Daily, quarterly and annual tests	**The lecture**	**Common in surgery abbreviations, hospital directions, and surgical terminology**	**Understand and apply the lecture**	2	**the first**
Daily, quarterly and annual tests	**The lecture**	**Nursing intervention in the patient's perioperative period.**	**Understand and apply the lecture**	2	**the second**
Daily, quarterly and annual tests	**The lecture**	**Surgical management of cardiovascular disease/coronary artery disease and angioplasty/signal complications.**	**Understand and apply the lecture**	2	**the third**
Daily, quarterly and annual tests	**The lecture**	**Diagnostic procedures: cystoscopy, biopsy, renal angiography, determination/purpose/intervention and responsibility before and after procedure.**	**Understand and apply the lecture**	2	**The fourth**
Daily, quarterly and annual tests	**The lecture**	**Digestive system / Physical assessment and diagnostic tests / Appendicitis / Causes, physiological signs and symptoms / Treatment / Preparation for appendectomy.**	**Understand and apply the lecture**	2	**Fifth**
Daily, quarterly and annual tests	**The lecture**	**Sign and symptoms of intestinal obstruction/treatment/nursing care**	**Understand and apply the lecture**	2	**Sixth**
Daily, quarterly and annual tests	**The lecture**	**Hemodialysis: dialysis/indication/complications/ nursing care and education.**	**Understand and apply the lecture**	2	**Seventh**
Daily, quarterly and annual tests	**The lecture**	**Peritoneal dialysis/indication/nursing care complications and education.**	**Understand and apply the lecture**	2	**Eighth**

Daily, quarterly and annual tests	**The lecture**	**Kidney transplantation: definition of complications, preoperative nursing intervention and postoperative nursing care**	**Understand and apply the lecture**	2	**Ninth**
Daily, quarterly and annual tests	**The lecture**	**Hernia / types / signs and symptoms / treatment / nursing care and education.**	**Understand and apply the lecture**	2	**tenth**
Daily, quarterly and annual tests	**The lecture**	**Fractures/types/causes/treatment and nursing intervention**	**Understand and apply the lecture**	2	**eleven**
Daily, quarterly and annual tests	**The lecture**	**Amputation/its types/causes/treatment and nursing intervention**	**Understand and apply the lecture**	2	**twelve**
Daily, quarterly and annual tests	**The lecture**	**Diabetic foot / causes / signs and symptoms / treatment / nursing care and education**	**Understand and apply the lecture**	2	**thirteen**
Daily, quarterly and annual tests	**The lecture**	**Thyroidectomy: Definition/Model/Preoperative Nursing Intervention/complications Postoperative nursing care**	**Understand and apply the lecture**	2	**Fourteen**
Daily, quarterly and annual tests	**The lecture**	**Definition of chemotherapy/side effects/method/administration of chemotherapy/patient education/nursing roles for patient injections.**	**Understand and apply the lecture**	2	**fifteen**

11. Course evaluation

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

12. Learning and teaching resources

	Required textbooks (methodology, if any)
Internet	Main references (sources)
	Recommended supporting books and references (scientific journals, reports…)

	Electronic references, Internet sites

1. Course name: Health assessment
2. Course code
3. Second semester/first year
4. Date this description was prepared: 02/18/2024
5. Available attendance formats: Lecture
6. Number of study hours (2) / Number of units (6)

7. Name of the course administrator (if more than one name is mentioned)
Name: Email:
8. Course objectives

1-	**Objectives of the study subject**
2-	
3-	

9. Teaching and learning strategies

	Strategy

10. Course structure

Evaluation method	Teaching method	Name of the unit or topic	Required learning outcomes	Watches	week
Daily, quarterly and annual tests	**The lecture**	**An introductory overview of health assessment: the nursing process and communication, levels of preventive health care, type of assessment, the role of nurses in health assessment, self-data collection.**	**Understand and apply the lecture**	6	**the first**
Daily, quarterly and annual tests	**The lecture**	**Objective data collection: approaching the client, physical assessment technique, data collection analysis and critical thinking process, diagnostic reasoning process, formulating a nursing diagnosis**	**Understand and apply the lecture**	6	**the second**

Daily, quarterly and annual tests	**The lecture**	**Evaluation of the integrative system (skin, hair, nails). Structure and function Self-data collection Collect objective data**	**Understand and apply the lecture**	6	**the third**
Daily, quarterly and annual tests	**The lecture**	**Primary lesion, secondary lesion, data analysis Diagnostic reasoning: a case study**	**Understand and apply the lecture**	6	**The fourth**
Daily, quarterly and annual tests	**The lecture**	**First exam**	**Understand and apply the lecture**	6	**Fifth**
Daily, quarterly and annual tests	**The lecture**	**Head assessment: head anatomy, subjective data collection Collect objective data (normal and abnormal results)**	**Understand and apply the lecture**	6	**Sixth**
Daily, quarterly and annual tests	**The lecture**	**Neck assessment: head anatomy, subjective data collection Collect objective data (normal and abnormal results)**	**Understand and apply the lecture**	6	**Seventh**
Daily, quarterly and annual tests	**The lecture**	**Eye assessment: neck anatomy, subjective data collection Collect objective data (normal and abnormal results)**	**Understand and apply the lecture**	6	**Eighth**
Daily, quarterly and annual tests	**The lecture**	**Special eye test vision test: Additional muscle function nursing diagnosis**	**Understand and apply the lecture**	6	**Ninth**
Daily, quarterly and annual tests	**The lecture**	**Second test**	**Understand and apply the lecture**	6	**tenth**
Daily, quarterly and annual tests	**The lecture**	**Ear evaluation: ear anatomy, subjective data collection, objective data collection (normal and abnormal findings)**	**Understand and apply the lecture**	6	**eleven**
Daily, quarterly and annual tests	**The lecture**	**Special ear test Hearing and balance tests**	**Understand and apply the lecture**	6	**twelve**
Daily, quarterly and annual tests	**The lecture**	**Oral and throat assessment: oral anatomy, subjective data collection Collect objective data (normal and abnormal results)**	**Understand and apply the lecture**	6	**thirteen**

Daily, quarterly and annual tests	**The lecture**	**Nose and sinuses: oral anatomy, subjective data collection Collect objective data (normal and abnormal results)**	**Understa nd and apply the lecture**	6	**Fourteen**
Daily, quarterly and annual tests	**The lecture**	**Final test**	**Understa nd and apply the lecture**	6	**fifteen**

11. Course evaluation
Distribution of the grade out of 100 according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly, written exams, reports, etc.

12. Learning and teaching resources	
	Required textbooks (methodology, if any)
Internet	Main references (sources)
	Recommended supporting books and references (scientific journals, reports….)
	Electronic references, Internet sites

1. Course name: Clinical Chemistry
2. Course code
3. Second semester/first year

4. Date this description was prepared: 02/18/2024
5. Available attendance formats: Lecture
6. Number of study hours (2) / Number of units (4)

7. Name of the course administrator (if more than one name is mentioned)	
Name: Yasmine Salam Email: Yasmine.ali@atu.edu.iq	
8. Course objectives	
1-	**Objectives of the study subject**
2-	
3-	
9. Teaching and learning strategies	
	Strategy
10. Course structure	

Evaluation method	Teaching method	Name of the unit or topic	Required learning outcomes	Watches	week
Daily, quarterly and annual tests	The lecture	Introduction to clinical chemistry, laboratory supplies - Separation techniques - Types of samples - Disposal of hazardous materials	Understand and apply the lecture	2	the first
Daily, quarterly and annual tests	The lecture	Body fluids Firstly. Blood - Composition and functions - Blood clotting and hemoglobin degradation - Prevent blood clotting. - Hemolysis	Understand and apply the lecture	2	the second
Daily, quarterly and annual tests	The lecture	secondly. Urine - Formation - Secretion -Normal and abnormal amount of urine - Urinalysis (physical and chemical properties)	Understand and apply the lecture	2	the third
Daily, quarterly and annual tests	The lecture	Electrolyte disturbance (sodium, potassium, iron, calcium, chloride) ❖ Kidney function test • Kidney function • Evaluation of kidney function tests	Understand and apply the lecture	2	The fourth
Daily, quarterly and annual tests	The lecture	Plasma proteins: • Types of protein abnormalities • Protein in other body fluids • Protein measurement methods	Understand and apply the lecture	2	Fifth
Daily, quarterly and annual tests	The lecture	• Non-protein nitrogen compounds (urea, creatinine, uric acid, ammonia) • Disturbances of the seventh and eighth urea cycle	Understand and apply the lecture	2	Sixth
Daily, quarterly and annual tests	The lecture	Enzymes Clinical enzymology ▪ (ALT, AST, GGT, ALP, ACP) ▪ Enzyme profile in liver diseases ▪ Enzymatic markers of	Understand and apply the lecture	2	Seventh

		heart disease ▪ Amylase and Lipase			
Daily, quarterly and annual tests	**The lecture**	Liver function examination ❖ **The main function of the liver** ❖ **Liver function test classification** ❖ **Signs of liver dysfunction**	**Understand and apply the lecture**	2	**Eighth**
Daily, quarterly and annual tests	**The lecture**	**Carbohydrates Types of carbohydrates and how to measure them in the blood High blood sugar and hypoglycemia Hormonal regulation of the level of carbohydrates in the body**	**Understand and apply the lecture**	2	**Ninth**
Daily, quarterly and annual tests	**The lecture**	**• Normal plasma glucose level and its clinical importance** **- Diabetes and metabolic syndrome** **- Laboratory tests for diabetes**	**Understand and apply the lecture**	2	**tenth**
Daily, quarterly and annual tests	**The lecture**	**Fats: general lipoprotein, fat-related diseases** **Plasma lipoprotein (types and importance), lipid profile**	**Understand and apply the lecture**	2	**eleven**
Daily, quarterly and annual tests	**The lecture**	Hormone Disorders: - Hormones from the hypothalamus and pituitary gland	**Understand and apply the lecture**	2	**twelve**
Daily, quarterly and annual tests	**The lecture**	**- Steroid hormones. - Thyroid hormones** **- Pancreas and digestive system** **- Pregnancy hormone**	**Understand and apply the lecture**	2	**thirteen**
Daily, quarterly and annual tests	**The lecture**	**Nucleotides: Cancer - cell differentiation, carcinogens and cancer treatment** **▪ Tumor markers** **▪ Free radicals: clinical importance (lipid peroxidation)**	**Understand and apply the lecture**	2	**Fourteen**

Daily, quarterly and annual tests	**The lecture**	**Vitamins and minerals: energy requirements, risk of malnutrition, obesity** **▪ Glycemic index: a toxic substance in foodstuffs**	**Understand and apply the lecture**	2	**fifteen**

11. Course evaluation

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

12. Learning and teaching resources

	Required textbooks (methodology, if any)
Internet	Main references (sources)
	Recommended supporting books and references (scientific journals, reports….)
	Electronic references, Internet sites

1. Course name/member positions
2. Course code
3. Second semester/first year
4. Date this description was prepared: 02/18/2024
5. Available attendance formats: Lecture
6. Number of study hours (2) / Number of units (4)

7. Name of the course administrator (if more than one name is mentioned)
Name: Shaimaa Jabbar Hussein Email: Shaimaa.jabbar@atu.edu.iq
8. Course objectives

1-	**Objectives of the study subject**
2-	
3-	

9. Teaching and learning strategies

	Strategy

10. Course structure

Evaluation method	Teaching method	Name of the unit or topic	Required learning outcomes	Watches	week
Daily, quarterly and annual tests	**The lecture**	**Introduction to Physiology: Cell and General Physiology**	**Understand and apply the lecture**	2	**the first**
Daily, quarterly and annual tests	**The lecture**	**Membrane physiology: transport of substances across the cell Membrane, membrane potential and action potential**	**Understand and apply the lecture**	2	**the second**
Daily, quarterly and annual tests	**The lecture**	**Skeletal muscle contraction and skeletal muscle excitation**	**Understand and apply the lecture**	2	**the third**
Daily, quarterly and annual tests	**The lecture**	**Contraction and excitability of smooth muscles**	**Understand and apply the lecture**	2	**The fourth**

Daily, quarterly and annual tests	**The lecture**	**myocardium; The heart as a pump and the function of the heart valves**	**Understand and apply the lecture**	2	**Fifth**
Daily, quarterly and annual tests	**The lecture**	**Normal electrocardiogram**	**Understand and apply the lecture**	2	**Sixth**
Daily, quarterly and annual tests	**The lecture**	**Blood cells, immunity and blood clotting**	**Understand and apply the lecture**	2	**Seventh**
Daily, quarterly and annual tests	**The lecture**	**Body fluid compartments: extracellular and intracellular fluids. -Interstitial fluid and edema**	**Understand and apply the lecture**	2	**Eighth**
Daily, quarterly and annual tests	**The lecture**	**Urine formation by the kidneys: glomerular filtration, renal blood Flow, tubular processing and control of glomerular filtration**	**Understand and apply the lecture**	2	**Ninth**
Daily, quarterly and annual tests	**The lecture**	**Regulating acid-base balance**	**Understand and apply the lecture**	2	**tenth**
Daily, quarterly and annual tests	**The lecture**	**Breathing**	**Understand and apply the lecture**	2	**eleven**
Daily, quarterly and annual tests	**The lecture**	**The nervous system: general principles and sensory physiology**	**Understand and apply the lecture**	2	**twelve**
Daily, quarterly and annual tests	**The lecture**	**Physiology of the digestive system**	**Understand and apply the lecture**	2	**thirteen**
Daily, quarterly and annual tests	**The lecture**	**Metabolism and temperature regulation**	**Understand and apply the lecture**	2	**Fourteen**

Daily, quarterly and annual tests	**The lecture**	**Endocrinology and reproduction**	**Understa nd and apply the lecture**	2	**fifteen**

11. Course evaluation
Distribution of the grade out of 100 according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly, written exams, reports, etc.

12. Learning and teaching resources	
	Required textbooks (methodology, if any)
Internet	Main references (sources)
	Recommended supporting books and references (scientific journals, reports….)
	Electronic references, Internet sites

1. Course name: Medical parasitology and viruses
2. Course code
3. Second semester/first year

4. Date this description was prepared: 02/18/2024
5. Available attendance formats: Lecture
6. Number of study hours (2) / Number of units (4)

7. Name of the course administrator (if more than one name is mentioned)	
Name: Email:	
8. Course objectives	
1-	**Objectives of the study subject**
2-	
3-	

9. Teaching and learning strategies	
	Strategy

11. Course structure					
Evaluation method	**Teaching**	**Name of the unit or topic**	**Required learning**	**Watches**	**week**

	method		outcomes		
Daily, quarterly and annual tests	**The lecture**	**Introduction to viruses, virus structure, virus classification, virus replication**	**Understand and apply the lecture**	2	**the first**
Daily, quarterly and annual tests	**The lecture**	**Antivirals and vaccines Encapsulated DNA viruses (herpes virus, cytomegalovirus, varicella zoster virus)**	**Understand and apply the lecture**	2	**the second**
Daily, quarterly and annual tests	**The lecture**	**Encapsulated DNA viruses (herpes virus, cytomegalovirus, varicella zoster virus)**	**Understand and apply the lecture**	2	**the third**
Daily, quarterly and annual tests	**The lecture**	**Non-enveloped viruses (human papillomavirus, adenovirus)**	**Understand and apply the lecture**	2	**The fourth**
Daily, quarterly and annual tests	**The lecture**	**Mumps, measles, German measles.**	**Understand and apply the lecture**	2	**Fifth**
Daily, quarterly and annual tests	**The lecture**	**Influenza, Corona virus, Rotavirus.**	**Understand and apply the lecture**	2	**Sixth**
Daily, quarterly and annual tests	**The lecture**	**Viral hepatitis virus, HIV.**	**Understand and apply the lecture**	2	**Seventh**
Daily, quarterly and annual tests	**The lecture**	**Introduction to parasitology, classification, antiparasitic drugs.**	**Understand and apply the lecture**	2	**Eighth**
Daily, quarterly and annual tests	**The lecture**	**Entamoeba histolytica, Giardia lamblia.**	**Understand and apply the lecture**	2	**Ninth**
Daily, quarterly and annual tests	**The lecture**	**Trichomonas vaginalis, Leishmania**	**Understand and apply the lecture**	2	**tenth**

Daily, quarterly and annual tests	**The lecture**	**Malaria, toxoplasma**	**Understand and apply the lecture**	2	**eleven**
Daily, quarterly and annual tests	**The lecture**	**Nematodes (Ascaris, Antropis)**	**Understand and apply the lecture**	2	**twelve**
Daily, quarterly and annual tests	**The lecture**	**Schistosomiasis**	**Understand and apply the lecture**	2	**thirteen**
Daily, quarterly and annual tests	**The lecture**	**Water bag worm**	**Understand and apply the lecture**	2	**Fourteen**
Daily, quarterly and annual tests	**The lecture**	**Cow tapeworm, pig tapeworm**	**Understand and apply the lecture**	2	**fifteen**

11. Course evaluation
Distribution of the grade out of 100 according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly, written exams, reports, etc.

12. Learning and teaching resources	
	Required textbooks (methodology, if any)
Internet	Main references (sources)
	Recommended supporting books and references (scientific journals, reports….)
	Electronic references, Internet sites

1. Course name: Basics of sterilization and health management
2. Course code

3. First semester/second year
4. Date this description was prepared: 02/18/2024
5. Available attendance formats: Lecture
6. Number of study hours (2) / Number of units (6)

7. Name of the course administrator (if more than one name is mentioned)	
Name: Shaher Rekan Email: Shaher.radhi@atu.edu.iq	
8. Course objectives	
1-	**Objectives of the study subject**
2-	
3-	
9. Teaching and learning strategies	
	Strategy

10. Course structure

Evaluation method	Teaching method	Name of the unit or topic	Required learning outcomes	Watches	week
Daily, quarterly and annual tests	The lecture	Sterilization and disinfection, basics of sterilization, sterilization in hospitals.	Understand and apply the lecture	2	the first
Daily, quarterly and annual tests	The lecture	Types of sterilization, the difference between sterilization and disinfection	Understand and apply the lecture	2	the second
Daily, quarterly and annual tests	The lecture	Management	Understand and apply the lecture	2	the third
Daily, quarterly and annual tests	The lecture	Management jobs	Understand and apply the lecture	2	The fourth
Daily, quarterly and annual tests	The lecture	Management theories	Understand and apply the lecture	2	Fifth
Daily, quarterly and annual tests	The lecture	How to manage	Understand and apply the lecture	2	Sixth
Daily, quarterly and annual tests	The lecture	Discuss reports	Understand and apply the lecture	2	Seventh
Daily, quarterly and annual tests	The lecture	Strategic management	Understand and apply the lecture	2	Eighth
Daily, quarterly and annual tests	The lecture	Time management	Understand and apply the lecture	2	Ninth
Daily, quarterly and annual tests	The lecture	Electronic management	Understand and apply the lecture	2	tenth

Daily, quarterly and annual tests	**The lecture**	**Roles of managers**	**Understand and apply the lecture**	2	**eleven**
Daily, quarterly and annual tests	**The lecture**	**Job description and job analysis**	**Understand and apply the lecture**	2	**twelve**
Daily, quarterly and annual tests	**The lecture**	**Change management**	**Understand and apply the lecture**	2	**thirteen**
Daily, quarterly and annual tests	**The lecture**	**Basic skills in health administration**	**Understand and apply the lecture**	2	**Fourteen**
Daily, quarterly and annual tests	**The lecture**	**Discussing student reports**	**Understand and apply the lecture**	2	**fifteen**

11. Course evaluation

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

12. Learning and teaching resources

	Required textbooks (methodology, if any)
Internet	Main references (sources)
	Recommended supporting books and references (scientific journals, reports….)
	Electronic references, Internet sites

1. Course name: Renal Nutrition
2. Course code
3. First semester/second year
4. Date this description was prepared: 2/18/2024
5. Available attendance formats: Lecture
6. Number of study hours (2) / Number of units (6)

7. Name of the course administrator (if more than one name is mentioned)	
Name: Email:	
8. Course objectives	
1-	**Objectives of the study subject**
2-	
3-	
9. Teaching and learning strategies	
	Strategy

10. Course structure

Evaluation method	Teaching method	Name of the unit or topic	Required learning outcomes	Watches	week
Daily, quarterly and annual tests	The lecture	Introduction to nutrition in dialysis: concept and definition of terms - nutrition, malnutrition and health: scope of nutrition, food selection, storage and preservation, and prevention of food adulteration.	Understand and apply the lecture	2	the first
Daily, quarterly and annual tests	The lecture	Types of nutrients: protein, carbohydrates, fats, vitamins, minerals, water. Its calorie value and calculation.	Understand and apply the lecture	2	the second
Daily, quarterly and annual tests	The lecture	Carbohydrates: monosaccharides: glucose, fructose, galactose. Disaccharides - maltose, lactose, sucrose. Polysaccharides: dextrin, starch, glycogen, resistant starch.	Understand and apply the lecture	2	the third
Daily, quarterly and annual tests	The lecture	Proteins - sources, daily needs and functions. The effect of very high and very low proteins on health. Digestion and absorption. Protein quality assessment (BV, PER, NPU).	Understand and apply the lecture	2	Fourth
Daily, quarterly and annual tests	The lecture	Factors affecting protein bioavailability including anti-nutritional factors.	Understand and apply the lecture	2	Fifth

Daily, quarterly and annual tests	**The lecture**	**Fats - sources, daily needs and functions. Digestion and absorption. Role and nutritional importance of PUFA, MUFA, SFA, and W-3 fatty acids**	**Understand and apply the lecture**	2	**Sixth**
Daily, quarterly and annual tests	**The lecture**	**Water - drinking water sources, requirements, water conservation. Vitamins - their types, sources, and vitamin deficiency needs**	**Understand and apply the lecture**	2	**Seventh**
Daily, quarterly and annual tests	**The lecture**	**Energy in human nutrition: the idea of energy and its unity, energy balance, assessment of deficiency and surplus energy requirements, determination of energy in food, B.M.R. and its organization, -S.D**	**Understand and apply the lecture**	2	**Eighth**
Daily, quarterly and annual tests	**The lecture**	**Clinical signs: need and importance, identifying signs of PEM, vitamin A deficiency and iodine deficiency, and interpreting the descriptive list of clinical signs and other diseases and disorders related to kidney disease.**	**Understand and apply the lecture**	2	**9th & 10th**
Daily, quarterly and annual tests	**The lecture**	**Nutritional anthropometry: need and importance, reference standard, techniques for measuring height, weight, head, chest and arm circumferences, interpretation of these measurements. Using a growth chart for a dialysis patient**	**Understand and apply the lecture**	2	**Eleven & twelve**
Daily, quarterly and annual tests	**The lecture**	**Minimum nutritional requirements for hemodialysis patients and the RDA: formulation of the RDA and the Dietary Guidelines for Men and Women Reference. Adult consumption unit.**	**Understand and apply the lecture**	2	**thirteenth**
Daily, quarterly and annual tests	**The lecture**	**Nutritional diet planning and maintenance of intake and output conversations for the dialysis patient.**	**Understand and apply the lecture**	2	**fourteenth**
Daily, quarterly and annual tests	**The lecture**	**Final test**	**Understand and apply the lecture**	2	**fifteenth**

11. Course evaluation
Distribution of the grade out of 100 according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly, written exams, reports, etc.

12. Learning and teaching resources	
	Required textbooks (methodology, if any)
Internet	Main references (sources)
	Recommended supporting books and references (scientific journals, reports….)
	Electronic references, Internet sites

1. Course name: Principles of psychiatric nursing
2. Course code
3. First semester/second year
4. Date this description was prepared: 02/18/2024
5. Available attendance formats: Lecture
6. Number of study hours (2) / Number of units (6)

7. Name of the course administrator (if more than one name is mentioned)
Name: Ahmed Hussein Salman Email:

8. Course objectives	
1-	**Objectives of the study subject**
2-	
3-	
9. Teaching and learning strategies	
	Strategy

1. Course name: Principles of psychiatric nursing
2. Course code
3. First semester/second year
4. Date this description was prepared: 2/18/2024/
5. Available attendance formats: Lecture
6. Number of study hours (2) / Number of units (6)

7. Name of the course administrator (if more than one name is mentioned)
Name: Ahmed Hussein Salman Email:
8. Course objectives

1-	**Objectives of the study subject**
2-	
3-	

9. Teaching and learning strategies

	Strategy

10. Course structure

Evaluation method	Teaching method	Name of the unit or topic	Required learning outcomes	Watches	week
Daily, quarterly and annual tests	The lecture	Psychological crisis The origin of the psychological crisis - physical and physiological changes - new motivations - disorders of adolescence - social factors - conflicts.	Understand and apply the lecture	2	the first
Daily, quarterly and annual tests	The lecture	Causes of psychological crises	Understand and apply the lecture	2	the second
Daily, quarterly and annual tests	The lecture	Conflict of motives	Understand and apply the lecture	2	the third
Daily, quarterly and annual tests	The lecture	Sources of crises	Understand and apply the lecture	2	The fourth
Daily, quarterly and annual tests	The lecture	Recidivism	Understand and apply the lecture	2	Fifth
Daily, quarterly and annual tests	The lecture	Overcompensation	Understand and apply the lecture	2	Sixth
Daily, quarterly and annual tests	The lecture	Lonely frustration, depression	Understand and apply the lecture	2	Seventh
Daily, quarterly and annual tests	The lecture	Withdrawal	Understand and apply the lecture	2	Eighth

Daily, quarterly and annual tests	**The lecture**	**Compatibility and miscompatibility, for harmony between the individual. - New circumstances facing the individual?**	**Understand and apply the lecture**	2	**Ninth**
Daily, quarterly and annual tests	**The lecture**	**Manifestations of general maladjustment, treatment and repair. Pictures of manifestations of general poor compatibility, lack of production. Lack of happiness, mental ill health.**	**Understand and apply the lecture**	2	**tenth**
Daily, quarterly and annual tests	**The lecture**	**Genetic factors, maladjustment as seen by schools of psychology, normal and abnormal personalities. Statistical standard. The ideal standard, the cultural standard, the pathological standard**	**Understand and apply the lecture**	2	**eleven**
Daily, quarterly and annual tests	**The lecture**	**The effect of repressed psychological aspects in the process of maladjustment. The relative mismatch between different societies and between society**	**Understand and apply the lecture**	2	**twelve**
Daily, quarterly and annual tests	**The lecture**	**The psychological traumas he faces during his public relationship**	**Understand and apply the lecture**	2	**thirteen**
Daily, quarterly and annual tests	**The lecture**	**Habits and trends**	**Understand and apply the lecture**	2	**Fourteen**
Daily, quarterly and annual tests	**The lecture**	**The effect of genetic factors on compatibility and psychological needs.**	**Understand and apply the lecture**	2	**fifteen**

11. Course evaluation

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

12. Learning and teaching resources	
	Required textbooks (methodology, if any)
Internet	Main references (sources)
	Recommended supporting books and references (scientific journals, reports….)
	Electronic references, Internet sites

1. Course name: Infection control
2. Course code
3. First semester/second year
4. Date this description was prepared: 2/18/2024
5. Available attendance formats: Lecture
6. Number of study hours (2) / Number of units (4)

7. Name of the course administrator (if more than one name is mentioned)	
Name: Email:	
8. Course objectives	
1-	**Objectives of the study subject**
2-	
3-	

9. Teaching and learning strategies	
	Strategy

10. Course structure					
Evaluation method	**Teaching method**	**Name of the unit or topic**	**Required learning outcom**	**Watches**	**week**

			es		
Daily, quarterly and annual tests	**The lecture**	**Introduction to infection control and glossary of terms**	**Understand and apply the lecture**	2	**the first**
Daily, quarterly and annual tests	**The lecture**	**Chain of disease transmission.**	**Understand and apply the lecture**	2	**the second**
Daily, quarterly and annual tests	**The lecture**	**Disease prevention plan.**	**Understand and apply the lecture**	2	**the third**
Daily, quarterly and annual tests	**The lecture**	**- General principles of prevention (level of prevention) and breaking the chain of infection.**	**Understand and apply the lecture**	2	**The fourth**
Daily, quarterly and annual tests	**The lecture**	**Immunity - vaccinations against infectious diseases (regional plan)**	**Understand and apply the lecture**	2	**Fifth**
Daily, quarterly and annual tests	**The lecture**	**Standard precautions (hand hygiene and personal protective equipment).**	**Understand and apply the lecture**	2	**Sixth**
Daily, quarterly and annual tests	**The lecture**	**Disinfectants and sterilization**	**Understand and apply the lecture**	2	**Seventh**

Daily, quarterly and annual tests	**The lecture**	**Biomedical waste management**	**Understand and apply the lecture**	2	**Eighth**
Daily, quarterly and annual tests	**The lecture**	**The infection is spread through food and water**	**Understand and apply the lecture**	2	**Ninth**
Daily, quarterly and annual tests	**The lecture**	**The infection is spread by animals and insects**	**Understand and apply the lecture**	2	**tenth**
Daily, quarterly and annual tests	**The lecture**	**The infection spreads through sexual contact and through blood and body fluids**	**Understand and apply the lecture**	2	**eleven**
Daily, quarterly and annual tests	**The lecture**	**Disease screening**	**Understand and apply the lecture**	2	**twelve**
Daily, quarterly and annual tests	**The lecture**	**Flowcharts for diagnosing infectious diseases: (Acute diarrhea syndrome and acute hemorrhagic fever syndrome)**	**Understand and apply the lecture**	2	**thirteen**
Daily, quarterly and annual tests	**The lecture**	**(acute respiratory syndrome) -Acute jaundice syndrome and acute neurological syndrome**	**Understand and apply the lecture**	2	**Fourteen**
Daily, quarterly and annual tests	**The lecture**	**Final test**	**Understand and apply the lecture**	2	**fifteen**

11. Course evaluation

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

12. Learning and teaching resources	
	Required textbooks (methodology, if any)
Internet	Main references (sources)
	Recommended supporting books and references (scientific journals, reports….)
	Electronic references, Internet sites

1. Course name: Immunology
2. Course code
3. First semester/second year
4. Date this description was prepared: 2/18/2024
5. Available attendance formats: Lecture
6. Number of study hours (2) / Number of units (2)

7. Name of the course administrator (if more than one name is mentioned)	
Name: Email:	
8. Course objectives	
1-	**Objectives of the study subject**

2-	
3-	

9. Teaching and learning strategies

	Strategy

10. Course structure

Evaluation method	Teaching method	Name of the unit or topic	Required learning outcomes	Watches	week
Daily, quarterly and annual tests	**The lecture**	**Basic Immunology: An Introduction to Immunology**	**Understand and apply the lecture**	2	**the first**
Daily, quarterly and annual tests	**The lecture**	**Immunity: definition of immunity, types of immunity**	**Understand and apply the lecture**	2	**the second**
Daily, quarterly and annual tests	**The lecture**	**The immune system and the cells and organs of the immune system**	**Understand and apply the lecture**	2	**the third**
Daily, quarterly and annual tests	**The lecture**	**Central and peripheral immune system**	**Understand and apply the lecture**	2	**The fourth**
Daily, quarterly and annual tests	**The lecture**	**Immune system functions**	**Understand and apply the lecture**	2	**Fifth**

Daily, quarterly and annual tests	**The lecture**	**Antigen: molecular shapes, antigenic determinants**	**Understand and apply the lecture**	2	**Sixth**
Daily, quarterly and annual tests	**The lecture**	**Antibody: types of antibodies, and composition of the antibody**	**Understand and apply the lecture**	2	**Seventh**
Daily, quarterly and annual tests	**The lecture**	**Differences between antigen and antibody**	**Understand and apply the lecture**	2	**Eighth**
Daily, quarterly and annual tests	**The lecture**	**Humoral and cellular immunity**	**Understand and apply the lecture**	2	**Ninth**
Daily, quarterly and annual tests	**The lecture**	**Phagocytosis and macrophage-mediated cell phagocytosis**	**Understand and apply the lecture**	2	**tenth**
Daily, quarterly and annual tests	**The lecture**	**Role of IgA against Streptococcus mutans bacteria in dental cavities**	**Understand and apply the lecture**	2	**eleven**
Daily, quarterly and annual tests	**The lecture**	**Hypersensitivity: definition and types of hypersensitivity**	**Understand and apply the lecture**	2	**twelve**
Daily, quarterly and annual tests	**The lecture**	**Autoimmunity: Definition of autoimmune diseases.**	**Understand and apply the lecture**	2	**thirteen**
Daily, quarterly and annual tests	**The lecture**	**Types of autoimmunity**	**Understand and apply the lecture**	2	**Fourteen**
Daily, quarterly and annual tests	**The lecture**	**Discussing student reports**	**Understand and apply the lecture**	2	**fifteen**

11. Course evaluation

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

12. Learning and teaching resources	
	Required textbooks (methodology, if any)
	Main references (sources)
	Recommended supporting books and references (scientific journals, reports….)
	Electronic references, Internet sites

1. Course name: Kidney diseases
2. Course code
3. First semester/second year
4. The date this description was prepared 02/18/2024
5. Available attendance formats: Lecture
6. Number of study hours (2) / Number of units (6)

7. Name of the course administrator (if more than one name is mentioned)	
Name: Email:	
8. Course objectives	
1-	**Objectives of the study subject**

2-	
3-	

9. Teaching and learning strategies

	Strategy

10. Course structure

Evaluation method	Teaching method	Name of the unit or topic	Required learning outcomes	Watches	week
Daily, quarterly and annual tests	**The lecture**	**Acute renal failure**	**Understand and apply the lecture**	2	**the first**
Daily, quarterly and annual tests	**The lecture**	**Nephrotic syndrome - primary and secondary**	**Understand and apply the lecture**	2	**the second**
Daily, quarterly and annual tests	**The lecture**	**Urinary tract infections**	**Understand and apply the lecture**	2	**the third**
Daily, quarterly and annual tests	**The lecture**	**Nephrotic syndrome**	**Understand and apply the lecture**	2	**The fourth**
Daily, quarterly and annual tests	**The lecture**	**Urinary abnormalities without symptoms**	**Understand and apply the lecture**	2	**Fifth**

Daily, quarterly and annual tests	**The lecture**	**Chronic kidney failure**	**Understand and apply the lecture**	2	**Sixth**
Daily, quarterly and annual tests	**The lecture**	**Kidney stone disease**	**Understand and apply the lecture**	2	**Seventh**
Daily, quarterly and annual tests	**The lecture**	**First exam**	**Understand and apply the lecture**	2	**Eighth**
Daily, quarterly and annual tests	**The lecture**	**Obstructive uropathy**	**Understand and apply the lecture**	2	**Ninth**
Daily, quarterly and annual tests	**The lecture**	**Congenital and hereditary kidney diseases**	**Understand and apply the lecture**	2	**tenth**
Daily, quarterly and annual tests	**The lecture**	**Kidney disease associated with pregnancy**	**Understand and apply the lecture**	2	**eleven**
Daily, quarterly and annual tests	**The lecture**	**Kidney tumors**	**Understand and apply the lecture**	2	**twelve**
Daily, quarterly and annual tests	**The lecture**	**Renal vascular disorders.**	**Understand and apply the lecture**	2	**thirteen**
Daily, quarterly and annual tests	**The lecture**	**High blood pressure associated with kidney disease**	**Understand and apply the lecture**	2	**Fourteen**
Daily, quarterly and annual tests	**The lecture**	**Final test**	**Understand and apply the lecture**	2	**fifteen**

11. Course evaluation

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

12. Learning and teaching resources	
	Required textbooks (methodology, if any)
Internet	Main references (sources)
	Recommended supporting books and references (scientific journals, reports….)
	Electronic references, Internet sites

1. Course name: Medical devices
2. Course code
3. Second semester/second year
4. Date this description was prepared: 2/18/2024
5. Available attendance formats: Lecture
6. Number of study hours (2) / Number of units (6)

7. Name of the course administrator (if more than one name is mentioned)	
Name: Mustafa Nazir Email: natheerm124@gmail.com	
8. Course objectives	
1-	**Objectives of the study subject**
2-	
3-	

9. Teaching and learning strategies	
	Strategy

10. Course structure					
Evaluation method	**Teaching method**	**Name of the unit or topic**	**Required learning outcomes**	**Watches**	**week**
Daily, quarterly and annual tests	**The lecture**	**introduction Learn about the course topics**	**Understand and apply the lecture**	2	**the first**
Daily, quarterly and annual tests	**The lecture**	**Centrifuge**	**Understand and apply the lecture**	2	**the second**

Daily, quarterly and annual tests	**The lecture**	**Thermoelectric devices: Applications of various thermal devices**	**Understand and apply the lecture**	2	**the third**
Daily, quarterly and annual tests	**The lecture**	**Microscope: Learn different parts, types and applications of microscopes**	**Understand and apply the lecture**	2	**The fourth**
Daily, quarterly and annual tests	**The lecture**	**Autoclave**	**Understand and apply the lecture**	2	**Fifth**
Daily, quarterly and annual tests	**The lecture**	**Spectrophotometer: Uses and applications of spectrophotometer**	**Understand and apply the lecture**	2	**Sixth**
Daily, quarterly and annual tests	**The lecture**	**Uses and applications of gel electrophoresis**	**Understand and apply the lecture**	2	**Seventh**
Daily, quarterly and annual tests	**The lecture**	**CBC Uses and applications of CBC**	**Understand and apply the lecture**	2	**Eighth**
Daily, quarterly and annual tests	**The lecture**	**Urine analysis How to implement GUE**	**Understand and apply the lecture**	2	**Ninth**
Daily, quarterly and annual tests	**The lecture**	**Automated hematology analyzer Uses and applications of automated hematology analyzer**	**Understand and apply the lecture**	2	**tenth**
Daily, quarterly and annual tests	**The lecture**	**Cytometer Uses and applications of hemocytometer**	**Understand and apply the lecture**	2	**eleven**
Daily, quarterly and annual tests	**The lecture**	**Kidney dialysis machines**	**Understand and apply the lecture**	2	**twelve**
Daily, quarterly and annual tests	**The lecture**	**Hemodialysis**	**Understand and apply the lecture**	2	**thirteen**

Daily, quarterly and annual tests	**The lecture**	**Peritoneal dialysis**	**Understand and apply the lecture**	2	**Fourteen**
Daily, quarterly and annual tests	**The lecture**	**Final test**	**Understand and apply the lecture**	2	**fifteen**

11. Course evaluation

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

12. Learning and teaching resources

	Required textbooks (methodology, if any)
Internet	Main references (sources)
	Recommended supporting books and references (scientific journals, reports….)
	Electronic references, Internet sites

1. Course name: Applied dialysis techniques

2. Course code

3. Second semester/second year

4. Date this description was prepared: 2/18/2024

5. Available attendance formats: Lecture

6. Number of study hours (2) / Number of units (4)

7. Name of the course administrator (if more than one name is mentioned)

Name: Email:

8. Course objectives

1-	**Objectives of the study subject**
2-	
3-	

9. Teaching and learning strategies

Strategy

10. Course structure

Evaluation method	Teaching method	Name of the unit or topic	Required learning outcomes	Watches	week
Daily, quarterly and annual tests	The lecture	History of dialysis – History of dialysis	Understand and apply the lecture	2	the first
Daily, quarterly and annual tests	The lecture	History of kidney disease: acute kidney injury, renal angiography, biopsy and culture	Understand and apply the lecture	2	the second
Daily, quarterly and annual tests	The lecture	Anatomy and physiology of dialysis: peritoneal anatomy, peritoneal physiology, ultradiffusion, absorption, clinical evaluation.	Understand and apply the lecture	2	the third
Daily, quarterly and annual tests	The lecture	Principles of dialysis, quantification of adequacy: principles of diffusion, filtration, ultrafiltration, convection, and osmosis. Solute transport and fluid movement during dialysis. Principles of fluid dynamics. Hemodialysis and peritoneal dialysis	Understand and apply the lecture	2	The fourth
Daily, quarterly and annual tests	The lecture	Measuring dialysis appropriately: urea reduction ratio - urea kinetic modeling. Pre-dialysis and post-dialysis - BUN measurement. KT/V measurement.	Understand and apply the lecture	2	Fifth
Daily, quarterly and annual tests	The lecture	Vascular access - temporary and permanent: Types of vascular access - fistulas, grafts and catheters. Predialysis evaluations for all types of vascular access. Methods of needle insertion into AVFs and grafts. Predialysis assessment, access procedures, exit site care, and catheter monitoring.	Understand and apply the lecture	2	Sixth

Daily, quarterly and annual tests	**The lecture**	**Types of dialysis**	**Understand and apply the lecture**	2	**Seventh**
Daily, quarterly and annual tests	**The lecture**	**Introduction to continuous renal replacement therapy (CRRT).**	**Understand and apply the lecture**	2	**Eighth**
Daily, quarterly and annual tests	**The lecture**	**Equipment, accessories and function (hemodialysis machine, peritoneal dialysis machine.**	**Understand and apply the lecture**	2	**9th & 10th**
Daily, quarterly and annual tests	**The lecture**	**Infection control and sterilization**	**Understand and apply the lecture**	2	**eleven**
Daily, quarterly and annual tests	**The lecture**	**Principles and practices of biomedical waste management.**	**Understand and apply the lecture**	2	**twelve**
Daily, quarterly and annual tests	**The lecture**	**Renal data maintenance: Records and reports are maintained in the dialysis unit.**	**Understand and apply the lecture**	2	**thirteen**
Daily, quarterly and annual tests	**The lecture**	**The technician's responsibility is to maintain records and reports.**	**Understand and apply the lecture**	2	**Fourteen**
Daily, quarterly and annual tests	**The lecture**	**Final test**	**Understand and apply the lecture**	2	**fifteen**

11. Course evaluation

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

12. Learning and teaching resources	
	Required textbooks (methodology, if any)
Internet	Main references (sources)
	Recommended supporting books and references (scientific journals, reports….)
	Electronic references, Internet sites

1. Course name: Hematology
2. Course code
3. Second semester/second year
4. Date this description was prepared: 2/18/2024
5. Available attendance formats: Lecture
6. Number of study hours (2) / Number of units (4)

7. Name of the course administrator (if more than one name is mentioned)
Name: Email:

8. Course objectives

1-	**Objectives of the study subject**
2-	
3-	

9. Teaching and learning strategies

	Strategy

11. Course structure

Evaluation method	Teaching method	Name of the unit or topic	Required learning outcomes	Watches	week
Daily, quarterly and annual tests	**The lecture**	**Anatomy/Physiology of Bone Marrow. The emergence of hematopoiesis – Roles of cytokines, growth factors, and the bone marrow microenvironment (niches) Bone marrow failure Aplastic anemia**	**Understand and apply the lecture**	2	**the first**
Daily, quarterly and annual tests	**The lecture**	**The process of red blood cell formation; Normal red cell metabolism (including ATP generation, 2,3 DPG and antioxidant defense); Normal hemoglobin (structure and function) Red cell senescence and removal by a renewable energy system**	**Understand and apply the lecture**	2	**the second**

Daily, quarterly and annual tests	**The lecture**	**Formation of white blood cells. Normal function of granulocytes, monocytes and lymphocytes. Anatomy of the immune system (primary and secondary lymphoid organs) Innate immunity and inflammatory response**	**Understand and apply the lecture**	2	**the third**
Daily, quarterly and annual tests	**The lecture**	**Anemia: - Pathophysiology and clinical signs/symptoms. - Classification according to cause - Morphological classification Erythrocytosis Causes and differential diagnosis**	**Understand and apply the lecture**	2	**The fourth**
Daily, quarterly and annual tests	**The lecture**	**Iron metabolism, iron-related red cell disorders: • Anemia due to iron deficiency • Chronic inflammatory anemia • Sideroblastic anemia Hemochromatosis and other iron overload disorders**	**Understand and apply the lecture**	2	**Fifth**
Daily, quarterly and annual tests	**The lecture**	**Megaloblastic anemia due to a deficiency of vitamin B12 or folic acid Hemolytic anemia - Genetic causes (erythrocytosis, leukocytosis, enzymatic disorders, etc.) Acquired causes (immune and non-immune, including malaria and PNH**	**Understand and apply the lecture**	2	**Sixth**
Daily, quarterly and annual tests	**The lecture**	**Genetic disorders of hemoglobin: structure of hemoglobin genes, thalassemia syndromes Structural hemoglobin diseases**	**Understand and apply the lecture**	2	**Seventh**
Daily, quarterly and annual tests	**The lecture**	**Non-malignant white cell disorders: - secondary leukocytosis and effects of bacterial/viral infection (including infectious mononucleosis) - agranulocytosis, molecular pathogenesis of leukemia.**	**Understand and apply the lecture**	2	**Eighth**
Daily, quarterly and annual tests	**The lecture**	**Acute leukemia - Classification: FAB / World Health Organization Myelodysplastic syndrome Aspects of treatment (chemotherapy – targeted and non-targeted, cancer**	**Understand and apply the lecture**	2	**Ninth**

		stem cell transplantation)			
Daily, quarterly and annual tests	**The lecture**	**Chronic myeloid leukemia Myeloproliferative disorders (PV, ET, MF.)**	**Understand and apply the lecture**	2	**tenth**
Daily, quarterly and annual tests	**The lecture**	**Lymphoproliferative disorders: chronic lymphocytic leukemia, lymphoma Multiple myeloma/Waldenstrom's macroglobulinemia**	**Understand and apply the lecture**	2	**eleven**
Daily, quarterly and annual tests	**The lecture**	**Hemostasis: - Components of the hemostasis system - Blood clotting mechanisms**	**Understand and apply the lecture**	2	**twelve**
Daily, quarterly and annual tests	**The lecture**	**Bleeding disorders: hereditary clotting defects, von Willebrands disease. Platelet disorders - Thrombocytopenia (immune and non-immune) - Functional disorders (genetic and acquired)**	**Understand and apply the lecture**	2	**thirteen**
Daily, quarterly and annual tests	**The lecture**	**Coagulation disorders Thrombophilia (hereditary and acquired such as APS)**	**Understand and apply the lecture**	2	**Fourteen**
Daily, quarterly and annual tests	**The lecture**	**Therapeutic aspects of thrombosis: anticoagulant therapy - Heparin, warfarin, new oral anticoagulants Treatment of bleeding disorders - Agent replacement therapy (including consideration of risks such as viral transmission and inhibitor formation) - Gene therapy - Thrombolytic therapy**	**Understand and apply the lecture**	2	**fifteen**

11. Course evaluation
Distribution of the grade out of 100 according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly, written exams, reports, etc.

12. Learning and teaching resources	
	Required textbooks (methodology, if any)
Internet	Main references (sources)
	Recommended supporting books and references (scientific journals, reports….)
	Electronic references, Internet sites

1. Course name: Pharmacology
2. Course code
3. Second semester/second year
4. Date this description was prepared: 2/18/2024
5. Available attendance formats: Lecture
6. Number of study hours (2) / Number of units (4)

7. Name of the course administrator (if more than one name is mentioned)	
Name: Email:	
8. Course objectives	
1-	**Objectives of the study subject**
2-	
3-	
9. Teaching and learning strategies	
	Strategy

10. Course structure

Evaluation method	Teaching method	Name of the unit or topic	Required learning outcomes	Watches	week
Daily, quarterly and annual tests	**The lecture**	**Introduction to Pharmacology: Definitions, Terms Used and Types: Classification, pharmacodynamics: actions, therapeutic, adverse, toxic effects, Pharmacokinetics: absorption, distribution, metabolism, interaction, excretion**	**Understand and apply the lecture**	2	**the first**
Daily, quarterly and annual tests	**The lecture**	**Methods and principles of administration of medicines, Indian Pharmacopoeia: Legal issues, storage of various medications, calculation of dosages of medications, rational use of Medications, treatment principles in hemodialysis**	**Understand and apply the lecture**	2	**the second**
Daily, quarterly and annual tests	**The lecture**	**Fluid therapy with special emphasis on kidney disease: setting intravenous fluids, Distinguish between different intravenous fluids**	**Understand and apply the lecture**	2	**the third**
Daily, quarterly and annual tests	**The lecture**	**Use of crystalloids and colloids in kidney disease. Mode of action, contraindications, precautions and side effects of different IV**	**Understand and apply the lecture**	2	**The fourth**

		use Fluids			
Daily, quarterly and annual tests	**The lecture**	**Definition of antihypertensive drugs, classification, procedures, dosage, side effects**	**Understa nd and apply the lecture**	2	**Fifth**
Daily, quarterly and annual tests	**The lecture**	**Medications and dialysis The dosage and duration of medications used in dialysis. administration Medications and the effect of dialysis on the action of medications**	**Understa nd and apply the lecture**	2	**Sixth**
Daily, quarterly and annual tests	**The lecture**	**Drugs subject to dialysis List of drugs subject to dialysis, their action, doses, side effects and Contraindications for the use of phenobarbitone, lithium, methanol, etc**	**Understa nd and apply the lecture**	2	**Seventh**
Daily, quarterly and annual tests	**The lecture**	**Heparin including low molecular weight heparin Introduction to low molecular weight heparin High molecular weight heparin. Description of heparin and LMWH, pharmacokinetics, Mode of action, indications and use, dosage, method of administration and side effects.**	**Understa nd and apply the lecture**	2	**Eighth**
Daily, quarterly and annual tests	**The lecture**	**Protamine sulfate Introduction to protamine, mode of action, pharmacokinetics, indications for use, dosage, method of use, side effects, precautions, contraindications.**	**Understa nd and apply the lecture**	2	**Ninth**
Daily, quarterly and annual tests	**The lecture**	**Fumalin, sodium hypochlorite, hydrogen peroxide Action, properties, use Medicines, their role as disinfectants and the harmful effects of residual applied particles Very formalin**	**Understa nd and apply the lecture**	2	**tenth**

Daily, quarterly and annual tests	**The lecture**	**Dialysis: Composition and dilution concentrates (acetate and bicarbonate).**	**Understa nd and apply the lecture**	2	**eleven**
Daily, quarterly and annual tests	**The lecture**	**Peritoneal dialysis fluid, especially hypertonic solutions - fluid composition Used in peritoneal dialysis, composition and concentration strength. road Action, uses, indications and precautions**	**Understa nd and apply the lecture**	2	**twelve**
Daily, quarterly and annual tests	**The lecture**	**Potassium exchange resins with special emphasis on route of administration Introduction to potassium exchange resins, chemical composition.**	**Understa nd and apply the lecture**	2	**thirteen**
Daily, quarterly and annual tests	**The lecture**	**Types, method Action, indications for use, side effects, precautions and contraindications.**	**Understa nd and apply the lecture**	2	**Fourteen**
Daily, quarterly and annual tests	**The lecture**	**Final test**	**Understa nd and apply the lecture**	2	**fifteen**

11. Course evaluation

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

12. Learning and teaching resources

	Required textbooks (methodology, if any)
Internet	Main references (sources)

	Recommended supporting books and references (scientific journals, reports….)
	Electronic references, Internet sites

1. Course name: Psychiatric and mental health nursing
2. Course code
3. Second semester/second year
4. Date this description was prepared: 2/18/2024
5. Available attendance formats: Lecture

6. Number of study hours (2) / Number of units (6)

7. Name of the course administrator (if more than one name is mentioned)	
Name: Email:	
8. Course objectives	
1-	**Objectives of the study subject**
2-	
3-	
9. Teaching and learning strategies	
	Strategy

Evaluation method	Teaching method	Name of the unit or topic	Required learning outcomes	Watches	week
Daily, quarterly and annual tests	**The lecture**	**Mental illnesses: Anxiety, neurotic depression**	**Understand and apply the lecture**	2	**the first**
Daily, quarterly and annual tests	**The lecture**	**Phobia**	**Understand and apply the lecture**	2	**the second**

Daily, quarterly and annual tests	**The lecture**	**The gang of authoritarian ideas**	**Understand and apply the lecture**	2	**the third**
Daily, quarterly and annual tests	**The lecture**	**Hysteria**	**Understand and apply the lecture**	2	**The fourth**
Daily, quarterly and annual tests	**The lecture**	**Hypochondria, suicide**	**Understand and apply the lecture**	2	**Fifth**
Daily, quarterly and annual tests	**The lecture**	**Nervous tension, mental illness: - Mental illnesses of functional origin.**	**Understand and apply the lecture**	2	**Sixth**
Daily, quarterly and annual tests	**The lecture**	**Schizophrenia.**	**Understand and apply the lecture**	2	**Seventh**
Daily, quarterly and annual tests	**The lecture**	**Reasons for imagination - cases of schizophrenia - methods of treating schizophrenia, such as chemical shock - electric shock treatment - insulin treatment - psychosurgical treatment - drug treatment - maintenance treatment - preventive treatment - psychotherapy.**	**Understand and apply the lecture**	2	**Eighth**
Daily, quarterly and annual tests	**The lecture**	**Epilepsy: The nature of epilepsy - factors causing epilepsy - types of epilepsy such as cryptogenic epilepsy - postural epilepsy**	**Understand and apply the lecture**	2	**Ninth**
Daily, quarterly and annual tests	**The lecture**	**Types of epilepsy - primary epilepsy - secondary epilepsy and reversible epilepsy - positional epilepsy - epileptic seizures - how to deal with an epileptic seizure.**	**Understand and apply the lecture**	2	**tenth**
Daily, quarterly and annual tests	**The lecture**	**Psychotic depression: The nature of psychotic depression - the causes leading to psychotic depression - the factors that help the emergence of psychotic depression - types of psychosis - recurrent manic**	**Understand and apply the lecture**	2	**eleven**

		psychosis			
Daily, quarterly and annual tests	**The lecture**	**Hypomania: Gradual progression of hypomania - recurrent manic depression - recurrent hypomanic depression - dysthymic depression - treatment of psychotic depression.**	**Understa nd and apply the lecture**	2	**twelve**
Daily, quarterly and annual tests	**The lecture**	**Persecutory psychosis**	**Understa nd and apply the lecture**	2	**thirteen**
Daily, quarterly and annual tests	**The lecture**	**Mental illnesses of organic origin**	**Understa nd and apply the lecture**	2	**Fourteen**
Daily, quarterly and annual tests	**The lecture**	**Mental health**	**Understa nd and apply the lecture**	2	**fifteen**

11. Course evaluation

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

12. Learning and teaching resources

	Required textbooks (methodology, if any)
Internet	Main references (sources)
	Recommended supporting books and references (scientific journals, reports….)
	Electronic references, Internet sites

1. Course name: Professional ethics
2. Course code
3. Second semester/second year
4. Date this description was prepared: 2/18/2024
5. Available attendance formats: Lecture
6. Number of study hours (2) / Number of units (2)

7. Name of the course administrator (if more than one name is mentioned)	
Name: Email:	
8. Course objectives	
1-	**Objectives of the study subject**
2-	
3-	
9. Teaching and learning strategies	
	Strategy

10. Course structure

Evaluation method	Teaching method	Name of the unit or topic	Required learning outcomes	Watches	week
Daily, quarterly and annual tests	**The lecture**	**Professional behavior: its definition, concept, and practical applications. The relationship between employees and their superiors**	**Understand and apply the lecture**	2	**the first**
Daily, quarterly and annual tests	**The lecture**	**Principles of professional ethics in the stages of cultural developments -Principles of professional ethics in Arab-Islamic civilization -Etiquette of dealing with patients in hospitals from ancient times until now.**	**Understand and apply the lecture**	2	**the second**
Daily, quarterly and annual tests	**The lecture**	**Personality types, how to deal with them. Definition of personality, its types, and relationships**	**Understand and apply the lecture**	2	**the third**
Daily, quarterly and annual tests	**The lecture**	**Values, their definition, classification, factors influencing them, and methods of their formation.**	**Understand and apply the lecture**	2	**The fourth**
Daily, quarterly and annual tests	**The lecture**	**Customs and traditions, their types, customs in the medical field, methods of developing them, and methods of evaluating them.**	**Understand and apply the lecture**	2	**Fifth**

Daily, quarterly and annual tests	**The lecture**	**Linguistic and non-linguistic communication methods, their definition, types, effects, and designing linguistic communication methods. The art of listening and listening and how to practice it, with practical examples.**	**Understand and apply the lecture**	2	**Sixth**
Daily, quarterly and annual tests	**The lecture**	**Behavior of dealing with the patient, receiving and dealing with the patient, maintaining professional secrets, setting appointments for the requirements of the required procedures, preserving the patient's needs.**	**Understand and apply the lecture**	2	**Seventh**
Daily, quarterly and annual tests	**The lecture**	**Behavioral handling of medical devices and equipment Daily access to devices, tools and solutions and preparing them for daily work Maintaining, sustaining, and preserving it, preparing the necessary medicines to work and behave properly**	**Understand and apply the lecture**	2	**Eighth**
Daily, quarterly and annual tests	**The lecture**	**Basic ethics of the profession, characteristics of professional ethics as a guide and guide of behavior. Characteristics and characteristics of health workers: appearance, behavior, and commitment**	**Understand and apply the lecture**	2	**Ninth**
Daily, quarterly and annual tests	**The lecture**	**Occupational safety: Preventing work risks and accidents. Preventing the risks of bacterial, dental, and radioactive contamination. Preventing the risks of infection from infectious and communicable diseases. Avoiding malpractices in the field of work.**	**Understand and apply the lecture**	2	**tenth**
Daily, quarterly and annual tests	**The lecture**	**Human, interactive, and collective behavioral patterns, their definition, nature, motivations, and explanations**	**Understand and apply the lecture**	2	**eleven**

Daily, quarterly and annual tests	**The lecture**	**Behavioral trends and tendencies, their definition, classification, factors affecting them, and ways of establishing them.**	**Understand and apply the lecture**	2	**twelve**
Daily, quarterly and annual tests	**The lecture**	**Conditions for embodying mental health, its definition, factors affecting it, prevention, the patient, the role of mental health in diseases**	**Understand and apply the lecture**	2	**thirteen**
Daily, quarterly and annual tests	**The lecture**	**Conditions for professional compatibility, its relationship to the work associated with it, its concept, and conditions**	**Understand and apply the lecture**	2	**Fourteen**
Daily, quarterly and annual tests	**The lecture**	**Discussing student reports**	**Understand and apply the lecture**	2	**fifteen**

11. Course evaluation

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

12. Learning and teaching resources

	Required textbooks (methodology, if any)
Internet	Main references (sources)
	Recommended supporting books and references (scientific journals, reports….)
	Electronic references, Internet sites