

Ministry of Higher Education and Scientific Research  
Scientific supervision and evaluation device  
Department of Quality Assurance and Academic accreditation  
Department Accreditation



# Academic Program and Course Description Guide

2024

Republic of Iraq  
Ministry of Higher Education & Scientific Research  
Supervision and Scientific Evaluation Directorate  
Quality Assurance and Academic Accreditation

## Academic Program Specification Form For Colleges and Institutions

**University: Northern Technical University**

**Institute: Technical Medical Institute / Mosul**

**Department: Anesthesia Techniques**

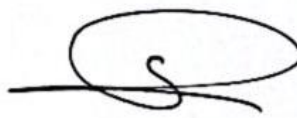
**Date of Form Completion: 08/ 1 / 2024**



Assistant Professor  
Dr. Mohammed F. Haddad

The Dean

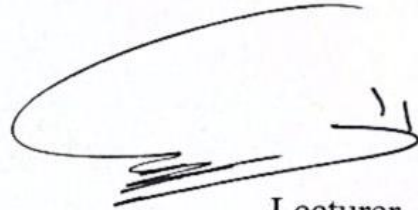
Date: 8/1/2024



Lecturer  
Dr. Omar I. Dallah Bashi

Dean's Assistant For Scientific Affairs

Date: 8/1/2024



Lecturer  
Dr. Alaa Y. Mahdy

Head of Department

Date: 8/1/2024

Quality Assurance And University Performance Manager  
Assistant Professor Dr. Ali M. Saadi  
Date: /8/1/2024

Signature



### 1-Program vision:

Teaching the student the basic theoretical information in the field of anesthesia and intensive care and training him on simulation mannequins at the institute, as well as virtually in operating theaters and recovery and intensive care units in hospitals in order to acquire the necessary skills and experience that qualifies him to work in hospitals in the future as an anesthesia technician.

### 2-Program message:

Delivering the scientific material that the student must receive in accordance with the instructions mentioned in the special skills item in the required educational outcomes and methods of teaching, learning and evaluation.

### 3- Program objectives

The program aims to graduate cadres with the ability to work in operating and intensive care theaters in government and private hospitals with the specialty of medical anesthesia technicians who hold a diploma and who have the ability to care for the patient in operating and intensive care theaters.

### 4-Program accreditation:

nothing

### 5-Other external influences:

nothing

6-Program structure:				
Program Structure	Number of Courses	Study Unit	Percentage	Notes *
University requirements	10	18	55%	4 Essential 6 optional
Institute requirements	5	14	35%	5 Essential
Department requirements	20	72	26%	16 Essential 6 optional
summer training	3	completed	-----	
Other	/	There isn't any		

7- Program description				
Year/level	Course or course code	Name of the course or course	Hours	Note
2023-2024/ first	NTU 100	Democracy and Human Rights	1	
	NTU 101	English language 1	1	
	NTU 102	Computer 1	1	
	NTU 103	Arabic language 1	1	
	NTU 104	Physical Activity	1	
	NTU 105	French Language	1	
	TIMM 106	Physiology	2	
	TIMM 107	Anatomy	2	
	TIMM 108	Safety in lab. & workshop	1	
	TIMM 109	Medical terminology	1	
	ANET110	Principle of Anesthesia	2	
	ANET111	Anesthesia application	2	
	ANET112	Clinical Chemistry	2	
	ANET113	Bacteriology	2	
	ANET114	Principles of Nursing	2	
	ANET115	Medical Physics	2	
NTU116	Psychology	2		
2023-2024 / 2ed	NTU201	Computer 2	1	

	NTU 202	Arabic language 2	1	
	NTU 203	Crimes of the Baath regime in Iraq	1	
	NTU204	Professional Ethics	1	
	ANET203	Pharmacology	2	
	ANET204	General Anesthesia	2	
	ANET205	Specialized Anesthesia	2	
	ANET206	Basics of Intensive Care	2	
	ANET207	Intensive Care application	2	
	ANET208	Anesthesia Equipment Technology	2	
	ANET209	Intensive Care Equipment Technology	2	
	ANET210	Anesthesia& Intensive Care drugs	2	
	ANET211	Internal Medicine	2	
	ANET212	Surgical Internal Medicine	2	
	ANET213	Proposal	1	
	ANET214	Health Management	1	
	TIMM202	Hematology	1	

### 8- Expected learning outcomes of the programme

#### Knowledge:

- 1-Learn how to perform general and local anesthesia.
- 2-Knowing how to care for the patient in intensive care rooms.
- 3-Knowing the patient's normal vital signs inside the intensive care room.
- 4-Knowledge of anesthesia and intensive care medications.

#### Skills

- 1-Teamwork skills.
- 2- Computer and Internet skills
- 3-Communication skills such as English
- 4-Leadership skills and taking responsibility.
- 5-The student qualifies to pass recruitment interviews.

#### Value

- 1-The student acquires the concepts and basics of anesthesia and intensive care
- 2-Analyzing the problems facing its employees and how to develop the necessary solutions.
- 3-Evaluating the proposed solutions and choosing the best ones.

## 9-Teaching and learning strategies

The teacher explains the theoretical material on the blackboard using a slide projector, paper lectures, educational packages, and methodological and summer training in hospitals.

## 10-Evaluation methods

Daily, quarterly and final tests, submitting weekly reports

## 11-The teaching staff

### Faculty members

Academic rank	specialization		Special requirements/skills (if any)		preparation of the teaching staff	
	general	Specialized			lecturer	staff
Ass.prof	Chemistry	Chemistry Inorganic Chemistry			staff	
Ass.prof	Sciences	Fungus			staff	
Ass.prof	Biological	microbiology			staff	
lecturer	Biological	microbiology			staff	
lecturer	Chemistry	Biochemistry			staff	
lecturer	Biological	Microbiology			staff	
lecturer	Tissue Culture	Agriculture and forestry			staff	
Ass. lecturer	Veterinary medicine and surgery	Pharmacology & toxicology			staff	
Ass. lecturer	Software engineering	Software			staff	
Ass. lecturer	Biological	Microbiology			staff	
Ass. lecturer	Biological	Fungus			staff	
Ass. lecturer	Biological	Fungus			staff	
Ass. lecturer	Biological	Microbiology			staff	

Specialist doctor	Medicine and Surgery	Family medicine			lecturer
Specialist doctor	Medicine and Surgery	Family medicine			lecturer
Specialist doctor	Medicine and Surgery	Family medicine			lecturer
Specialist doctor	Medicine and Surgery	Anesthetist			lecturer
Engineer	Technical engineering	Medical device engineering			lecturer

### 12-Professional development

Orienting new faculty members

### Professional development

Professional development for faculty members

### 13-Acceptance criterion

- The student's admission criterion is determined according to the central admission plan within the plan of the Ministry and the student's preparatory branch, his grade point average and his desire. After that, the student is interviewed in a special interview at the institute

### 14- The most important sources of information about the program

- External sources (the Internet)
- Scientific research and its latest developments
- Methodological books

### 15-Program development plan

- 1- Adding information on all topics related to anesthesia and intensive care.
- 2- Learn about recent scientific developments.
- 3- Participation in international and local conferences.
- 4- Participation in scientific workshops inside and outside Iraq.
- 5-Hosting scientific competencies in the field of specialization

Code	Path	UNIT	Hours		Course name		Requirement Type
			P	TH	English Language	Arabic Language	
NTU 100	-	2	0	2	Democracy and Human Rights	ديمقراطية وحقوق الانسان	University
NTU 101	-	2	0	2	English language 1	اللغة الإنكليزية 1	
NTU 102	-	2	1	1	Computer 1	الحاسوب 1	
NTU 103	-	2	0	2	Arabic language 1	1 اللغة العربية	
NTU 104	-	2	1	1	Physical Activity	الرياضة ( اختياري )	
NTU105	-	2	0	2	French Language	اللغة الفرنسية (اختياري)	
		10			Total university units required		
TIMM 106	.	4	2	2	Physiology	علم وظائف الاعضاء	Institute
TIMM 107	.	4	2	2	Anatomy	التشريح	
TIMM 108	.	2	-	2	Safety in lab. & workshop	سلامه المختبرات والورش	
TIMM 109	.	2	-	2	Medical terminology	المصطلحات الطبية	
		12			Total Required Institute Units		
ANET110	.	6	4	2	Principle of Anesthesia	مبادئ التخدير	Department
ANET111	.	6	4	2	Anesthesia application	تطبيقات التخدير	
ANET112	-	4	2	2	Clinical Chemistry	الكيمياء السريرية	
ANET113	-	4	2	2	Bacteriology	علم البكتريا	
ANET114	-	4	2	2	Principles of Nursing	مبادئ التمريض	
ANET115	-	2	-	2	Medical Physics	( اختياري ) فيزياء طبية	
			26		Total Required department units		
		48			Total units of the First level		



second level modules / Anesthesia techniques Department

Code	UNIT	Hours		Course name		Requirement type	
		P	TH	English Language	Arabic Language		
NTU201	NTU 102	2	1	1	Computer 2	الحاسوب 2	University
NTU202	NTU 103	2	0	2	Arabic language 2	اللغة العربية 2	
NTU 203	.	2	0	2	Crimes of the Baath regime in Iraq	جرائم نظام البعث في العراق	
NTU 204	.	2	0	2	Professional Ethics	اخلاقيات المهنة	
		8			الجامعية المطلوبة مجموع الوحدات		
TIMM202	.	2	-	2	Biostatistics	الإحصاء الحياتي	Institute
		2			Total required institute Requirements Units		
ANET203	.	3	2	1	Pharmacology	الدوائيات	Department
ANET204	.	5	3	2	General Anesthesia	تخدير عام	
ANET205	.	5	3	2	Specialized Anesthesia	تخدير تخصصي	
ANET206	.	5	3	2	Basics of Intensive Care	اساسيات العناية المركزة	
ANET207	.	5	3	2	Intensive Care application	تطبيقات العناية المركزة	
ANET208	.	5	3	2	Anesthesia Equipment Technology	تقنيات اجهزة التخدير	
ANET209	.	5	3	2	Intensive Care Equipment Technology	تقنيات أجهزة العناية مركزة	
ANET210	.	3	2	1	Anesthesia & Intensive Care drugs	أدوية التخدير والعناية المركزة	
ANET211	.	3	2	1	Internal Medicine	الطب الباطني	
ANET212	.	3	2	1	Surgical Internal Medicine	الطب الباطني الجراحي	
ANET213	.	2	2	-	Proposal	مشروع البحث	
ANET214	.	2	-	2	Health Management	(اختياري) إدارة صحية	
ANET215	.	2	-	2	Hematology	علم الدم (اختياري)	
		46			Total units of the second level /department		
		56			Total units of the second level		

Program skills chart															
Learning outcomes required from the program												Essential or optional	Course name	Course code	Year/level
values				skills				Knowledge							
C4	C3	C2	C1	B4	B3	B2	B1	A4	A3	A2	A1				
		/			/				/			Essential	Democracy and Human Rights	NTU 100	2023-2024/1 <sup>st</sup> .
		/					/			/		Essential	English language 1	NTU 101	
		/					/	/			/	Essential	Computer 1	NTU 102	
		/					/				/	Essential	Arabic language 1	NTU 103	
		/					/				/	optional	Physical Activity	NTU 104	
												optional	French Language	NTU105	
			/				/				/	Essential	Physiology	TIMM 106	
			/				/				/	Essential	Anatomy	TIMM 107	
		/				/					/	Essential	Safety in lab. & workshop	TIMM 108	
			/				/				/	Essential	Medical terminology	TIMM 109	
			/				/				/	Essential	Principle of Anesthesia	ANET110	
			/				/				/	Essential	Anesthesia application	ANET111	
			/				/				/	Essential	Clinical chemistry	ANET112	
			/				/				/	Essential	Bacteriology	ANET113	
			/				/				/	Essential	Principles of Nursing	ANET114	
			/				/				/	Essential	Medical Physics	ANET115	

		/				/				/	Essential	Computer 2	NTU201	2023-2024/2ed.
		/				/				/	Essential	Arabic language 2	NTU202	
		/				/				/	Essential	Crimes of the Baath regime in Iraq	NTU 203	
		/				/				/	Essential	Professional Ethics	NTU 204	
		/				/				/	Essential	Biostatistics	TIMM 202	
		/	/			/				/	Essential	Pharmacology	ANET203	
		/	/			/				/	Essential	General Anesthesia	ANET204	
		/	/			/				/	Essential	Specialized Anesthesia	ANET205	
		/	/			/				/	Essential	Basics of Intensive Care	ANET206	
		/	/			/				/	Essential	Intensive Care application	ANET207	
		/	/			/				/	Essential	Anesthesia Equipment Technology	ANET208	
		/	/			/				/	Essential	Intensive Care Equipment Technology	ANET209	
		/	/			/				/	Essential	Anesthesia& Intensive Care drugs	ANET210	
		/	/			/				/	Essential	Internal Medicine	ANET211	
		/	/			/				/	Essential	Surgical Internal Medicine	ANET212	
		/	/			/				/	Essential	Proposal	ANET213	
		/	/			/				/	optional	Health Management	ANET214	
		/	/			/				/	optional	Hematology	ANET215	

1. Teaching Institution	Ministry of Higher Education and Scientific Research / Northern Technical University
2. University/ Department	Mosul Medical Technical Institute/ Anesthesia Techniques Department
3. Course title/code	Democracy and Human Rights NTU100
4. Programme (s) to which it contributes	Anesthesia Techn. diploma
5. Modes of Attendance offered	* Weekly lesson schedule (theoretical) * Scientific discussions, seminars, other activities
6. Semester/Year	Annual
7. Number of hours tuition (total)	30
8. Date of production/revision of this specification	8 / 1 / 2024
<b>9. Aims of the Course</b>	
1 - Providing students with basic concepts related to democracy and human rights.	
2- Knowledge of political systems, methods of elections and public freedoms.	
3- Developing the legal and constitutional culture among students.	
<b>10. Course outcomes and teaching, learning and evaluation methods</b>	
A.Cognitive objectives	
1- Enabling students to understand the concept of democracy and the rights to be implemented in the field of human rights.	
2- Developing the knowledge aspects of the constitution, the legal state and human rights guarantees.	
B - The skills objectives of the course.	
Enable students to understand the concept of democracy and the rights to be done in the field of human rights and how to defend these rights. And know the guarantees related to them.	
Teaching and learning methods	
((Theoretical lectures / interactive lectures ))	
<b>Evaluation methods</b>	
((Oral tests / written tests / weekly reports / daily attendance / participation and interaction in lectures / semester and final exams))	
C- Emotional and value goals	
Carrying out duties in the workplace with professional motives	
<b>Teaching and learning methods</b>	
((Theoretical lectures / seminars / debate work between students))	
<b>Evaluation methods</b>	

((Oral Tests / Written Tests / Observation / Student Cumulative Record))

D - Transferable general and qualifying skills (other skills related to employability and personal development).

Understand the concept of democracy and the rights to be implemented in the field of human rights.

## 11. Course Structure

Week	Hours	Unit/Module or Topic Title	ILOs	Teaching Method	Assessment Method
1	2	Human rights, definition, objectives Human rights in ancient civilizations / Human rights in heavenly laws	Knowledge and application	Theoretical	Tests & Reports
2	2	Human Rights in Contemporary and Modern History (International Recognition of Human Rights since the First World War and the League of the United Nations) / Regional Recognition of Human Rights: European Convention on Human Rights 1950, American Convention on Human Rights 1969, African Charter on Human Rights 1981, Arab Charter on Human Rights 1994	Knowledge and application	Theoretical	Tests & Reports
3	2	NGOs and human rights (ICRC, Amnesty International, Human Rights Watch, National Human Rights Organizations)	Knowledge and application	Theoretical	Tests & Reports
4	2	Human rights in Iraqi constitutions between theory and reality / the relationship between human rights and public freedoms: -1In the Universal Declaration of Human Rights. -2In regional charters and national constitutions.	Knowledge and application	Theoretical	Tests & Reports
5	2	Economic, social and cultural human	Knowledge	Theoretical	Tests &

		rights , Civil and political human rights / Modern human rights : Facts in development , Right to clean environment , Right to solidarity , Right to religion	and application	al	Reports
6	2	Guarantees of respect and protection of human rights at the national level, guarantees in the Constitution and laws, guarantees in the principle of the rule of law, guarantees in constitutional oversight, guarantees in freedom of the press and public opinion, the role of non-governmental organizations in respecting and protecting human rights / guarantees, respect and protection of human rights at the international level: .1Role of the United Nations and its specialized agencies in providing safeguards -2The role of regional organizations (Arab League, European Union, African Union, Organization of American States, ASEAN.( .3Role of international, regional non-governmental organizations and public opinion in respecting and protecting human rights	Knowledge and application	Theoretic al	Tests & Reports
7	2	The general theory of freedoms: the origin of rights and freedoms, the legislator's position on public rights and freedoms, the use of the term public freedoms	Knowledge and application	Theoretic al	Tests & Reports
8	2	Organizing public freedoms from the previousness of 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 to public authorities	Knowledge and application	Theoretic al	Tests & Reports

9	2	Freedom of learning , freedom of the press , freedom of assembly Freedom of association, freedom of work Right of ownership	Knowledge and application	Theoretic al	Tests & Reports
10	2	Freedom of trade and industry Freedom of security and a sense of security Freedom to go and return Freedom of trade and industry Women's freedom	Knowledge and application	Theoretic al	Tests & Reports
11	2	Scientific and technical progress and public freedoms The future of public freedoms	Knowledge and application	Theoretic al	Tests & Reports
12	2	The crime of genocide	Knowledge and application	Theoretic al	Tests & Reports
13	2	Democracy, its characteristics and types	Knowledge and application	Theoretic al	Tests & Reports
14	2	Elections, their definition and types	Knowledge and application	Theoretic al	Tests & Reports
15	2	Contemporary political systems	Knowledge and application	Theoretic al	Tests & Reports

<b>12. Infrastructure</b>	
Required reading:	Available in free education and institute library
Main references (sources)	Available in free education and institute library
B - Electronic references, Internet sites...	Internet

<b>13. Course development plan</b>
1- Developing curricula appropriate to human rights developments. 2- Dividing the article into two parts, the first related to human rights and the second to democracy.

1. Teaching Institution	Ministry of Higher Education and Scientific Research / Northern Technical University
2. University/ Department	Mosul Medical Technical Institute/ Anesthesia Techniques Department
3. Course title/code	Computer1 NTU102
4. Programme (s) to which it contributes	Anesthesia techni. deploma
5. Modes of Attendance offered	* Weekly lesson schedule (theoretical and practical) * Scientific discussions, seminars, other activities
6. Semester/Year	Annual
7. Number of hours tuition (total)	30
8. Date of production/revision of this specification	8 / 1 / 2024
<b>9. Aims of the Course</b>	
1- Teaching the student the skills of working on the computer and the use of ready-made applications and the principles of the Internet in the field of specialization.	
2- Teaching the student the skills of working on the computer and the use of ready-made applications and the principles of the Internet in the field of specialization.	
3. Perform his duties at the workplace for professional motives.	
<b>10. Course outcomes and teaching, learning and evaluation methods</b>	
A.Cognitive objectives	
A1- Teaching the student the skills of working on the computer and the use of ready-made applications and the principles of the Internet in the field of specialization.	
B - The skills objectives of the course.	
B1 - Teaching the student the skills of working on the computer and the use of ready-made applications and the principles of the Internet in the field of specialization.	
Teaching and learning methods	
((Theoretical lectures / practical lectures / field visits / solving examples / seminars / summer training))	
<b>Evaluation methods</b>	
((Oral exams / written tests / weekly reports / daily attendance / semester and final exams))	
C- Emotional and value goals	
C1- Perform his duties at the workplace for professional motives.	



<b>Teaching and learning methods</b>
((Theoretical lectures / practical lectures / field visits / solving examples / seminars / summer training))
<b>Evaluation methods</b>
((Oral Tests / Written Tests / Observation / Student Cumulative Record))
D - Transferable general and qualifying skills (other skills related to employability and personal development). D1- Improve their discussion skills. D2- Raising their research perceptions and transferring the student from the stage of teaching to learning.

11. Course Structure					
Week	Hours	Unit/Module or Topic Title	ILOs	Teaching Method	Assessment Method
2&1	2	Introduction to the computer / computer system / information technology / types of computers / input units / central processing unit / output units / main memory and its types / data storage in memory / factors affecting computer performance Definition of software and its types / systems software: operating systems / programming languages and software systems / applied software.	Knowledge and practical application	Practical + Theoretical	Tests & Discussion
3	2	Introduction to Windows / its features / operating the device / shutting down the device / using the mouse / windows screen components: taskbar: icons: and their types (standard and general.(	Knowledge and practical application	Practical + Theoretical	Tests & Discussion
4	2	Control Panel / Desktop Control / Screen Saver / Window Colors and Lines / Screen Settings / Adjust Screen Colors / Modify Time and Date / Volume / Change Between Mouse Buttons / Double-Click Speed Control / Change Mouse Pointer /	Knowledge and practical application	Practical + Theoretical	Tests & Discussion

		Control Mouse Speed / Install and Uninstall Programs			
5	2	Minimize and enlarge the window / final closure / temporary closure / move the window / control the capacity of the window / ways to run applications and programs	Knowledge and practical application	Practical + Theoretical	Tests & Discussion
6	2	Order start menu items / delete start menu items / add submenu to start menus / add new button to start menu	Knowledge and practical application	Practical + Theoretical	Tests & Discussion
7	2	Basic System Information / Stop Unwanted Applications Windows explorer window finder / My computer icon / my computer window parts	Knowledge and practical application	Practical + Theoretical	Tests & Discussion
8&9	2	Recycle Bin (delete, retrieve and empty the basket) / My Document icon	Knowledge and practical application	Practical + Theoretical	Tests & Discussion
10&11	2	Definition of files and folders / Identification of files and folders / Properties of files Definition of folders / Create files and folders / Change the name of files and folders / Move file or folder / Copy file or folder / Search for file or folder / Create a shortcut icon for an application or file	Knowledge and practical application	Practical + Theoretical	Tests & Discussion
12&13	2	Calculator / Notepad / WordPad / Use the memo to edit and create the file Paint / Screen components / Create drawings / Select front and background colors / Choose brush font size / Select and select the drawing tool / Save drawing / Make drawing desktop background / Quit Paint Entertainment programs Media player	Knowledge and practical application	Practical + Theoretical	Tests & Discussion
14&15	2	Viruses / Reason for naming /	Knowledge	Practical +	Tests &

	Definition / Ways of spreading the virus / Symptoms of infection with the virus / Protection methods / Types of viruses Computer crimes / theft / hackers	and practical application	Theoretical	Discussion
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<b>12.Infrastructure</b>	
Required reading:	Available in the free department and library of the institute
Main references (sources)	Available in the free department and library of the institute
Recommended books and references (scientific journals, reports,...)	Internet

<b>13.Course development plan</b>
1- Developing curricula adapted to the labor market 2- Holding seminars and scientific conferences aimed at updating the curricula 3- Follow-up scientific developments in the field of specialization

1. Teaching Institution	Ministry of Higher Education and Scientific Research / Northern Technical University
2. University/ Department	Mosul Medical Technical Institute/ Anesthesia Techniques Department
3. Course title/code	Arabic Language NTU103
4. Programme (s) to which it contributes	Anesthesia Techn.deploma
5. Modes of Attendance offered	* Weekly lesson schedule (theoretical) * Discussions and reports
6. Semester/Year	Annual
7. Number of hours tuition (total)	30
8. Date of production/revision of this specification	8 / 1 / 2024
<b>9. Aims of the Course</b>	
1- Enabling the student to read correctly. 2- Enabling the student to write correctly and use punctuation marks.	

<p>3- The student should acquire the ability to use the Arabic language correctly.</p> <p>4- Introducing the student to the correct Arabic language words, structures and sound methods in an interesting way.</p> <p>5- Accustom the student to sound and clear expressions of his ideas.</p> <p>6- Helping the student to understand complex structures and mysterious methods.</p>
<p><b>10. Course outcomes and teaching, learning and evaluation methods</b></p>
<p>A.Cognitive objectives</p> <p>A- The student should recognize common mistakes in writing Arabic in order to avoid them</p> <p>B - The student should recognize the punctuation marks and use them correctly</p> <p>C - The student should distinguish between the solar lam and the lunar lam, which helps to pronounce it correctly</p> <p>D - The student differentiates between Dhad and Zaa, and this is what helps him to avoid falling into a spelling error</p> <p>E - To distinguish between the verb, the noun and the letter, as this is what his Arabic speech is based on.</p> <p>F- He must be able to write the hamza in its correct position correctly.</p>
<p>B - The skills objectives of the course.</p> <p>B1 – Providing the student with a linguistic wealth that makes him more able to correctly express what he wants.</p> <p>B2- Correcting the student's tongue and preventing it from error</p>
<p>Teaching and learning methods</p> <p>((Theoretical lectures / listening lectures / conversation lectures / interactive lectures / research in libraries and the Internet on specific topics)).</p>
<p><b>Evaluation methods</b></p>
<p>((Oral tests / written tests / weekly reports / daily attendance / participation and interaction in lectures / semester and final exams))</p>
<p>C- Emotional and value goals</p> <p>C1- Thinking, activation and organization development</p> <p>C2- Working to make the student's imagination fertile imagination by highlighting the aesthetics of the language and thus enabling him to express the essence of the soul in a proper way.</p>
<p><b>Teaching and learning methods</b></p>
<p>((Theoretical lectures / seminars / conducting debates between students / making reports))</p>
<p><b>Evaluation methods</b></p>
<p>((Oral Tests / Written Tests / Observation / Student Cumulative Record))</p>
<p>D - Transferable general and qualifying skills (other skills related to employability and personal development).</p> <p>D1- The ability to develop and develop his expressive skills such as poetry and</p>

story.

D2- The ability to communicate with the outside world properly.

## 11. Course Structure

Week	Hours	Unit/Module or Topic Title	ILOs	Teaching Method	Assessment Method
1	2	Introduction to linguistic errors – Taa Al-Marbouta and Al-Taa Al-Maktaba	1. Identify the types of linguistic errors. 2. Differentiate between open Taa and Taa tethered	Discussion method, lecture method	Oral test
2	2	Rules for writing the elongated and compartment thousand – solar and lunar letters	1. Differentiate between the writing of the extended thousand and the compartment and the positions of the writing of the two thousand 2. Differentiate between solar letters and lunar letters	Discussion method, lecture method	Oral test
3	2	Al-Daad and Al-Zaa	Differentiate between Dhad and Z	Discussion method, lecture	Oral test

				method	
4	2	Hamza writing	Enable the student to write the hamza correctly	Discussion method, lecture method	Oral test
5	2	Punctuation	Recognize punctuation and write it in the correct location	Discussion method, lecture method	Oral test
6	2	Noun and verb and differentiate between them	1. Recognize the noun and verb and indicate the sign of each 2. Differentiate between noun and verb 3. Indication of the types of verb 4. Differentiate between types of verbs	Discussion method, lecture method	Oral test
7	2	Effects	identify the types of effects and differentiate between them	Discussion method, lecture method	Oral test
8	2	Number	Enable the student to write numbers correctly	Discussion method, lecture method	Oral test
9	2	Applications of common linguistic errors	Recognize and avoid common language errors	Discussion method, lecture method	Oral test
10	2	Applications of common	Recognize and	Discussion	Oral test

		linguistic errors	avoid common language errors	on method, lecture method	
11	2	Noon and Tanween meanings of prepositions	1. Differentiate between Noon and Tanween 2. Recognize the meanings of prepositions	Discussion method, lecture method	Oral test
12	2	Formal aspects of administrative discourse	Identify the formal aspects of administrative discourse	Discussion method, lecture method	Oral test
13	2	The language of administrative discourse	Recognize the language of administrative discourse	Discussion method, lecture method	Oral test
14	2	The language of administrative discourse	Recognize the language of administrative discourse	Discussion method, lecture method	Oral test
15	2	Samples of administrative correspondence	Identify samples of administrative correspondence	Discussion method, lecture method	Oral test

<b>12. Infrastructure</b>	
Required reading:	Textbooks: General Arabic Language Binding for Technical Universities by (Dr. Safaa Kazem Makki and Dr. Lama Muhammad Younis
Main references (sources)	1- Clear dictation: Abdul Majeed Al-Nuaimi, Daham Al-Kayyal, Dar Al-Mutanabbi Library, Baghdad, 6th edition, 1987 AD. 2- Lessons in language, grammar and spelling

	<p>for state employees: Ismail Hammoud Atwan and others, Ministry of Education Press No. (3), Baghdad, 2nd edition, 1984.</p> <p>3- Arabic language for the third intermediate grade: Fatima Nazem Al-Attabi, et al., 1st edition, 2018.</p> <p>4 - General Arabic language for sections other than specialization: Abdul Qadir Hassan Amin and others, Ministry of Higher Education and Scientific Research, 2nd Edition, 2000.</p> <p>5- Inspired by Arabic literature: Haval Muhammad Amin, Al-Saadoun Press, Baghdad.</p>
Electronic references, Internet sites...	World Wide Web

### 13. Course development plan

Correcting the linguistic errors that occurred in the manual to be taught and trying to add a definition to some of the terms contained in the fascicle, especially since the Arabic language fascicle was prepared for non-specialists in the Arabic language, and this leads to making the prescribed vocabulary more accurate and clear.

1. Teaching Institution	Ministry of Higher Education and Scientific Research / Northern Technical University
2. University/ Department	Mosul Medical Technical Institute/ Anesthesia Techniques Department
3. Course title/code	Physical activity NTU104
4. Programme (s) to which it contributes	Anesthesia Techn.deploma
5. Modes of Attendance offered	* Weekly lesson schedule (theoretical and practical) * Sports discussions and activities
6. Semester/Year	Annual
7. Number of hours tuition (total)	30
8. Date of production/revision of this specification	8 / 1 / 2024
<b>9. Aims of the Course</b> 1- The student should be able to identify the most important types of sports and	



<p>what are the laws and skills of some sports</p> <p>2- Identify the motor mechanism of the human body and what are the common injuries that occur in the human body.</p> <p>3. Perform his duties at the workplace for professional motives.</p>
<b>10. Course outcomes and teaching, learning and evaluation methods</b>
A.Cognitive objectives A1- The student should be able to identify the most important types of sports and what are the laws and skills of some sports
B - The skills objectives of the course. B1- Identify the motor mechanism of the human body and what are the common injuries that occur in the human body.
Teaching and learning methods ((Theoretical lectures / practical lectures / field visits / solving examples / seminars))
<b>Evaluation methods</b> ((Oral exams / written tests / weekly reports / daily attendance / semester and final exams))
C- Emotional and value goals C1- Perform his duties at the workplace for professional motives.
<b>Teaching and learning methods</b> ((Theoretical lectures / practical lectures / field visits / solving examples / seminars))
<b>Evaluation methods</b> ((Oral Tests / Written Tests / Observation / Student Cumulative Record))
D - Transferable general and qualifying skills (other skills related to employability and personal development). D1- Improve their discussion skills. D2- Raising their research perceptions and transferring the student from the stage of teaching to learning.

<b>11. Course Structure</b>					
Week	Hours	Unit/Module or Topic Title	ILOs	Teaching Method	Assessment Method
1	2	Sport definition, importance and types	Knowledge and practical application	theoretical and practical	Tests & Reports
2	2	The mechanism of movement of the human body	Knowledge and practical application	theoretical and practical	Tests & Reports
3	2	Common sports injuries	Knowledge and practical	theoretical and	Tests & Reports

			application	practical	
4	2	Basic skills of the game of basketball	Knowledge and practical application	theoretical and practical	Tests & Reports
5	2	International Basketball Law	Knowledge and practical application	theoretical and practical	Tests & Reports
6	2	Basic skills of table tennis and its international law	Knowledge and practical application	theoretical and practical	Tests & Reports
7	2	Basic skills of volleyball and its international law	Knowledge and practical application	theoretical and practical	Tests & Reports
8	2	Swimming sport	Knowledge and practical application	theoretical and practical	Tests & Reports
9	2	Basic skills of tennis and its international law	Knowledge and practical application	theoretical and practical	Tests & Reports
10	2	Basic skills of handball	Knowledge and practical application	theoretical and practical	Tests & Reports
11	2	International Handball Law	Knowledge and practical application	theoretical and practical	Tests & Reports
12	2	Arena and field games (types, international law of the game)	Knowledge and practical application	theoretical and practical	Tests & Reports
13	2	Basic Football Skills	Knowledge and practical application	theoretical and practical	Tests & Reports
14	2	Management of sports competitions and competitions	Knowledge and practical application	theoretical and practical	Tests & Reports
15	2	Sports Laws and Legislations	Knowledge and practical application	theoretical and practical	Tests & Reports

## **12.Infrastructure**

Required reading:

Available in the free department and library of the

	institute
Main references (sources)	Available in the free department and library of the institute
Electronic references, Internet sites...	Internet

### 13. Course development plan

- 1- Developing curricula adapted to the labor market
- 2- Holding seminars and scientific conferences aimed at updating the curricula
- 3- Follow-up scientific developments in the field of specialization

1. Teaching Institution	Ministry of Higher Education and Scientific Research / Northern Technical University
2. University/ Department	Mosul Medical Technical Institute/ Anesthesia Techniques Department
3. Course title/code	Physiology /TIMM106
4. Programme (s) to which it contributes	Technical Diploma in anesthesia
5. Modes of Attendance offered	* Weekly lesson schedule (theoretical and practical) * Scientific discussions, seminars, other activities
6. Semester/Year	Module
7. Number of hours tuition (total)	60
8. Date of production/revision of this specification	8 / 1 / 2024
<b>9. Aims of the Course:</b> Teaching and training students about: <ol style="list-style-type: none"> <li>1. Laboratory blood examination.</li> <li>2. Reading a complete blood count and other blood tests.</li> <li>3. Using the (E.C.G.) and read the diagram.</li> <li>4. Using spirometer and know the normal values.</li> <li>5. Knowing the functions of the various body systems.</li> </ol>	
<b>10. Course outcomes and teaching, learning and evaluation methods</b>	
A.Cognitive objectives <ol style="list-style-type: none"> <li>1- Identify the benefit of physiological processes in human nursing.</li> <li>2- Knowing the organs in the human body and their relationship to body functions.</li> <li>3- The various body functions and physiological processes that take place within the</li> </ol>	

human body.
<p>B - The skills objectives of the course: the student will be able to:</p> <ol style="list-style-type: none"> <li>1- Use the equipment used to that used to measure organ functions.</li> <li>2- Distinguish between normal and abnormal values for blood tests.</li> <li>3- Measure vital signs such as pulse, breathing, body temperature, and blood pressure, and to distinguish between normal and abnormal values.</li> </ol>
<b>Teaching and learning methods</b>
Traditional lecture, report writing, seminar conduct, practical training in the laboratory, methodological training in the hospital, and summer training.
<b>Evaluation methods</b>
Daily written and oral tests, applied tests, seminars, semester and final exams, obligations to assignments, attendance and commitment, feedback (testing the student on the previous subject), self-evaluation (questions are set for the student by the teacher and the student answers the questions, and the teacher also answers the same questions and asks The student is asked to evaluate himself in light of the teacher's answers, reports on scientific developments in the field of specialization, and asks analytical and deductive questions.
<p>C- Emotional and value goals</p> <ol style="list-style-type: none"> <li>1- Teach the student to estimate the benefit of medical equipment used and maintain it in the laboratory and hospital.</li> <li>2- Training on how to deal with various laboratory tests.</li> <li>3- Training on giving accurate test results and comparing them with abnormal values.</li> </ol>
<b>Teaching and learning methods</b>
Traditional lecture, self-learning, feedback, deductive and analytical thinking questions, methodological training in laboratories, applied training in hospitals, and summer training.
<b>Evaluation methods</b>
Simulating the medical condition, written, oral, and applied tests, semester and final exams, daily tests, and commitments to assignments such as making reports in the field of specialization and then discussing the reports, attendance and commitment, feedback (testing the student on the previous subject), self-evaluation (questions are put to the student by the teacher). The student answers the questions, and the teacher also answers the same questions. The student is asked to evaluate himself according of the teacher's answers) and deductive questions.
<p>D - Transferable general and qualifying skills (other skills related to employability and personal development).</p> <ol style="list-style-type: none"> <li>1- Field visits to gain experience from others.</li> <li>2- Access to scientific developments in the field of specialization (educational</li> </ol>

## 11. Course Structure

videos).  
3- Practical training in hospitals.

<b>Wee k</b>	<b>Hours</b>	<b>Outcome of the teaching</b>	<b>Unit/Module or Topic Title</b>	<b>Teaching methods</b>	<b>Assess ment metho d</b>
1	4	Introducing students to the physiology.	Introduction of physiology , body organs, homeostasis, Blood composition ,WBC , RBC , Platelets	Lecture, discussion, presentation of videos	<b>Test</b>
2	4	Identifying blood types, knowing why blood clots outside the body.	blood grouping , mechanism of clotting, blood disorder	Lecture, discussion, presentation of videos	<b>Practi cal test</b>
3	4	Knowing the parts of the cardiovascular system and recognizing heart sounds	cardio vascular system , heart, arteries , veins, capillaries , valves , heart sound , cardiac cycle	Lecture, discussion, presentation of videos	<b>Test</b>
4	4	Identifying the pulse, the normal rate of the pulse, abnormal rate of the pulse, and knowing the electrocardiogram.	Origin of heart pulse , blood pressure and ECG	Lecture, discussion, presentation of videos	<b>Practi cal test</b>
5	4	Identify the lymphatic system, body fluids and homeostasis	Lymphatic system and body fluid, homeostasis	Lecture, discussion, presentation of videos	<b>Test</b>
6	4	Knowledge of the respiratory system Anatomy of the respiratory system	Structure of Respiratory system ,mechanism of breathing pulmonary functions	Lecture, discussion, presentation of videos	<b>Test</b>

7	4	Knowing the spirometer, the types of respiratory volumes, and identifying respiratory diseases	Spirometer ,lung volume, respiratory, disorder ,asthma ,T.B. pneumonia	Lecture, discussion, presentation of videos	<b>Practical test</b>
8	4	Identify the parts of the nervous system and how this system works	Nervous system , structure .and function nerve cell cranial nerve , spinal nerve, nerve synapse	Lecture, discussion, presentation of videos	<b>Test</b>
9	4	Knowing of the functions of the peripheral nervous system and the function of peripheral nerves, knowing the functions of the autonomic nervous system	Peripheral Nervous system, sympathetic and parasympathetic system.	Lecture, discussion, presentation of videos	<b>Practical test</b>
10	4	Learning how food is digested and absorbed	Digestive system structure and function	Lecture, discussion, presentation of videos	<b>Test</b>
11	4	Identifying the glands accessory to the digestive system (liver, pancreas, and salivary glands), knowing the main food components and how they are digested and absorbed	Accessory of Digestive system, structure and function and metabolism	Lecture, discussion, presentation of videos	<b>Practical test</b>
12	4	To learn the kidney anatomy and its functions	Urinary system, structure and function	Lecture, discussion, presentation of videos	<b>Test</b>
13	4	Identify the components of the male and female	Reproductive system, Male reproductive	Lecture, discussion, presentation	<b>Test</b>

		reproductive systems, diagnose some conditions that affect these two systems	system and female reproductive system, structure and function	of videos	
14	4	Knowing the site of endocrine glands and their functions	Endocrine system (pituitary, thyroid, ovaries and testis)	Lecture, discussion, presentation of videos	<b>Test</b>
15	4	Knowing the sources of gained and lost energy, how to control a constant temperature, and knowing the normal body temperature	Body temperature regulation, Muscular and skin structure and function.	Lecture, discussion, presentation of videos	<b>Practical Test</b>

<b>12.Infrastructure</b>	
Required reading:	Physiology
<b>Main references (sources)</b>	<p>1. احمد صابر , علم وظائف الاعضاء , 2012</p> <p>2. أ.د. صباح ناصر العلوجي, علم وظائف الاعضاء , 2014</p> <p>3. Memmler/ Wood- Structure and function of the human body, fourth edition</p> <p>4. Silverthorn, D. U. (2015). <i>Human physiology</i>. Jones &amp; Bartlett Publishers</p>
Recommended books and references (scientific journals, reports,...)	
B - Electronic references, Internet sites...	

<b>13.Course development plan</b>
<p>Access to modern scientific literature</p> <p>1-Participation in relevant scientific conferences</p> <p>2-The teaching and training staff is partially devoted to applying and working in hospitals</p> <p>3-Hosting specialized professors</p> <p>4-Academic pairing with other universities and corresponding colleges</p>



<b>1. Teaching Institution</b>	Ministry of Higher Education and Scientific Research / Northern Technical University
<b>2. University/ Department</b>	Mosul Medical Technical Institute/ Anesthesia Techniques Department
<b>3. Course title/code</b>	Anatomy / TIMM 107
<b>4. Program (s) to which it contributes</b>	Technical Diploma in anesthesia
<b>5. Modes of Attendance offered</b>	* Weekly lesson schedule (theoretical and practical) * Scientific discussions, seminars, other activities
<b>6. Semester/Year</b>	Modules
<b>7. Number of hours tuition (total)</b>	60
<b>8. Date of production/revision of this specification</b>	8 / 1 / 2024
<b>9. Aims of the Course</b>	
The student will be able to:	
<ul style="list-style-type: none"> <li>• Identify the human body's systems.</li> <li>• Identify the relationship between devices.</li> </ul>	
<b>10. Course outcomes and teaching, learning and evaluation methods</b>	
A. <u>Cognitive objectives:</u>	
A1. Identify the organs of each system of the human body.	
A2. Identify the location of each organ in the human body.	
B - <u>Skills objectives:</u>	
• Training students on the general anatomical positions of the human body	
C- <u>Emotional and Value-Based objectives:</u>	
• Respecting the patient's sanctity, customs and traditions.	
D - <u>General and qualifying skills:</u>	
D1- Field visits to gain experience from others.	
D2- Access to scientific developments in the field of specialization (educational videos).	
D3- Practical training in hospitals.	
<b>Teaching and learning methods</b>	
Traditional lecture, Writing reports, Seminar conduct, Practical training in the laboratory, Practical training in the hospital, and End of the course training.	

**Evaluation methods**

Daily written and oral tests, Applied tests, Seminars, Semester and final exams, Commitments to assignments, Attendance and commitment, Feedback (Linking the current topic to the previous topic), Self-evaluation, Reports on scientific developments in the field of specialization, Asking analytical and deductive questions.

**11. Course Structure**

Week	Hours	Unit/Module or Topic Title	Teaching Method	Assessment Method
1	4	Anatomical Directions: Explain all directions of the human body. Surface anatomy of the heart: Describe the position of the heart according to the chest wall and the number of the rib .	Lecture, discussion, presentation of videos	test
2	4	Surface Anatomy of lungs: Describe the position of the lungs according to the chest wall and the number of the rib. Anatomy of the abdomen surface: Drawing the regions of the abdominal surface according to the horizontally & vertically lines .	Lecture, discussion, presentation of videos	test
3	4	Anatomy of stomach: Demonstration the relation of the stomach to the other organs to the abdomen. Anatomy of the liver & spleen: Explain the regions of liver & spleen according to the surface anatomy of abdomen .	Lecture, discussion, presentation of videos	test
4	4	Anatomy of Intestine:	Lecture, discussion,	Test

		Demonstration the relation of the Intestine to the other organs to the abdomen. Anatomy of the Appendix: Determine the region of the appendix at the right iliac region .	presentation of videos, Display models	
5	4	Anatomy of the gall bladder: Determine the region of gall bladder at the right sub – costal region. Define the region of the uterus at the supra – pubic region .	Lecture, discussion, presentation of videos, Display models	practical test
6	4	Anatomy of the skeleton: Describe the center skeleton: Skull – vertebral column & the peripheral. Bones of the shoulder: Show the bones of the shoulder on the skeleton which are the scapula and the clavicle.	Lecture, discussion, presentation videos, Display models	practical test
7	4	Bones of the arm: Show the bones of the arm (Humarus). Bones of the forearm: Show the bones of Ulna and Radius.	Lecture, discussion, presentation videos, Display models	practical test
8	4	Bones of the hand: Demonstrate the bones of the hand: (carpal bones and meta carpal and phalangus). Bones of the pelvis: Define the bones of the pelvis which are: (Iliac and Ischemic and sacrum).	Lecture, discussion, presentation videos, Display models	practical test
9	4	Bones of the thigh: Demonstrate of the skeleton the femur bone with the lower and upper ends. Bones of the leg: Show the bones which are: (Tibia & fibula), and extration to the femur and the foot .	Lecture, discussion, presentation videos, Display models	practical test

10	4	Bones of the foot: Describe the bones which are :(Tarsal & metatarsal & phalanges). Bones of the skull: Name the numbers of the bones on all at surfaces of the skull .	Lecture, discussion, presentation videos, Display models	practical test
11	4	Bones of vertebral column: Show the student the types of the vertebrae column and the numbers. Muscle of the shoulder: Show them on the model all the muscles of the shoulder.	Lecture, discussion, presentation videos, Display models	practical test
12	4	Anatomy of the chest wall: Give the types and numbers of the ribs and explain the sternum. Muscles of the chest & abdomen: Give the name of the muscles of the chest wall and abdominal wall.	Lecture, discussion, presentation videos, Display models	practical test
13	4	Muscles of the back & gluteal region: Show the student muscles of the back and gluteal muscles. Anatomy of the digestive system: Show the organs of the digestive system .	Lecture, discussion, presentation videos, Display models	practical test
14	4	Anatomy of the cardio-muscular system: Show them the model of the organs which is the heart and big vessels. Respiratory system: Demonstrate the lungs and bronchus and bronchi..	Lecture, discussion, presentation videos, Display models	practical test
15	4	The uro-genetal system: Show the kidney and urinary bladder with exaltation to the uterus & prostate. The central nervous system: Describe the brain – cerebellum – medulla	Lecture, discussion, presentation videos, Display models	practical test

		oblongata and the spinal cord.		
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<b>12.Infrastructure</b>	
<b>Required reading:</b>	<b>Anatomy</b>
<b>Main references (sources)</b>	1- مبادئ علم التشريح لطلبة معاهد المهن الصحية، الدكتور عبد الرحمن محمود، الرحيم / وزارة الصحة 1983
<b>Recommended books and references (scientific journals, reports,...)</b>	<b>Atlas of anatomy (Grantes) / 1998. Kingham anatomy – Oxford – London / 1987 .</b>
<b>B - Electronic references, Internet sites...</b>	

<b>13.Course development plan</b>
<p>Access to modern scientific literature through:</p> <ol style="list-style-type: none"> <li>1- Participation in relevant scientific conferences</li> <li>2- The teaching and training staff is partially devoted to applying and working in hospitals</li> <li>3- Hosting specialized professors</li> <li>4- Academic pairing with other universities and corresponding colleges</li> </ol>

1. Teaching Institution	Ministry of Higher Education and Scientific Research / Northern Technical University
2. University/ Department	Mosul Medical Technical Institute/ Anesthesia Techniques Department
3. Course title/code	<b>Safety in lab &amp; workshop TIMM108</b>
4. Programme (s) to which it contributes	<b>Anesthesia Tech Diploma</b>
5. Modes of Attendance offered	<b>1 -Weekly lesson schedule (theoretical( 2- Discussions</b>
6. Semester/Year	<b>First semester/first level</b>
7. Number of hours tuition (total)	<b>30 hours (the number of theoretical hours during the 15 weeks)</b>
8. Date of production/revision of this specification	<b>8/1/2024</b>
<b>9. Aims of the Course</b> The student will be able to: <ul style="list-style-type: none"> <li>• Identify the human body's systems.</li> <li>• Identify the relationship between devices.</li> </ul>	
<b>10. Course outcomes and teaching, learning and evaluation methods</b>	
1. Course objectives	<p>At the end of the course, the student learns about the basic laboratory equipment and what precautions are taken to ensure safety.</p> <p>Protects workers from chemical, radiological, biological, and fire hazards through knowledge of personal equipment.</p> <p>These must be available in laboratories and knowledge of first aid for every accident that may occur. As he recognizes</p> <p>The student learns about the most important environmental factors that have an impact on the health and safety of laboratory workers, such as light., Noise, temperature, and humidity</p> <p>-</p>
2. Course outcomes and teaching, learning and evaluation methods	

<p>A- Cognitive objectives</p> <p>a1- Identify the basic equipment in laboratories.</p> <p>a2- Identify the precautions that provide safety for laboratory workers</p> <p>a3- Identify chemical, radiological and biological risks</p> <p>a4- Identify the types of diagnostic equipment and how to deal with them</p>
<p>B - The skills objectives of the course.</p> <p>The course is limited to theoretical hours and no practical hours are allocated to enhance the student's skills.</p>
<p><b>Teaching and learning methods</b></p>
<p>1 Adopting the screen to display the lecture enhanced with illustrative pictures.</p> <p>-2 Adopting the discussion method and involving the largest number of students because of their prior knowledge of the topic of the lecture that was prepared for them.</p> <p>In a binding manner</p>
<p>Evaluation methods</p>
<p>-Monthly evaluation by conducting the examination stipulated in the instructions.</p> <p>-To evaluate the activities required of students</p>
<p>C- Emotional and value goals</p> <p>C1- Be careful when dealing with any substance in the laboratory.</p> <p>C2- He knows the importance of wearing personal protective equipment when entering the laboratory.</p> <p>C3- It protects laboratory equipment, especially chemicals, from being wasted or spilled, because they represent a danger as well.</p> <p>About her loss.</p> <p>-C4- Adhere to the instructions for use and cautionary instructions before starting any experiment or work in the laboratory.</p>
<p><b>Teaching and learning methods</b></p>
<p>1- Adopting the screen to display the lecture supported by illustrative pictures.</p> <p>-2 Adopting the discussion method and involving the largest number of students because of their prior knowledge of the topic of the lecture that was prepared for them.</p> <p>In a binding manner</p>
<p><b>Evaluation methods</b></p>
<p>-Monthly evaluation by conducting the examination stipulated in the instructions.</p> <p>-Evaluation related to the activities required of students</p>
<p>D - Transferable general and qualifying skills (other skills related to employability and personal development).</p> <p>Dr1- The student's ability to evaluate laboratories according to his knowledge of the</p>

conditions that must be met in the laboratory.

<b>11.Course structure</b>					
<b>Evaluation method</b>	<b>Teaching method</b>	<b>Name of the unit/topic</b>	<b>Required learning outcomes</b>	<b>hours</b>	<b>the week</b>
Feedback Through guidance questions	Method Discussion	<b>Basic equipment that must be available in the laboratory (laboratory arrangement)</b>	The student gets to know the basic equipment Must be available in Laboratory	2	1
Feedback Through guidance questions	Method Discussion	<b>Safety precautions when dealing with laboratory tools and chemicals</b>	The student understands safety precautions When dealing with Laboratory tools /Chemical materials	2	2
Feedback Through guidance questions	Method Discussion	<b>Safety precautions when completing laboratory work and storing and preserving materials</b>	Teaching students how to work and safety precautions Upon completion of work Laboratory and storage materials and their preservation)	2	3



Feedback Through guidance questions	Method Discussi on	<b>Fires and their types. And means of extinguishing it</b>	The student should distinguish between fires and their types And means of extinguishing it	2	4&5
Feedback Through guidance questions	Method Discussi on	<b>Personal protective equipment</b>	For students to become familiar with protective equipment Personality	2	6
Feedback Through guidance questions	Method Discussi on	<b>Chemical hazards, and how to deal with them</b>	For students to know the types of chemical hazards And how to deal with it	2	7
Feedback Through guidance questions	Method Discussi on	<b>Radiation hazards</b>	For students to know the types of radiation hazards	2	8
Feedback Through guidance questions	Method Discussi on	<b>Biological hazards</b>	For students to know the types of biological hazards	2	9
Feedback Through guidance questions	Method Discussi on	<b>Disposal of laboratory (medical) waste. Use of warning signs in the laboratory</b>	For students to know the types of laboratory waste (Medical)	2	10&11
Feedback Through guidance questions	Method Discussi on	<b>First aid in laboratories</b>	For students to know the types of	2	12&13

			accidents and first aid		
Feedback Through guidance questions	Method Discussion	<b>Other environmental factors and their impact on safety and health (light, noise, heat and humidity)</b>	<b>The student gets to know the physical factors harmful to the work environment</b>	2	14
Feedback Through guidance questions	Method Discussion	<b>Safety in field studies</b>	For students to become familiar with the types of field studies	2	15

<b>12.Infrastructure</b>	
There are no textbooks prescribed for this course	1- Required prescribed books
1Korkis Abdel Adam_Youssef Zora Youssef, Chemical Hazards and Safety, University of Basra, College of Science.1980 -2Abdul Rahman Nayef Al Abri - Hussein Ahmed Al Sharif, security and safety conditions in... Chemical warehouses, Civil Defense Directorate, Kingdom of Saudi Arabia.2013 -3A.D. Ahmed Lotfy, Guide to Security and Safety Precautions in Chemical Laboratories, Damietta University, .2015 -4World Health Organization, ionizing radiation, its health effects and prevention measures, .2005 -5World Health Organization, biological risks, .	2- Main references (sources)
Occupational health and safety books	Recommended books and references (scientific journals, reports,...)
	B - Electronic references, Internet sites...

### 3. Course development plan

-Access to modern scientific literature  
-addition side practical to The decision For a purpose Consolidation Ideas I have Students  
3- Deleting the topic of field studies from the curriculum because there is no relationship between it and the safety of laboratories and workshops.

1. Teaching Institution	Ministry of Higher Education and Scientific Research / Northern Technical University
2. University/Department	Mosul Medical Technical Institute/ Anesthesia Department
3. Course title/code	Medical Terminology ( <b>TIMM 109</b> )
5. Modes of Attendance offered	* Weekly lesson schedule (theoretical and practical) * Scientific discussions, seminars, other activities
6. Semester/Year	Courses
7. Number of study hour (total)	30 hour
8. Date of production/revision of this specification	8 / 1 / 2024
<b>9. Aims of the Course</b> 1- Teaching and training the student on how to pronounce letters correctly. 2- Teaching and training the student on how to communicate with others. 3- Teaching and training the student to know the tenses and their structure. 4- Teaching and training the student to know how to make a question and a negation. 5- Teaching and training the student on how to use punctuation and definition tools. 6- Teaching and training the student on how to know information about himself and others as well.	
<b>Course outcomes and teaching, learning and evaluation methods</b>	
<b>A. Cognitive objectives</b> A1- Identify tenses (present simple, past simple, and future simple) . A2- Learn how to pronounce correctly . A3- Learn how to provide a personal biography for an individual. A4- Focus on grammar. A5- Clear vocabulary approach. A6- Work on integrated skills.	
B - The skills objectives of the course.	

- B1- Training in identifying correct sentences from incorrect sentences and explaining the reason.  
 B2 - Training students on how to tell the time.  
 B3 - Training on some countries, nationalities, and languages.  
 B4 - Training on introduction, getting to know each other, and bidding farewell.

**Teaching and learning methods**

Traditional lecture, writing reports, conducting seminars, systematic training in the classroom, and the use of technology in modern education, self-learning, feedback, deductive and analytical thinking questions, systematic training in laboratories.

**Evaluation methods**

Daily written and oral tests, applied tests, seminars, semester and final exams, obligations to assignments, attendance and commitment, feedback (testing the student on the previous subject), self-evaluation (questions are set for the student by the teacher and the student answers the questions, and the teacher also answers the same questions and asks The student is asked to evaluate himself in light of the teacher’s answers, and ask analytical and deductive questions.

**C- Emotional and value goals**

- C1- Training on how to deal with incorrect sentences.  
 C2- Training on how to improve your skills to use the English language more effectively and perform well in your studies.  
 C3- Training on how to proceed at work and communicate in English in your free time. .  
 C4- Training on how to deal with native speakers.  
 C5- Training on how to benefit from acquired skills.  
 C6- Instilling a love of knowledge in the student by encouraging him to learn.

**D - Transferable general and qualifying skills (other skills related to employability and personal development).**

- D1-Encouraging reading of texts in English.  
 D2- Access to scientific developments in the field of specialization (educational videos).

**11. Course Structure**

Week	Hours	Required learning outcomes	Unit/Module or Topic Title	Teaching Method	Assessment Method
1	2	Introducing students to the importance	Introduction To Medical Terminology	Lecture, discussion, pairs of students to conduct	Oral Test

		of the medical terminology course and its nature		dialogues, representation by drawing on the blackboard, PowerPoint	
2	2	Identify the structure of the medical term and its basic parts	Basic Word Structure	Lecture, discussion, video presentation, and PowerPoint	Oral Test
3	2	. Identify the root word of the medical term	Root	Lecture, discussion, PowerPoint presentation, acting pairs	Oral Test
4	2	Identify the syllables that are added to the beginnings of a medical term	The Prefix	Lecture, discussion, video presentation, and pair acting	Oral and Practical Test
5	2	Identify the syllables that are added to the ends of a medical term	The Suffix	Lecture, discussion, video and photo presentation	Practical and Oral Test
6	2	Learn how to connect medical terms	Rules For Combining Vowels	Lecture, discussion, video and photo presentation	Practical Test
7	2	Identify the types of association related to medical terms	Combining Form	Lecture, discussion, slide show	Practical and Oral Test
8	2	Learn about the most important	Medical terminology and pathology	Lecture, discussion, video and photo	Practical Test

		medical terms and concepts of pathology		presentation	
9	2	Identify the most important medical terms related to the heart, circulatory, and nervous systems, its component parts, and the most important common diseases	Terms of Cardiovascular system Terms of Nervous system	Lecture, discussion, showing videos and photo	Practical Test
10	2	Identify the most important medical terms related to the digestive and urinary systems, their component parts, and the most common diseases	Terms of Digestive system Urinary system Terms of	Lecture, discussion, presentation of videos and photos	Practical Test
11	2	Identify the most important medical terms related to the blood and	Terms of Blood and Lymphatic system	Lecture, discussion, presentation of videos and photos	Practical Test

		lymphatic system, its component parts, and the most important common diseases			
12	2	Identify the most important medical terms related to the respiratory system, its component parts, and the most common diseases	Terms of Respiratory system	Lecture, discussion, presentation of videos and photos	Practical Test
13	2	Identify the most important medical terms related to teeth, face and jaws	Terms Of Teeth And Oral Facial Regio	Lecture, discussion, presentation of videos and photos	Practical Test
14	2	Identify the most important medical terms related to conditions and trends	Positional and directional terms	Lecture, discussion, presentation of radiological videos and films	Practical Test
15	2	Identify the most important medical terms related to the	Musculoskeletal System	Lecture, discussion, presentation of videos and photos	Practical and Oral Test

		musculoskeletal system, its component parts, and the most common diseases			
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## 12. Infrastructure

<b>Main references (sources)</b>	
Recommended books and references (scientific journals, reports,...)	
B - Electronic references, Internet sites...	

## 13. Course development plan

Access to modern scientific literature

- 5- Access to modern scientific literature.
- 6- Participation in relevant scientific conferences.
- 7- Devoting the teaching and training staff to apply and work in places to apply what has been learned.
- 8- Hosting specialized professors.
- 9- Academic pairing with other universities and corresponding colleges.

1. Teaching Institution	Ministry of Higher Education and Scientific Research / Northern Technical University
2. University/ Department	Mosul Medical Technical Institute/ Anesthesia Techniques Department
3. Course title/code	Principles of anaesthesia <b>ANET110</b>
4. Programme (s) to which it contributes	Diploma in anaesthesia technology
5. Modes of Attendance offered	* Weekly lesson schedule (theoretical and



	practical) * Scientific discussions, seminars, other activities
6. Semester/Year	Regulation
7. Number of hours tuition (total)	90 hr.
8. Date of production/revision of this specification	8 / 1 / 2024
<b>9. Aims of the Course</b>	
<b>1-Teaching and training students on the use of anesthesia medications</b>	
<b>2-Teaching and training students on anesthesia methods</b>	
<b>3-Teaching and training the student to prepare medications and equipment for anesthesia.</b>	
<b>4-Teaching and training the student about the side effects of each medication.</b>	
.	
<b>10. Course outcomes and teaching, learning and evaluation methods</b>	
A.Cognitive objectives	
A1- Identify the types of anesthetic medications and the side effects of each medication.	
A2- Identify the stages of anesthesia that the patient goes through	
A3- Identifying the types of anesthesia.	
B - The skills objectives of the course.	
B1-Training on how to use the anesthesia cart, knowing its parts, and knowing the gases contained in it the cart.	
B2 - Training students on how to use anesthesia tools.	
B3 - Training the student to prepare anesthesia medications.	
Teaching and learning methods	
Traditional lecture, report writing, seminar conduct, practical training in the laboratory, methodological training in the hospital, and summer training.	
<b>Evaluation methods</b>	
Daily written and oral tests, applied tests, seminars, semester and final exams,	

<p>obligations to assignments, attendance and commitment, feedback (testing the student on the previous subject), self-evaluation (questions are set for the student by the teacher and the student answers the questions, and the teacher also answers the same questions and asks The student is asked to evaluate himself in light of the teacher's answers, reports on scientific developments in the field of specialization, and asks analytical and deductive questions.</p>
<p>C- Emotional and value goals  C1- Training on how to deal with premature babies and newborns.  C2- Training on how to deal with pregnant women.  C3- Training on how to deal with unconscious patients.  C4- Training on how to deal with elderly patients.  C5- Training on how to deal with paralyzed patients.  C6- Training on how to deal with patients who have injuries resulting from traffic collisions and exposure to gunfire.</p>
<p><b>Teaching and learning methods</b></p>
<p>Traditional lecture, self-learning, feedback, deductive and analytical thinking questions, methodological training in laboratories, applied training in hospitals, and summer training.</p>
<p><b>Evaluation methods</b></p>
<p>Simulating the medical condition, written, oral, and applied tests, semester and final exams, daily tests, and commitments to assignments such as making reports in the field of specialization and then discussing the reports, attendance and commitment, feedback (testing the student on the previous subject), self-evaluation (questions are put to the student by the teacher The student answers the questions, and the teacher also answers the same questions. The student is asked to evaluate himself in light of the teacher's answers) and deductive and deductive questions.</p>
<p>D - Transferable general and qualifying skills (other skills related to employability and personal development).  D1- Field visits to gain experience from others.  D2- Access to scientific developments in the field of specialization (educational videos).  D3- Practical training in hospitals.</p>

<b>11. Course Structure</b>					
Week	Hours	Unit/Module or Topic Title	ILOs	Teaching	Assessment Method

				Method	
1	6	History of anesthesia.	Lecture, discussion, presentation of anaesthesia videos and films	6	test
2	6	Respiratory physiology related to anaesthesia.	Lecture, discussion, presentation of anaesthesia videos and films	6	practical test
3	6	Respiratory physiology related to anaesthesia	Lecture, discussion, presentation of anaesthesia videos and films	6	test
4	6	Type of anaesthetic techniques available: local analgesia techniques, general anaesthesia	Lecture, discussion, presentation of anaesthesia videos and films	6	Test
5	6	Ideal anaesthetic agent, ideal anaesthesia	Lecture, discussion, presentation of anaesthesia videos and films	6	practical test
6	6	Pharmacodynamic effect: effect of drug on the patient	Lecture, discussion, presentation of anaesthesia videos and films	6	practical test
7	6	Pharmacodynamic effect: effect of drug on the patient	Lecture, discussion, presentation of anaesthesia videos and films	6	practical test
8	6	Pharmacodynamic effect: effect of drug on the	Lecture, discussion,	6	practical test

		patient	presentation of anaesthesia videos and films		
9	6	Pharmacodynamic effect:effect of drug on the patient	Lecture, discussion, presentation of anaesthesia videos and films	6	practical test
10	6	Steps of anaesthesia :pre-operative,pre-induction,maintenance,reversal,early recovery and late recovery.	Lecture, discussion, presentation of anaesthesia lvideos and films	6	practical test
11	6	Vital signs and anaesthesia:proper monitoring and recording.	Lecture, discussion, presentation of anaesthesia videos and films	6	practical test
12	6	Vital signs and anaesthesia:proper monitoring and recording.	Lecture, discussion, presentation of anaesthesia videos and films	6	practical test
13	6	Anaesthesia and respiratory insufficiency respiratory failure;diagnosis and treatment.	Lecture, discussion, presentation of anaesthesia videos and films	6	practical test
14	6	Anaesthesia and respiratory insufficiency respiratory failure;diagnosis and treatment.	Lecture, discussion, presentation of anaesthesia videos and films	6	practical test
15	6	Anaesthesia and shock syndrome.	Lecture, discussion, presentation of anaesthesia videos and films	6	practical test

## 12.Infrastructure

Required reading:	
<b>Main references (sources)</b>	
Recommended books and references (scientific journals, reports,...)	
B - Electronic references, Internet sites...	

### 13. Course development plan

- Access to modern scientific literature
- 10- Participation in relevant scientific conferences
  - 11- The teaching and training staff is partially devoted to applying and working in hospitals
  - 12- Hosting specialized professors
  - 13- Academic pairing with other universities and corresponding colleges

1. Teaching Institution	Ministry of Higher Education and Scientific Research / Northern Technical University
2. University/ Department	Mosul Medical Technical Institute/ Anesthesia Techniques Department
3. Course title/code	<b>Anesthesia application ANET111</b>
4. Programme (s) to which it contributes	Diploma in anaesthesia technology
5. Modes of Attendance offered	* Weekly lesson schedule (theoretical and practical) * Scientific discussions, seminars, other activities
6. Semester/Year	Regulation
7. Number of hours tuition (total)	90 hr.
8. Date of production/revision of this specification	8 / 1 / 2024
<b>9. Aims of the Course</b> <b>1-Teaching and training students on the use of anesthesia medications</b>  <b>2-Teaching and training students on anesthesia methods</b>  <b>3-Teaching and training the student to prepare medications and equipment for anesthesia.</b>  <b>4-Teaching and training the student about the side effects of each medication.</b>	

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<b>10. Course outcomes and teaching, learning and evaluation methods</b>
A.Cognitive objectives
A1- Identify the types of anesthetic medications and the side effects of each medication.
A2- Identify the stages of anesthesia that the patient goes through
A3- Identifying the types of anesthesia.
B - The skills objectives of the course.
B1-Training on how to use the anesthesia cart, knowing its parts, and knowing the gases contained in it the cart.
B2 - Training students on how to use anesthesia tools.
B3 - Training the student to prepare anesthesia medications.
Teaching and learning methods
Traditional lecture, report writing, seminar conduct, practical training in the laboratory, methodological training in the hospital, and summer training.
<b>Evaluation methods</b>
Daily written and oral tests, applied tests, seminars, semester and final exams, obligations to assignments, attendance and commitment, feedback (testing the student on the previous subject), self-evaluation (questions are set for the student by the teacher and the student answers the questions, and the teacher also answers the same questions and asks The student is asked to evaluate himself in light of the teacher's answers, reports on scientific developments in the field of specialization, and asks analytical and deductive questions.
C- Emotional and value goals
C1- Training on how to deal with premature babies and newborns.
C2- Training on how to deal with pregnant women.
C3- Training on how to deal with unconscious patients.
C4- Training on how to deal with elderly patients.
C5- Training on how to deal with paralyzed patients.
C6- Training on how to deal with patients who have injuries resulting from traffic collisions and exposure to gunfire.
<b>Teaching and learning methods</b>
Traditional lecture, self-learning, feedback, deductive and analytical thinking

questions, methodological training in laboratories, applied training in hospitals, and summer training.

**Evaluation methods**

Simulating the medical condition, written, oral, and applied tests, semester and final exams, daily tests, and commitments to assignments such as making reports in the field of specialization and then discussing the reports, attendance and commitment, feedback (testing the student on the previous subject), self-evaluation (questions are put to the student by the teacher The student answers the questions, and the teacher also answers the same questions. The student is asked to evaluate himself in light of the teacher’s answers) and deductive and deductive questions.

D - Transferable general and qualifying skills (other skills related to employability and personal development).

D1- Field visits to gain experience from others.

D2- Access to scientific developments in the field of specialization (educational videos).

D3- Practical training in hospitals.

**11. Course Structure**

Week	Hours	Unit/Module or Topic Title	ILOs	Teaching Method	Assessment Method
1	6	Anesthesia and shock syndrome.	Introducing the anesthesia and shock syndrome.	Lecture, discussion, presentation of anaesthesia videos and films	test
2	6	I.V. preparation during anesthesia: blood, blood types	Introducing the I.V. preparation during anesthesia:	Lecture, discussion, presentation of	test

			blood, blood types	anaesthesia videos and films	
3	6	I.V. preparation during anesthesia: blood, blood types	Introducing the I.V. preparation during anesthesia: blood, blood types	Lecture, discussion, presentation of anaesthesia videos and films	practical test
4	6	Local analgesic techniques available: subtotal, epidural plexus block, trunk block and nerve block, surface analgesia, Endotracheal tubes : practical application	Introducing the Local analgesic techniques available: subtotal, epidural plexus block, trunk block and nerve block, surface analgesia	Lecture, discussion, presentation of anaesthesia videos and films	Test
5	6	====	=====	Lecture, discussion, presentation of anaesthesia videos and films	practical test
6	6	Some serious complications during anesthesia and treatment: regurgitation, vomiting, inhalation, regularization,	Introducing the Some serious complications	Lecture, discussion, presenta	practical test



		laryngospasm, cyanosis, serious drug reactions and blood incompatibility.	during anesthesia and treatment	tion of anaesthesia videos and films	
7	6	=====		Lecture, discussion, presentation of anaesthesia videos and films	practical test
8	6	=====		Lecture, discussion, presentation of anaesthesia videos and films	practical test
9	6	=====		Lecture, discussion, presentation of anaesthesia videos and films	practical test
10	6	Renal insufficiency and anesthesia.	Introducing the Renal insufficiency and anesthesia.	Lecture, discussion, presentation of	practical test

				anaesthesia videos and films	
11	6	Liver insufficiency and anesthesia	Introducing the Liver insufficiency and anesthesia	Lecture, discussion, presentation of anaesthesia videos and films	practical test
12	6	. Lab. Experiment Assignments 12 Emergency drugs in anesthetic theater	Introducing the . Lab. Experiment Assignments 12 Emergency drugs in anesthetic theater	Lecture, discussion, presentation of anaesthesia videos and films	practical test
13	6	Anesthesia and dysrhythmia: monitoring, Stimulation drugs,	Introducing the Anesthesia and dysrhythmia: monitoring, Stimulation drugs,	Lecture, discussion, presentation of anaesthesia videos and films	practical test
14	6	= = = =		Lecture, discussion, presentation of anaesthesia	practical test

				sia videos and films	
15	6	Short muscle-relaxants, types, how to use them.	Introducing the Short muscle-relaxants, types, how to use them.	Lecture, discussion, presentation of anaesthesia sia videos and films	practical test

## 12. Infrastructure

Required reading:

**Main references (sources)**

Recommended books and references  
(scientific journals, reports,...)

B - Electronic references, Internet sites...

## 13. Course development plan

Access to modern scientific literature

1-Participation in relevant scientific conferences

2-The teaching and training staff is partially devoted to applying and working in hospitals

3-Hosting specialized professors

4-Academic pairing with other universities and corresponding colleges

1. Teaching Institution	Ministry of Higher Education and Scientific Research / Northern Technical University
2. University/ Department	Mosul Medical Technical Institute/ Anesthesia Techniques Department
3. Course title/code	Clinical chemistry <b>ANET112</b>
4. Programme (s) to which it contributes	Diploma in anesthesia technology
5. Modes of Attendance offered	* Weekly lesson schedule (theoretical and practical) * Scientific discussions, seminars, other activities
6. Semester/Year	Annual
7. Number of hours tuition (total)	225
8. Date of production/revision of this specification	8/1/2024
<b>9. Aims of the Course</b>	
<p>1- Teaching the student about diseases and how to diagnose them laboratory.</p> <p>2- Teaching student's ways to protect workers from health risks and dangers related to the use of chemicals</p> <p>3- Teaching the student laboratory safety methods.</p> <p>4- Teaching and training the student on how to read the results of laboratory tests.</p> <p>5- Teaching and training the student on how to conduct laboratory tests accurately.</p> <p>6- Teaching and training the student on how to draw blood.</p> <p>7- Teaching and training the student on how to use various laboratory equipment.</p>	
<b>10. Course outcomes and teaching, learning and evaluation methods</b>	
<p>A.Cognitive objectives</p> <p>A1- Identifying diseases and laboratory tests associated with them.</p> <p>A2- Analyzing the patient's test results.</p>	
<p>B - The skills objectives of the course.</p> <p>B1 - Training the student to increase the skill of dealing with the patient and drawing blood.</p> <p>B2 - Training the student on how to understand the basics of reading laboratory test results.</p>	
<b>Teaching and learning methods</b>	

Lecture, report writing, seminars, dialogue, practical training in the laboratory, feedback, dialogue, discussion and brainstorming.
<b>Evaluation methods</b>
Daily written and oral tests, assignments, semester and final exams, attendance and commitment, feedback (testing the student on the previous subject), reports on scientific developments in the field of specialization, asking analytical and deductive questions.
<b>C- Emotional and value goals</b>
C1- Prepare the student scientifically to know the relationship between diseases and diagnostic methods C2- Creating a healthy culture to know ways to prevent diseases and maintain human health.
<b>D - Transferable general and qualifying skills (other skills related to employability and personal development).</b>
D1- Access to the latest developments in chemistry, especially medical ones. D2- Practical training in hospitals.

11. Course Structure					
Week	Hours	Unit/Module or Topic Title	ILOs	Teaching Method	Assessment Method
1	15	Introduction to clinical chemistry	laboratory safety	Lecture	oral test
2	15	Carbohydrates - types and Metabolism	Draw of blood	Lecture, discussion, test presentation	test
3	15	Significance of Glucose, Diabetes Mellitus	Estimation of Glucose	Lecture, discussion, test presentation	test
4	15	Carbohydrates- Clinical significance. Lipids- cholesterol, functions, clinical.	Estimation of Cholesterol	Lecture, discussion, test presentation	test
5	15	Lipid- Triglyceride, functions, clinical significance.	Estimation of Triglyceride.	Lecture, discussion, test	Test

				presentation	
6	15	Proteins, Albumin. Proteins, Classification, Metabolism	Estimation of Total	Lecture, discussion, test presentation	test
7	15	Estimation of cholesterol. Kidney Function tests- Urea,	Function tests- Urea,	Lecture, discussion, test presentation	test
8	15	Kidney Function tests- Creatinine, Formation and destination.	Estimation of uric acid.	Lecture, discussion, test presentation	test
9	15	. Liver Function tests- GPT, GOT, ALP	Estimation of GPT	Lecture, discussion, test presentation	test
10	15	Estimation of cholesterol. Kidney Function tests- Urea,	Estimation of creatinine	Lecture, discussion, test presentation	test
11	15	: Serum Sodium, principles, normal values, clinical significance and functions.	Estimation of Na	Lecture, discussion, test presentation	test
12	15	. Electrolytes Serum Potassium, functions, normal values and clinical significance	Estimation of K.	Lecture, discussion, test presentation	test
13	15	. Serum Calcium, S. Ca <sup>++</sup> .	Estimation of Ca	Lecture, discussion, test presentation	Test
14	15	Serum Chloride, S. CL <sup>-</sup> .	Estimation of Cl	Lecture, discussion, test presentation	test
15	15	Enzymes - classification, clinical significance.	Estimation of Amylase	Lecture, discussion, test presentation	test

<b>12.Infrastructure</b>	
Required reading:	
<b>Main references (sources)</b>	Prescribed methodological books
Recommended books and references (scientific journals, reports,...)	Supporting sources for each course

B - Electronic references, Internet sites...

### 13. Course development plan

1- Participation in relevant scientific conferences

2- Hosting specialized professors

1. Teaching Institution	Ministry of Higher Education and Scientific Research / Northern Technical University
2. University/ Department	Mosul Medical Technical Institute/ Anesthesia Techniques Department
3. Course title/code	Bacteriology (ANET113)
4. Program (s) to which it contributes	دبلوم تقني تخدير
5. Modes of Attendance offered	* Weekly lesson schedule (theoretical and practical) * Scientific discussions, seminars, other activities
6. Semester/Year	courses
7. Number of hours tuition (total)	270
8. Date of production/revision of this specification	8 / 1 / 2024
<b>9. Aims of the Course:</b> 1. Identify the microorganism. 2. Enumerate the main branches of medical microbiology. 3. Distinguish between Eukaryotic & Prokaryotic cell. 4. Mention the main pathogenic species of microorganism in the theater & intensive care unit. 5. Mention in short notes about pathogenic fungi, viruses 6. Use microscope to examine bacteria. 7. Stain bacteria. 8. Cultivate bacteria.	
<b>10. Course outcomes and teaching, learning and evaluation methods:</b>	
<b>A. Cognitive objectives:</b>	

<p>A1- Identify the bacteria</p> <p>A2- learn how to differentiate between gram positive and negative by using microscope</p> <p>A3- identify the bacteria which cause infectious disease in human and methods of laboratory diagnosis and effective treatment</p>
<p><b>B. The skills objectives of the course:</b></p> <p>B1 - Training the student to stain the bacteria</p> <p>B2 - Training students on the methods of cultivation of bacteria and the benefit of each methods .</p> <p>B3 – Training the student to examine bacteria with microscope</p> <p>.</p>
<p><b>Teaching and learning methods :</b></p>
<p>Traditional lecture, report writing, seminar conduct, practical training in the laboratory, methodological training in the hospital, and summer training.</p>
<p><b>Evaluation methods:</b></p>
<p>Daily written and oral tests, applied tests, seminars, semester and final exams, obligations to assignments, attendance and commitment, feedback (testing the student on the previous subject), self-evaluation</p>
<p>C- Emotional and value goals</p> <p>C1- Training on how to deal with pathogens</p> <p>C2- Training on how to take pathological samples</p> <p>C3- Training on how to conduct laboratory diagnostic tests.</p> <p>C4-Training on how to prevent infection with microorganisms</p>
<p><b>Teaching and learning methods</b></p>
<p>Traditional lecture, self-learning, feedback.</p>
<p><b>Evaluation methods</b></p>
<p>Simulating the medical condition, written, oral, and applied tests, semester and final exams, daily tests, and commitments to assignments such as making reports in the field of specialization and then discussing the reports, attendance and commitment, feedback (testing the student on the previous subject), self-evaluation.</p>
<p>D - Transferable general and qualifying skills (other skills related to employability and personal development).</p> <p>D1- Field visits to gain experience from others.</p> <p>D2- Access to scientific developments in the field of specialization (educational videos).</p>

**11. Course Structure**



Week	Hours	Unit/Module or Topic Title	ILOs	Teaching Method	Assesment Method
1	6	Historical introduction of microbiology, the development of this science, the relation ship between microbiology & other science. General characters of bacteria cell. The main differences between eukaryotic & prokaryotic cell.	introduc Historical introduction of microbiology, the development of this science, the relation ship between microbiology & other science.	Lecture, discussion, video presentation	Test
2	6	.Stages of the bacteria growth, the nutritional and environmental factors which bacteria are need them to growth Infection, modes of spread of infection.	Introduce Stages of the bacteria growth, the nutritional and environmental factors which bacteria are need them to growth Infection, modes of spread of infection	Lecture, discussion,	test
3	6	Sterilization, methods of Sterilization, the effect of sterilization on bacteria growth	Introduce Sterilization, methods of Sterilization, the effect of sterilization on bacteria growth	Lecture, discussion,	Test
4	6	.Gram's positive cocci, genus streptococcus: General characters, natural habitat, toxins, main species, resistance, pathogenicity. Staphylococcus: general characters, natural habitat, toxins, main species, resistance, pathogenicity	IntroduceGram's positive cocci, genus streptococcus: General characters, natural habitat, toxins, main species, resistance, pathogenicity. Staphylococcus: general characters, natural habitat, toxins, main species, resistance, pathogenicity	Lecture, discussion,	Test

5	6	<p>Gram's negative cocci. Neisseria: General characters, natural habitat, toxins, main species, pathogenicity. Mycobacterium. T.B bacilli: General characters, natural habitat, toxins, main species, their resistance to ordinary dyes, pathogenicity. B.C.G vaccine. Leprosy bacilli: General characters, natural habitat, main species.</p>	<p>Introduce Gram's negative cocci. Neisseria: General characters, natural habitat, toxins, main species, pathogenicity. Mycobacterium. T.B bacilli: General characters, natural habitat, toxins, main species, their resistance to ordinary dyes, pathogenicity. B.C.G vaccine. Leprosy bacilli: General characters, natural habitat, main species.</p>	<p>Lecture, discussion, video presentation</p>	<p>test</p>
6	6	<p>Anaerobic spores forming gram's positive bacilli genus clostridium: General characters, natural habitat, toxins, main species, pathogenicity, effect of this genus in the theater, vaccine. Corynebacteria: General characters, main species, pathogenicity, carriers.</p>	<p>Introduce Anaerobic spores forming gram's positive bacilli genus clostridium: General characters, natural habitat, toxins, main species, pathogenicity, effect of this genus in the theater, vaccine. Corynebacteria: General characters, main species, pathogenicity, carriers</p>	<p>Lecture, discussion, video presentation</p>	<p>test</p>
7	6	<p>Gram's negative cocci: Enterobacteriaceae, Escherichia; General characters, pathogenicity, type of toxin, the medical importance of the bacteria. Klebsiella: General characters, main species, the main diseases of this genus</p>	<p>Introduce Gram's negative cocci: Enterobacteriaceae, Escherichia; General characters, pathogenicity, type of toxin, the medical importance of the bacteria. Klebsiella: General characters, main species, the main diseases of this genus</p>	<p>Lecture, , discussion, video presentation</p>	<p>test</p>
8	6	<p>Salmonella group: general characters, pathogenicity, sources of infection, Salmonella food poisoning bacteria. Shigella: general characters , main species, pathogenicity.</p>	<p>Introduce Salmonella group: general characters, pathogenicity, sources of infection, Salmonella food poisoning bacteria. Shigella: general characters , main species, pathogenicity.</p>	<p>Lecture, discussion,</p>	<p>test</p>

9	6	.Bacillus Proteus: general characters , main species, pathogenicity. Pseudomonas Bacilli.: general characters, main species, pathogenicity	Introduce Bacillus Proteus: general characters , main species, pathogenicity. Pseudomonas Bacilli.: general characters, main species, pathogenicity	Lecture, discussion,	test
10	6	Vibrionaceae: general characters, natural habitat , main species of this family. Vibrio cholerae: general characters, their toxin, how we can distinguish between this bacteria and the other enteric bacteria species.	Introduce Vibrionaceae: general characters, natural habitat , main species of this family. Vibrio cholerae: general characters, their toxin, how we can distinguish between this bacteria and the other enteric bacteria species	Lecture, discussion,	test
11	6	Brucella: General characters, main species, bacteria morphology, main diseases.	Introduce Brucella: General characters, main species, bacteria morphology, main diseases	Lecture, discussion,	test
12	6	Plague Bacilli: General characters, natural habitat, morphology, disease transmission (plague).	Introduce Plague Bacilli: General characters, natural habitat, morphology, disease transmission (plague).	Lecture, discussion, presentation of videos	test
13	6	.Haemophilus bacteria: General characters, morphology, growth requirement, main species, pathogenicity. Bordetella bacteria: general characters, natural habitat, , pathogenicity, main species, disease transmission.	Introduce Haemophilus bacteria: General characters, morphology, growth requirement, main species, pathogenicity. Bordetella bacteria: general characters, natural habitat, , pathogenicity, main species, disease transmission	Lecture, discussion,	test
14	6	.Pathogenic Fungi: General characters, main species, Fungi regeneration, main disease, Fungi diseases transmission.	Introduce Pathogenic Fungi: General characters, main species, Fungi regeneration, main disease, Fungi diseases transmission	Lecture, discussion,	test

15	6	.General information of Viruses, their characters, pathogenicity ,their relation between virus and AIDS General review.	Introduce General information of Viruses, their characters, pathogenicity ,their relation between virus and AIDS General review	Lecture, discussion,	test
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<b>12.Infrastructure</b>	
Required reading:	Medical microbiology
<b>Main references (sources)</b>	1 The short textbook of medical microbiology Author: Satish gupte, MD Department of pathology and microbiology Medical college and associated hospital .1982 2-fundamentals of laboratory and clinical bacteriological diagnosis .2014 Abdel Razzaq Suleiman al- toumi Muhammad al -imam Abdel basset Ramadan Abu zuwayda National library Benghazi. Libya Al-mohanna, M.T. (2016) 'Morphology and Classification of Bacteria'.  Herchline, T. E. (2019) 'Tuberculosis (TB) Treatment & Management'
Recommended books and references (scientific journals, reports,...)	Microbiology -Jr,rel-mechel.Jr-Meael.pelez 1965
B - Electronic references, Internet sites...	

<b>13.Course development plan</b>
Access to modern scientific literature 14- Participation in relevant scientific conferences 15- The teaching and training staff is partially devoted to applying and working in hospitals 16- Hosting specialized professors 17- Academic pairing with other universities and corresponding colleges

1. Teaching Institution	Ministry of Higher Education and Scientific Research / Northern Technical
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2. University Department/Centre	Mosul Medical Technical Institute/ Anesthesia Techniques Department
3. Course title/code	Fundamental of Nursing <b>ANET114</b>
4. Programme(s) to which it contributes	Technical Diploma in anesthesia
5. Modes of Attendance offered	* Weekly lesson schedule (theoretical and practical)
6. Semester/Year	Module
7. Number of hours tuition (total)	191h
8. Date of production/revision of this specification	8 / 1 / 2024
<p><b>9. Aims of the Course</b></p> <ul style="list-style-type: none"> <li>* Teach and train the student on how to receive the patient. .</li> <li>* Teaching and training students on how to apply the steps of the nursing process</li> <li>* Teaching and training students on how to measure vital signs</li> <li>* Teaching and training students on how to collect laboratory samples</li> <li>* Teaching and training students on drug administration</li> <li>* Teaching and training the student on how to give intravenous fluids</li> <li>* Teaching and training the student on how to give oxygen</li> <li>* Teaching and training the student on how to insert and replace the urinary catheter</li> <li>* Teaching and training the student on suture and wound dressing.</li> <li>* Teaching and training students on first aids</li> </ul>	
<p><b>10• Learning Outcomes, Teaching ,Learning and Assessment Methods</b></p> <p>A- Knowledge and Understanding</p> <ol style="list-style-type: none"> <li>1. Identifying what the nursing process is.</li> <li>2. Identify the most important laboratory tests</li> <li>3. Identify the medication and method of administration</li> <li>4. Learn how to administer intravenous fluids</li> <li>5. Identifying the objectives of the urinary catheter</li> <li>6 . Identify first aids</li> </ol>	
<p>B. Subject-specific skills</p> <ol style="list-style-type: none"> <li>1. Biomarker measurement training</li> <li>2. Training in drug administration methods</li> <li>3. Training in the insertion of the urinary catheter</li> <li>4. Training on how to administer intravenous fluids</li> <li>5. Surgical patient care training</li> </ol>	

**Teaching and Learning Methods**

Traditional lecture, reporting, seminars, laboratory applied training, systematic training in the hospital, and summer training

**Assessment methods**

Daily written and oral tests, applied tests, seminars, partial and final examinations, commitments to assignments, attendance and obligations, feedback (student test in the previous subject), self-assessment (questions are placed for the student by the teacher and the student

answers questions as well as the teacher answers the same questions and asks the student to

evaluate himself corresponding the teacher's answers), reports on scientific developments in the field of

**C. Thinking Skills**

1. Training on how to deal with the patient and how to take information from him/her.
2. Training on how to establish a therapeutic relationship with the patient
3. Training in simulating the condition by representing the patient's complaint
4. Training on how to deal with emergencies and provide first aids

**Teaching and Learning Methods**

Traditional lecture, self-learning, feedback, questions of inferred and analytical thinking, systematic training in laboratories, applied training in hospitals, and summer training.

specialization, and asking analytical and productive questions.

### Assessment methods

Simulation of the pathological condition, written, oral and applied tests, partial and final examinations, home-work, assignment obligations such as the work of reports in the field of specialization and then discussion of reports, attendance and commitment, feedback (student test in the previous subject), self-assessment (questions are asked to the student by the teacher and the student answers questions as well as the teacher answers the same questions and asks the student to evaluate himself corresponding of the teacher's answers), questions of conclusion and inference. Simulation of the pathological condition, written, oral and applied tests, partial and final examinations, home-work, assignment obligations such as the work of reports in the field of specialization and then discussion of reports, attendance and commitment, feedback (student test in the previous subject), self-assessment (questions are asked to the student by the teacher and the student answers questions as well as the teacher answers the same questions and asks the student to evaluate himself corresponding of the teacher's answers), questions of conclusion and inference. Simulation of the pathological condition, written, oral and applied tests, partial and final examinations, home-work, assignment obligations such as the work of reports in the field of specialization and then discussion of reports, attendance and commitment, feedback (student test in the previous subject), self-assessment (questions are asked to the student by the teacher and the student answers questions as well as the teacher answers the same questions and asks the student to evaluate himself corresponding of the teacher's answers), questions of conclusion and inference.

11. Course Structure					
Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
1	7		Modern nursing history, definition of term: nurse, nursing, health, patient, hospital	Lecture, discussion, feedback, displaying illustrative posters, viewing videos and test movies.	Tests
2	7		Medical ethics, Maslow's hierarchy of human needs.	Lecture, discussion, feedback, displaying illustrative posters, viewing videos and test movies.	Tests
3	7		Hospital admissions, patient's chart.	Lecture, discussion, feedback, displaying illustrative posters, viewing videos and test movies.	Tests
4	7		Nursing process,	Lecture, discussion,	Tests

			physical examination.	feedback, displaying illustrative posters, viewing videos and test movies.	
5	7		Positions of the patient: -for physical examination. -in the operating theater.	Lecture, discussion, feedback, displaying illustrative posters, viewing videos and test movies.	Tests
6	7		Vital sings.	Lecture, discussion, feedback, displaying illustrative posters, viewing videos and test movies.	Tests
7	7		= =	Lecture, discussion, feedback, displaying illustrative posters, viewing videos and test movies.	Practical tests
8	7		Vital sings fever.	Lecture, discussion, feedback, displaying illustrative posters, viewing videos and test movies.	Practical tests
9	7		Administration of medication, routes of medications administration	Lecture, discussion, feedback, displaying illustrative posters, viewing videos and test movies.	Tests
10	7		Routes of medications administration.	Lecture, discussion, feedback, displaying illustrative posters, viewing videos and test movies.	Tests
11	7		Routes of medications administration, storage of medications.	Lecture, discussion, feedback, displaying illustrative posters, viewing videos and test movies.	Tests
12	7		Duties of nurse anesthetist in the recovery room.	Lecture, discussion, feedback, displaying illustrative posters, viewing videos and test movies.	Tests
13	7		post anesthesia care unit (the role of the ward nurse).	Lecture, discussion, feedback, displaying illustrative posters, viewing videos and test movies.	Tests
14	7		Nursing management in the ICU: physical care	Lecture, discussion, feedback, displaying illustrative posters, viewing videos and test movies.	Tests
15	7		fever	Lecture, discussion, feedback, displaying illustrative posters, viewing	Tests



<b>12. Infrastructure</b>	
<p>Required reading:</p> <ul style="list-style-type: none"> <li>· CORE TEXTS</li> <li>· COURSE MATERIALS</li> <li>· OTHER</li> </ul>	<ul style="list-style-type: none"> <li>* Fundamental of Nursing, Principles</li> <li>* Taylor C, and Others; Fundamentals of Nursing, The art and Science of Nursing Care, Lippincott, 2005.</li> <li>* Barbera K; Fundamentals Skills and concepts in Patient Care, Lippincott, 2000.</li> <li>* Pharyngeal anatomy. (Drake RL, Vogl AW, Mitchell AWM, et al. Gray's Atlas of Anatomy. Philadelphia: Churchill Livingstone Elsevier, 2008, p. 504.</li> <li>* Bickley, L. S., P. G., Szilagyi. J. G. Stackhouse. Bates' Guide to Physical Examination &amp; History Taking, 8th edition. Philadelphia: Lippincott Williams &amp; Wilkins, 2002.</li> <li>* Barbera K; Fundamentals Skills and concepts in Patient Care, Lippincott, 2000</li> </ul>
<p>Special requirements (include for example workshops, periodicals, IT software, websites)</p>	<ul style="list-style-type: none"> <li>* Nursing journal dealing with nursing practices</li> <li>* Any textbook specialized in nursing</li> <li>* * Medical record; From Wikipedia, the free encyclopedia</li> </ul>
<p>Community-based facilities (include for example, guest Lectures , internship , field studies)</p>	

### **13.Course development plan**

- Access to modern scientific literature
- 1-Participation in relevant scientific conferences
  - 2-The teaching and training staff is partially devoted to applying and working in hospitals
  - 3-Hosting specialized professors

4-Academic pairing with other universities and corresponding colleges

1. Teaching Institution	Ministry of Higher Education and Scientific Research / Northern Technical University
2. University/ Department	Mosul Medical Technical Institute/ Anesthesia Techniques Department
3. Course title/code	Computer2 NTU 102
4. Programme (s) to which it contributes	Anesthesia Techn.deploma
5. Modes of Attendance offered	* Weekly lesson schedule (theoretical and practical) * Scientific discussions, seminars, other activities
6. Semester/Year	Annual
7. Number of hours tuition (total)	30
8. Date of production/revision of this specification	8 / 1 / 2024
<b>9. Aims of the Course</b>	
1- Teaching the student the skills of working on the computer and the use of ready-made applications and the principles of the Internet in the field of specialization.	
2- Teaching the student the skills of working on the computer and the use of ready-made applications and the principles of the Internet in the field of specialization.	
3. Perform his duties at the workplace for professional motives.	
<b>10. Course outcomes and teaching, learning and evaluation methods</b>	
A.Cognitive objectives	
A1- Teaching the student the skills of working on the computer and the use of ready-made applications and the principles of the Internet in the field of specialization.	
B - The skills objectives of the course.	
B1 - Teaching the student the skills of working on the computer and the use of ready-made applications and the principles of the Internet in the field of specialization.	
Teaching and learning methods	
((Theoretical lectures / practical lectures / field visits / solving examples / seminars / summer training))	
<b>Evaluation methods</b>	
((Oral exams / written tests / weekly reports / daily attendance / semester and final exams))	
C- Emotional and value goals	

C1- Perform his duties at the workplace for professional motives.
<b>Teaching and learning methods</b>
((Theoretical lectures / practical lectures / field visits / solving examples / seminars / summer training))
<b>Evaluation methods</b>
((Oral Tests / Written Tests / Observation / Student Cumulative Record))
D - Transferable general and qualifying skills (other skills related to employability and personal development).
D1- Improve their discussion skills.
D2- Raising their research perceptions and transferring the student from the stage of teaching to learning.

11. Course Structure					
Week	Hours	Unit/Module or Topic Title	ILOs	Teaching Method	Assessment Method
2&1	2	Features of the word processor / running the word / the basic elements of the word window / flipping the language / definition of the paragraph / merging and splitting the paragraph / selecting (shading) the text.	Knowledge and practical application	Practical + Theoretical	Tests & Discussion
3	2	New / Open Inventory File / Close Document / Save New Document / Save Existing Document / Preview Before Printing / Close Document / End Word	Knowledge and practical application	Practical + Theoretical	Tests & Discussion
4	2	Clipboard: Cut / Copy / Paste / Copy Format Font: Change font / font size / enlarge and reduce font / clear formatting / change font color / text highlight color / subscript / superscript text / change case / underline style / effects / character spacing Paragraph: Numbering / Bullets / Create a bulleted list to existing text / Cancel bullets / Indent / Paragraph spacing / Line spacing / Text direction / Alignment / Borders &	Knowledge and practical application	Practical + Theoretical	Tests & Discussion

		Shading Styles: Normal / No Spacing / Heading 1 / Heading 2 / Subtitle / Change Styles / Show Preview / Disable Linked Styles / Options Edit: Find/Go/Replace/Select			
5	2	Pages: Blank Page / Cover Page / Page Break Table: Insert Table / Draw Table / Convert Text to Table / Excel Data Table / Quick Tables / Table Styles / Draw Table Borders Illustrations: Picture / Clip Art / Prepared Shapes / Smart Art Drawing / Chart	Knowledge and practical application	Practical + Theoretica 1	Tests & Discussion
6	2	Header and footer: header / footer / page number Text: text box / ornate text Word art / signature line / date and time / object / equation / symbol.	Knowledge and practical application	Practical + Theoretica 1	Tests & Discussion
7	2	Features: Themes / Colors / Fonts / Effects.	Knowledge and practical application	Practical + Theoretica 1	Tests & Discussion

1. Teaching Institution	Ministry of Higher Education and Scientific Research / Northern Technical University
2. University/ Department	Mosul Medical Technical Institute/ Anesthesia Techniques Department
3. Course title/code	Arabic Language NTU103
4. Programme (s) to which it contributes	Anesthesia Techn.deploma
5. Modes of Attendance offered	* Weekly lesson schedule (theoretical) * Discussions and reports
6. Semester/Year	Annual
7. Number of hours tuition (total)	30
8. Date of production/revision of this specification	8 / 1 / 2024
<b>9. Aims of the Course</b>	

<p>1- Enabling the student to read correctly.</p> <p>2- Enabling the student to write correctly and use punctuation marks.</p> <p>3- The student should acquire the ability to use the Arabic language correctly.</p> <p>4- Introducing the student to the correct Arabic language words, structures and sound methods in an interesting way.</p> <p>5- Accustom the student to sound and clear expressions of his ideas.</p> <p>6- Helping the student to understand complex structures and mysterious methods.</p>
<p><b>10. Course outcomes and teaching, learning and evaluation methods</b></p>
<p>A.Cognitive objectives</p> <p>A- The student should recognize common mistakes in writing Arabic in order to avoid them</p> <p>B - The student should recognize the punctuation marks and use them correctly</p> <p>C - The student should distinguish between the solar lam and the lunar lam, which helps to pronounce it correctly</p> <p>D - The student differentiates between Dhad and Zaa, and this is what helps him to avoid falling into a spelling error</p> <p>E - To distinguish between the verb, the noun and the letter, as this is what his Arabic speech is based on.</p> <p>F- He must be able to write the hamza in its correct position correctly.</p>
<p>B - The skills objectives of the course.</p> <p>B1 – Providing the student with a linguistic wealth that makes him more able to correctly express what he wants.</p> <p>B2- Correcting the student's tongue and preventing it from error</p>
<p>Teaching and learning methods</p>
<p>((Theoretical lectures / listening lectures / conversation lectures / interactive lectures / research in libraries and the Internet on specific topics)).</p>
<p><b>Evaluation methods</b></p>
<p>((Oral tests / written tests / weekly reports / daily attendance / participation and interaction in lectures / semester and final exams))</p>
<p>C- Emotional and value goals</p> <p>C1- Thinking, activation and organization development</p> <p>C2- Working to make the student's imagination fertile imagination by highlighting the aesthetics of the language and thus enabling him to express the essence of the soul in a proper way.</p>
<p><b>Teaching and learning methods</b></p>
<p>((Theoretical lectures / seminars / conducting debates between students / making reports))</p>
<p><b>Evaluation methods</b></p>
<p>((Oral Tests / Written Tests / Observation / Student Cumulative Record))</p>
<p>D - Transferable general and qualifying skills (other skills related to employability</p>

and personal development).

D1- The ability to develop and develop his expressive skills such as poetry and story.

D2- The ability to communicate with the outside world properly.

### 11. Course Structure

Week	Hours	Unit/Module or Topic Title	ILOs	Teaching Method	Assessment Method
1	2	Introduction to linguistic errors – Taa Al-Marbouta and Al-Taa Al-Maktaba	1. Identify the types of linguistic errors. 2. Differentiate between open Taa and Taa tethered	Discussion method, lecture method	Oral test
2	2	Rules for writing the elongated and compartment thousand – solar and lunar letters	1. Differentiate between the writing of the extended thousand and the compartment and the positions of the writing of the two thousand 2. Differentiate between solar letters and lunar letters	Discussion method, lecture method	Oral test
3	2	Al-Daad and Al-Zaa	Differentiate between Dhad and Z	Discussion method, lecture method	Oral test
4	2	Hamza writing	Enable the student to write the hamza correctly	Discussion method, lecture method	Oral test
5	2	Punctuation	Recognize punctuation and write it in the correct location	Discussion method, lecture method	Oral test
6	2	Noun and verb and differentiate between them	1. Recognize the noun and verb and indicate the sign of each 2. Differentiate between noun and verb 3. Indication of the types of verb 4. Differentiate between types of verbs	Discussion method, lecture method	Oral test

7	2	Effects	identify the types of effects and differentiate between them	Discussion method, lecture method	Oral test
8	2	Number	Enable the student to write numbers correctly	Discussion method, lecture method	Oral test
9	2	Applications of common linguistic errors	Recognize and avoid common language errors	Discussion method, lecture method	Oral test
10	2	Applications of common linguistic errors	Recognize and avoid common language errors	Discussion method, lecture method	Oral test
11	2	Noon and Tanween meanings of prepositions	1. Differentiate between Nun and Tanween 2. Recognize the meanings of prepositions	Discussion method, lecture method	Oral test
12	2	Formal aspects of administrative discourse	Identify the formal aspects of administrative discourse	Discussion method, lecture method	Oral test
13	2	The language of administrative discourse	Recognize the language of administrative discourse	Discussion method, lecture method	Oral test
14	2	The language of administrative discourse	Recognize the language of administrative discourse	Discussion method, lecture method	Oral test
15	2	Samples of administrative correspondence	Identify samples of administrative correspondence	Discussion method, lecture method	Oral test

## 12. Infrastructure

Required reading:

Textbooks:  
General Arabic Language Binding for Technical Universities by (Dr. Safaa Kazem Makki and Dr. Lama Muhammad Younis

Main references (sources)	<p>1- Clear dictation: Abdul Majeed Al-Nuaimi, Daham Al-Kayyal, Dar Al-Mutanabbi Library, Baghdad, 6th edition, 1987 AD.</p> <p>2- Lessons in language, grammar and spelling for state employees: Ismail Hammoud Atwan and others, Ministry of Education Press No. (3), Baghdad, 2nd edition, 1984.</p> <p>3- Arabic language for the third intermediate grade: Fatima Nazem Al-Attabi, et al., 1st edition, 2018.</p> <p>4 - General Arabic language for sections other than specialization: Abdul Qadir Hassan Amin and others, Ministry of Higher Education and Scientific Research, 2nd Edition, 2000.</p> <p>5- Inspired by Arabic literature: Haval Muhammad Amin, Al-Saadoun Press, Baghdad.</p>
Electronic references, Internet sites...	World Wide Web

### 13.Course development plan

Correcting the linguistic errors that occurred in the manual to be taught and trying to add a definition to some of the terms contained in the fascicle, especially since the Arabic language fascicle was prepared for non-specialists in the Arabic language, and this leads to making the prescribed vocabulary more accurate and clear.

1. Teaching Institution	Ministry of Higher Education and Scientific Research / Northern Technical University
2. University/ Department	Mosul Medical Technical Institute/ Anesthesia Techniques Department
3. Course title/code	Crimes of the Baath regime in Iraq NTU203
4. Programme (s) to which it contributes	Anesthesia Techn.deploma
5. Modes of Attendance offered	* Weekly lesson schedule (theoretical) * Scientific discussions
6. Semester/Year	Annual
7. Number of hours tuition (total)	30



8. Date of production/revision of this specification	8 / 1 / 2024
<b>9. Aims of the Course</b>	
<p>1- Providing students with basic concepts related to the definition of crimes, their types and divisions.</p> <p>2- Definition of crimes and violations of the former regime and types of international crimes</p> <p>3- Introducing mass grave crimes and violations of Iraqi laws</p> <p>4- Addressing environmental crimes, the destruction of cities, policies of demographic change and extrajudicial detention</p> <p>5- Explaining the role of the Supreme Criminal Court in dealing with the crimes of the Baath regime</p>	
<b>10. Course outcomes and teaching, learning and evaluation methods</b>	
A.Cognitive objectives	
A1- Enabling students to understand the concept of crime and the types of national and international crimes.	
A2- Developing the knowledge aspects of the protection and guarantees of human rights.	
A3- Developing students' ability to distinguish between crimes and human rights violations and how to confront them	
B - The skills objectives of the course.	
B1 – Enable students to understand the concept of national and international crime.	
B2 - Enable students to know human rights and how to defend these rights. And know the guarantees related to them.	
Teaching and learning methods	
((Theoretical lectures, periodic reports / periodic tests / practical case studies)).	
<b>Evaluation methods</b>	
((Periodic exams / direct questions / preparation of special reports))	
C- Emotional and value goals	
C1- Development of legal culture	
C2- Carrying out his duties in the workplace with professional motives.	
C3- Instilling the values of tolerance and cooperation in society.	
<b>Teaching and learning methods</b>	
((Student groups / case studies / preparation of special reports))	
<b>Evaluation methods</b>	
((Periodic exams / direct questions / preparation of special reports))	
D - Transferable general and qualifying skills (other skills related to employability and personal development).	
D1- Developing the skills of students in the field of public service or the private sector.	
D2- Developing personal skills to develop students' legal culture.	

## 11. Course Structure

Week	Hours	Unit/Module or Topic Title	ILOs	Teaching Method	Assessment Method
1	2	-Crimes of the Baath regime under the Law of the Supreme Iraqi Criminal Tribunal in 2005 -The concept of crimes and their divisions -Definition of crime linguistically and idiomatically	Knowledge and practical application	theoretical	Tests & Discussion
2	2	-Crime sections -Crimes of the Baath regime as documented in the Law of the Supreme Iraqi Criminal Tribunal in 2005	Knowledge and practical application	theoretical	Tests & Discussion
3	2	- Types of international crimes - Decisions issued by the Supreme Criminal Court	Knowledge and practical application	theoretical	Tests & Discussion
4	2	- Psychological and social crimes and their effects. - Mental Crimes - Mechanisms of psychological crimes - Effects of mental crimes	Knowledge and practical application	theoretical	Tests & Discussion
5	2	- Social crimes - Militarization of society - The position of the Baath regime on religion	Knowledge and practical application	theoretical	Tests & Discussion
6	2	- Violations of Iraqi laws - Photos of human rights violations and crimes of the authority	Knowledge and practical application	theoretical	Tests & Discussion
7	2	- Some decisions on political and military violations of the Baath regime	Knowledge and practical application	theoretical	Tests & Discussion
8	2	- Places of Prisons and Detention of the Baath Regime	Knowledge and practical application	theoretical	Tests & Discussion
9	2	- Environmental crimes of the	Knowledge and	theoretical	Tests &

		Baath regime in Iraq	practical application	cal	Discussion
10	2	- War and radioactive contamination and mine explosions	Knowledge and practical application	theoretical	Tests & Discussion
11	2	- Destruction of towns and villages - Scorched earth policy	Knowledge and practical application	theoretical	Tests & Discussion
12	2	- Drainage of marshes - Dredging palm groves, trees and plantings	Knowledge and practical application	theoretical	Tests & Discussion
13	2	- Mass grave crimes - Mass graves	Knowledge and practical application	theoretical	Tests & Discussion
14	2	- Mass graves and genocide committed by the Baathist regime	Knowledge and practical application	theoretical	Tests & Discussion
15	2	- Chronological classification of genocide graves in Iraq	Knowledge and practical application	theoretical	Tests & Discussion

<b>12.Infrastructure</b>	
1 Required textbooks	General Books
2 Main references (sources)	Literature on crimes, penal law and human rights available in the college library and the central library of the university
3 Electronic references, websites	Human rights websites.

### 13.Course development plan

Access to modern scientific literature

There are no proposals because the subject is taught in the current academic year for the first time

1. Teaching Institution	Ministry of Higher Education
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	and Scientific Research / Northern Technical University
2. University/ Department	Mosul Medical Technical Institute/ Anesthesia Techniques Department
3. Course title/code	<b>Professional Ethics NTU204</b>
4. programmer (s) to which it contributes	<b>Anesthesia Tech. Diploma</b>
5. Modes of Attendance offered	<b>1 -Weekly lesson schedule (theoretical( 2- Discussions</b>
6. Semester/Year	<b>Second semester/second level</b>
7. Number of hours tuition (total)	<b>30 hours (the number of theoretical hours during the 15 weeks)</b>
8. Date of production/revision of this specification	<b>5/1/2024</b>
.Course objectives	
<b>-Teaching students that their commitment to the ethics of their professions is an integral part of the correct practice of them, and this commitment is their duty toward</b>	
<b>-Teaching the professional ethics course is considered the cornerstone of preparing future generations professionally and ethically.</b>	
-Teaching a professional ethics course to institute students represents the right beginning for any society that seeks to raise the level of ethical practice among professionals.	
.Course outcomes and teaching, learning and evaluation methods	
A- Cognitive objectives a1- Identify the principles of ethical analysis and thinking In various professional situations. a2- Know the difference between Work and profession a3-.RecognitionPatient rights	
B - The skills objectives of the course. B1 –Brainstorming skill inside the hall. B2 -Give examples and modern applications to enhance understanding.	
<b>Teaching and learning methods</b>	
Traditional lecture, report writing, discussion	
Evaluation methods	
Daily written and oral tests, semester and final exams, commitment to assignments, attendance and commitment, feedback (testing the student on the previous subject), self-evaluation (questions are set for the student by the teacher and the student	

answers the questions, and the teacher also answers the same questions and asks the student to evaluate himself in light of Teacher's answers (analytical and deductive questions).

C- Emotional and value goals

C1-The student understands the meaning of the basic terms of the curriculum.

C2- That the student understands Characteristics and duties of a medical technician.

C3- That The student distinguishes the importance of ethics for the individual and society.

C4- That The student compares the concept of work, profession and craft.

### Teaching and learning methods

Traditional lecture, feedback, deductive and analytical thinking questions.

### Evaluation methods

Written tests, semester and final exams, daily tests, and commitments to assignments such as making reports and then discussing the reports, attendance and commitment.

D - Transferable general and qualifying skills (other skills related to employability and personal development).

Dr1- Skills of modern interactive teaching methods among students.

Dr2- Scientific competition skills among students through asking questions.

## 11. Course structure

Evaluation method	Teaching method	Name of the unit/topic	Required learning outcomes	hours	week
Duties Quizzes Reports	Theoretical lectures Group discussions	Moral.	identification requester Concept Moral	2	1
Duties Quizzes Reports	Theoretical lectures Group discussions	Work and profession.	Define the student the difference between work and profession	2	2
Duties Quizzes	Theoretical	Professional ethics.	The student understands the nature	2	3

Reports	lectures Group discussions		of professional ethics		
Duties Quizzes Reports	Theoretical lectures Group discussions	Values and professional ethics.	Introducing the student to the values and ethics of the profession	2	45&
Duties Quizzes Reports	Theoretical lectures Group discussions	Patterns of unethical behavior In the profession.	Introducing the student to patterns of unethical behavior Administrative corruption + bribery + fraud at work	2	6&7
Duties Quizzes Reports	Theoretical lectures Group discussions	Means and methods of consolidating professional ethics.	Understand the means of consolidating values	2	8
Duties Quizzes Reports	Theoretical lectures Group discussions	Ethics of practicing medical professions Characteristics and duties of a medical technician.	Introducing the student to the duties of medical staff	2	9
Duties Quizzes Reports	Theoretical lectures Group discussions	.Patient rights.	Introducing the student to patient rights	2	10
Duties Quizzes Reports	Theoretical lectures Group discussions	.The medical technician's relationship with society and his responsibility towards the environment and public safety.	Introducing the student to the role of the medical technician in society	2	11&12

Duties Quizzes Reports	Theoretical lectures Group discussions	.Professional relations (the medical technician's relationship with his colleagues in the health institution.	Clarifying the medical technician's relationship with his co-workers and his subordinates	2	13&14
Duties	Theoretical lectures Group discussions	.Ethics of teaching and learning for patients.	Understand and explain the ethics of teaching and learning to patients	2	15

<b>12.Infrastructure</b>	
Unified curriculum for technical universities in Iraq	1- Required prescribed books
<ul style="list-style-type: none"> <li>● Abu Al-Khair, Muhammad Saeed (B.T): Guide to Professional Ethics, Faculty of Arts, Zagazig University.</li> <li>● Hassan, Abdul Mahdi Abdul Reda (bt): Rules of professional ethics for nurses and midwives in Iraq, website. <a href="http://www.uobabylon.edu.iq/eprints/pubdoc_10_6984_150.doc">www.uobabylon.edu.iq/eprints/pubdoc_10_6984_150.doc</a></li> <li>● Al-Hourani, Ghaleb Saleh Watanash, Salama Youssef (2007): Academic ethics for university professors <b>from Faculty members' point of view University of Jordan Studies Journal</b>, Educational Sciences, Vol.34), Issue (2), Jordan.</li> <li>● <b>Rabhi, Israa (2018): The concept of bribery</b>, Internet site. <a href="https://mawdoo3.com">https://mawdoo3.com</a></li> <li>● Mohamed Ahmed (2018): What is the difference between a gift and a bribe? <a href="https://mawdoo3.com/">https://mawdoo3.com/</a></li> <li>● National Center for Developing Faculty and Leadership Capabilities (2011): Ethics of Scientific Research, Program Series, Egypt.</li> <li>● Mishal, Talal (2018): What is the importance of ethics, website. <a href="https://mawdoo3.com/">https://mawdoo3.com/</a></li> <li>● Al-Mashharawi, Ahmed Hussein (2014): The</li> </ul>	2- Main references (sources)

<p>role of professional ethics in promoting social responsibility in Palestinian government hospitals (Al-Shifa Medical Complex as an example), Master's thesis in the program</p> <ul style="list-style-type: none"> <li>• Saudi Commission for Health Specialties (2012): Health Practitioner Ethics, 3rd edition, p. 44.</li> <li>• Quality Assurance Unit (2017): Guide to Professional Ethics, Faculty of Arabic Language, Al-Azhar University, Cairo.</li> <li>• Iraqi Ministry of Health (2018): Code of Medical Research Ethics, National Center for Training and Human Development.</li> </ul> <p>Iraqi Ministry of Health (2017): Principles of medical ethics in Iraqi health institutions.</p>	
	Recommended books and references (scientific journals, reports,...)
Modern sources via the Internet	B - Electronic references, Internet sites...

### 13. Course development plan

- Access to modern scientific literature
- Periodic review of the course

<b>1. Teaching Institution</b>	Ministry of Higher Education and Scientific Research / Northern Technical University
<b>2. University/ Department</b>	Mosul Medical Technical Institute/ Anesthesia Techniques Department
<b>3. Course title/code</b>	Bio-Statistic / TIMM202
<b>4. Program (s) to which it contributes</b>	Technical Diploma in anesthesia
<b>5. Modes of Attendance offered</b>	* Weekly lesson schedule (theoretical and practical) * Scientific discussions, seminars,



	other activities
<b>6. Semester/Year</b>	Modules
<b>7. Number of hours tuition (total)</b>	30 Hour
<b>8. Date of production/revision of this specification</b>	9 / 4 / 2024
<b>9. Aims of the Course</b>	
The student will be able to:	
<ul style="list-style-type: none"> <li>Processing and analyzing statistical data, arriving at correct conclusions, and preparing statistical forms.</li> </ul>	
<b>10. Course outcomes and teaching, learning and evaluation methods</b>	
A. <u>Cognitive objectives</u> : The student will be able to:	
A1. Deal with statistical data.	
A2. Deal with and knowing life and health statistics.	
A3. Organize the statistical form and health form related to daily incidents such as births, deaths and diseases	
B - <u>Skills and Behavioral objectives</u> : The student will be able to:	
<ul style="list-style-type: none"> <li>Analyze statistical data.</li> </ul>	
C- <u>Emotional and Value-Based objectives</u> : The student will be able to:	
<ul style="list-style-type: none"> <li>Explain the community's need to learn statistics and its applications at work</li> </ul>	
D - <u>General and qualifying skills</u> :	
D1. Access to scientific developments in the field of specialization.	
D2. Communication skills with others.	
D3. Self-reliance skills.	
D4. Teamwork skills.	
<b>Teaching and learning methods</b>	
Traditional lecturing, report writing, conducting seminars, group learning training.	
<b>Evaluation methods</b>	
Daily written and oral tests, Applied tests, Seminars, Semester and final exams, Commitments to assignments, Attendance and commitment, Feedback (Linking the current topic to the previous topic), Self-evaluation, Reports on scientific developments in the field of specialization, Asking analytical and deductive questions.	

<b>11. Course Structure</b>				
Week	Hours	Unit/Module or Topic Title	Teaching Method	Assessment Method

1	2	Definition of statistics. Data collection methods. Presentation and description of statistical data, preparation of a questionnaire (unclassified data) form.	Traditional lecture, seminars, group discussion	test
2	2	Representing frequency distributions for “classified data” Tabular display "Frequency distribution tables"	Traditional lecture, seminars, group discussion	test
3	2	Graphical display - inscribed histogram, curved histogram, histogram, polygon histogram	Traditional lecture, seminars, group discussion	test
4	2	measures of central tendency, Arithmetic mean .	Traditional lecture, seminars, group discussion	Test
5	2	The median, Mode	Traditional lecture, seminars, group discussion	Test
6	2	Introduction to sampling theory, “its meaning and reasons for choosing it.”	Traditional lecture, seminars, group discussion	Test
7	2	Life statistics, ratio and rate, death statistics	Traditional lecture, seminars, group discussion	Test
8	2	Fertility statistics	Traditional lecture, seminars, group discussion	Test
9	2	Disease statistics, Life tables	Traditional lecture, seminars, group discussion	Test
10	2	Definition of health statistics and its sources	Traditional lecture, seminars, group discussion	Test
11	2	Fields that the health statistics address	Traditional lecture, seminars, group discussion	Test
12	2	Statistics of causes of death (medical certificate, cause, death, death certificate).	Traditional lecture, seminars, group discussion	Test
13	2	Statistics of health institutions	Traditional lecture, seminars, group discussion	Test
14	2	The most appropriate rates for hospitals and patients. Treatment days. Length of stay (average days of stay)	Traditional lecture, seminars, group discussion	Test
15	2	Family occupancy rate, Admission rate.	Traditional lecture, seminars, group discussion	Test

## 12. Infrastructure

### Required reading:

W. Dixon and F. Massey – Introduction to statistical analysis

\* علي عبد الأمير – طب نسائية وتوليد – وزارة الصحة – مطبعة العمال المركزية / 1985 .

* علي عبد الأمير – الأمراض النسائية والتوليد - وزارة الصحة – مطبعة العمال المركزية / 1985 .
Banderfort Hill, Fundament in Biosciences.
<b>B - Electronic references, Internet sites...</b>

### 13.Course development plan

- Access to modern scientific literature through:
- 18- Participation in relevant scientific conferences
  - 19- The teaching and training staff is partially devoted to applying and working in hospitals
  - 20- Hosting specialized professors
  - 21- Academic twinning with other universities and corresponding colleges

1. Teaching Institution	Ministry of Higher Education and Scientific Research / Northern Technical University
2. University/ Department	Mosul Medical Technical Institute/ Anesthesia Techniques Department
3. Course title/code	Pharmacology(ANET203)
4. Programme (s) to which it contributes	Anesthesia technician
5. Modes of Attendance offered	* Weekly lesson schedule (theoretical and practical) * Scientific discussions, seminars, other activities
6. Semester/Year	Annual
7. Number of hours tuition (total)	135 hr.
8. Date of production/revision of this specification	8/ 1 / 2024
<b>9. Aims of the Course</b> <ul style="list-style-type: none"> <li>1- Teaching and training the student on the types of medications used according to the to patient's condition.</li> <li>2- Teaching and training the student on methods of administering medications.</li> <li>3- Teaching and training students on drug interactions and drug cautions.</li> <li>4- Teaching and training the student about the side effects of each medication.</li> </ul>	

<b>10. Course outcomes and teaching, learning and evaluation methods</b>
A- Cognitive objectives A1- Identify pharmaceutical terminology. A2- Identify the nature of the action of drugs within the body, including absorption, digestion, and excretion. A3- Identify the types of medications for each system within the body.
B - The skills objectives of the course. B1 - Training on how to inject medication. B2 - Training students on how to handle medications B3 - Training the student to read medical prescriptions
<b>Teaching and learning methods</b>
Traditional lecture, report writing, seminar conduct, practical training in the laboratory, methodological training in the hospital, and summer training.
<b>Evaluation methods</b>
Daily written and oral tests, applied tests, seminars, semester and final exams, obligations to assignments, attendance and commitment, feedback (testing the student on the previous subject), self-evaluation (questions are set for the student by the teacher and the student answers the questions, and the teacher also answers the same questions and asks The student is asked to evaluate himself in light of the teacher's answers, reports on scientific developments in the field of specialization, and asks analytical and deductive questions.
C- Emotional and value goals C1- Training on how to deal with therapeutic medications C2- Training on methods of administering medications. C3- Training on how to deal with the side effects of medications. C4- Training on how to give medications to elderly patients. C5- Training on how to give medications to paralyzed patients. C6- Training on how to deal with patients who have cases of allergy or poisoning as a result of taking incorrect doses.
<b>Teaching and learning methods</b>
Traditional lecture, self-learning, feedback, deductive and analytical thinking questions, methodological training in laboratories, applied training in hospitals, and summer training.
<b>Evaluation methods</b>
Simulating the medical condition, written, oral, and applied tests, semester and final exams, daily tests, and commitments to assignments such as making reports in the field of specialization and then discussing the reports, attendance and commitment, feedback (testing the student on the previous subject), self-evaluation (questions are put to the

student by the teacher The student answers the questions, and the teacher also answers the same questions. The student is asked to evaluate himself in light of the teacher's answers) and deductive and deductive questions.

D - Transferable general and qualifying skills (other skills related to employability and personal development).

D1- Field visits to gain experience from others.

D2- Access to scientific developments in the field of specialization (educational videos).

D3- Practical training in hospitals.

### 11. Course Structure

Week	Hours	Unit/Module or Topic Title	ILOs	Teaching Method	Assessment Method
1	2	Introduction to pharmacology, drug definition, drug kinetics and pharmacodynamics, drug receptors	Introduction to pharmacology, drug definition, drug kinetics and pharmacodynamics, drug receptors	Theoretical lectures, educational videos	Daily test, daily posts, quarterly and final exams, weekly reports
2	2	Types of doses, antagonists and antagonists	Introducing the types of medicinal doses, and knowing the antagonists and antagonists	Theoretical lectures, educational videos	Daily test, daily posts, quarterly and final exams, weekly reports
3	2	Medicines that affect the autonomic nervous system Parasympathetic stimulants and narcotics Acetylcholine mimics, anticholinergics	Introducing medications that affect the central nervous system, acetylcholine and similar medications, carbachol and its group.	Theoretical lectures, educational videos	Daily test, daily posts, quarterly and final exams, weekly reports
4	2	Sympathetic nervous system, adrenergic, stimulants, adrenal gland, anti-adrenaline drugs.	Introduction to sympathetic nervous system medications: epinephrine, dopamine, norepinephrine, and adrenaline.	Theoretical lectures, educational videos	Daily test, daily posts, quarterly and final exams, weekly reports
5	2	Digestive system, antacid, antiulcer Antiemetic, antidiarrheal,	Introduction to digestive system medications, ulcer	Theoretical lectures,	Daily test, daily posts, quarterly and

		laxative	medications, the three-year plan for treating ulcers, antidepressants, natural and synthetic laxatives, and antidiarrheals.	educational videos	final exams, weekly reports
6	2	Urinary system, diuretics, total body fluids and Balance of mineral salts, acid and basic factors	Introduction to urinary system medications, mechanism of action, uses, and side effects	Theoretical lectures, educational videos	Daily test, daily posts, quarterly and final exams, weekly reports
7	2	cardiovascular system, anti-heart disorder medications. Antianginal, antihypertensive, anticoagulant, drugs	Introduction to cardiovascular system medications, blood pressure regulators, heart pacemakers, angina medications, warfarin, heparin,	Theoretical lectures, educational videos	Daily test, daily posts, quarterly and final exams, weekly reports
8	2	Cardiotonics, digitalis glycoside, antiplatelet agents, Aspirin	Knowledge of heart strengthening medications, digitalis glycoside, and antiplatelet medications, their uses, side effects, and mechanism of action.	Theoretical lectures, educational videos	Daily test, daily posts, quarterly and final exams, weekly reports
9	2	Respiratory system, expectorants, antitussives, bronchodilators, sputum analyzers	Knowledge of respiratory medications, mechanism of action, uses, and side effects.	Theoretical lectures, educational videos	Daily test, daily posts, quarterly and final exams, weekly reports
10	2	Drugs that act on the central nervous system, analgesic, opioid analgesic, sedative and hypnotic, narcotic.	Introduction to narcotic drugs, their types, their mechanism of action, their uses and side effects	Theoretical lectures, educational videos	Daily test, daily posts, quarterly and final exams, weekly reports
11	2	Antidepressant, neuroleptic & antianxiety , drugs used to treat epilepsy & convulsion	Introduction to antidepressants and anti-anxiety medications, what medications are used to treat epilepsy, their	Theoretical lectures, educational videos	Daily test, daily posts, quarterly and final exams, weekly reports

			mechanism of action, and side effects		
12	2	Antibiotic, Antibacterial, Antifungal,	Introducing anti-inflammatories and antifungals and the mechanism of action of each of them.	Theoretical lectures, educational videos	Daily test, daily posts, quarterly and final exams, weekly reports
13	2	Antiviral, Amoebicidal & Trichomonacidal	Introduction to antivirals and trichomocides, their mechanism of action and therapeutic uses	Theoretical lectures, educational videos	Daily test, daily posts, quarterly and final exams, weekly reports
14	2	Anti-inflammation, steroidal & non-steroidal anti-inflammatory drug, antihistamine agents	Introduction to steroidal and non-steroidal anti-inflammatory drugs and antihistamines.	Theoretical lectures, educational videos	Daily test, daily posts, quarterly and final exams, weekly reports
15	2	Toxicology, heavy metal toxicity, Mercury , Silver, Lead, Barbiturate, Acetaminophen	Knowledge of toxins and toxicity of heavy metals, mercury, silver, lead, barbiturates, and acetaminophen	Theoretical lectures, educational videos	Daily test, daily posts, quarterly and final exams, weekly reports

<b>12.Infrastructure</b>	
Required reading:	
<b>Main references (sources)</b>	<p>1-adams 4th Edition</p> <p>Michael patrick adams Carol Quamurban Rebecca E. Sutter</p> <p>2- Coodman &amp; Gilman's 14th Edition 2022</p> <p>Laurance L. Brunton Bjorn c. knollmann</p>

Recommended books and references (scientific journals, reports,...)	
B - Electronic references, Internet sites...	

### 13. Course development plan

- Access to modern scientific literature
- 22- Participation in relevant scientific conferences
  - 23- The teaching and training staff is partially devoted to applying and working in hospitals
  - 24- Hosting specialized professors
  - 25- Academic pairing with other universities and corresponding colleges

1. Teaching Institution	Ministry of Higher Education and Scientific Research / Northern Technical University
2. University/ Department	Mosul Medical Technical Institute/ Anesthesia Techniques Department
3. Course title/code	General anesthesia <b>ANET204</b>
4. Programme (s) to which it contributes	Anesthetic technical/ diploma
5. Modes of Attendance offered	* Weekly lesson schedule (theoretical and practical) * Scientific discussions, seminars, other activities
6. Semester/Year	Annual
7. Number of hours tuition (total)	120
8. Date of production/revision of this specification	8/1/2024



## 9. Aims of the Course

### GENERAL AIMS:-

The student must be able to help, efficiently, clinical anesthesiologist with good theoretical back ground and reasonable practice.

### SPECIAL AIMS:-

- Proper maintenance of anesthetic machines.
- Proper preparation and labeling of drugs.
- Proper monitoring of the patient all over stages of anesthesia.

## 10. Course outcomes and teaching, learning and evaluation methods

### A.Cognitive objectives

A1\_The primary goal of general anesthesia is to render a patient unconscious and unable to feel painful stimuli while controlling autonomic reflexes.

A2\_ Identify the risks of Anaesthetic drug exposure.

A3- Identify the nature of the work inside the operating theater (team work).because the work of anesthesiologist is related to the surgeon.

### B - The skills objectives of the course.

B1 – Training how to patient reception and dealing friendly with him.

B2 - Training students to prepare the suitable position of patient after consults the surgeon.

B3 – Training students to prepare the anesthetic drugs and labeling them.

B4 – Training the students how to monitoring the general situation of patient by monitor observation.

### Teaching and learning methods

Traditional lecture, report writing, seminar conduct, practical training in the laboratory, methodological training in the hospital, and summer training.

### Evaluation methods

Daily written and oral tests, applied tests, seminars, semester and final exams, obligations to assignments, attendance and commitment, feedback (testing the student on the previous subject), self-evaluation (questions are set for the student by the teacher and the student answers the questions, and the teacher also answers the same questions and asks The student is asked to evaluate himself in light of the teacher's answers, reports on scientific developments in the field of specialization, and asks analytical and deductive questions.

### C- Emotional and value goals

C1- Training on how to deal with the patients regardless the age of old ..because the psychology factor is very important to patient who will undergoing operation.

C2\_ Training the students to know names and doses of analgesic drugs that will be administer to patients before operation for analgesic them.

<b>Teaching and learning methods</b>
Traditional lecture, self-learning, feedback, deductive and analytical thinking questions, methodological training in laboratories, applied training in hospitals, and summer training.
<b>Evaluation methods</b>
Simulating the medical condition, written, oral, and applied tests, semester and final exams, daily tests, and commitments to assignments such as making reports in the field of specialization and then discussing the reports, attendance and commitment, feedback (testing the student on the previous subject), self-evaluation (questions are put to the student by the teacher The student answers the questions, and the teacher also answers the same questions. The student is asked to evaluate himself in light of the teacher's answers) and deductive and deductive questions.
D - Transferable general and qualifying skills (other skills related to employability and personal development). D1- Field visits to gain experience from others. D2- Access to scientific developments in the field of specialization (educational videos). D3- Practical training in hospitals.

<b>11. Course Structure</b>					
Week	Hours	Unit/Module or Topic Title	ILOs	Teaching Method	Assessment Method
1	2	Introduction about anesthesia Differences between G.A. and Local Analgesic Technique	Lecture, discussion, presentation ,How Filling the Anesthetic chart (in details).	Theoretical lectures learning vidios	test
2	2	Characters of an ideal anesthetic	Lecture, discussion, presentation,	Theoretical	test

		drug. Factors affecting the decision of the anesthesiologists (The patient surgical Requirements . anesthetic Requirement(	Filling the Anesthetic chart in details).	lectures learning vidios	
3	2	Local Analgesic Techniques Available	Lecture, discussion, presentation Sites of Arterial pulsations. Proper labeling for Emergency states.	Theoretic al lectures learning vidios	practical test
4	2	The Ideal anesthetic System	Lecture, discussion, presentation Sites of major Veins of interest in Anesthesiology	Theoretic al lectures learning vidios	Practical test
5	2	Classification of anesthetic systems according to their relation to the atmospheric Air (open , semi – open , semi – closed and closed systems.(	Lecture, discussion, presentation Proper i.v. cannulation (in details)	Theoretic al lectures learning vidios	Practical test
6	2	Brief review about Resp. physiology related to anesthesia . The anesthetic Resp. decision )spontaneous , controlled (	Lecture, discussion, presentation Proper cardiac monitoring (in Details).	Theoretic al lectures learning vidios	test

7	2	Different i.v. fluids used in surgical theaters.	Lecture, discussion, presentation Types of artifacts during cardiac Monitoring	Theoretical lectures learning vidios	practical test
8	2	Anesthesia for laboratory in general. Example taken : Acute intestinal obstruction (Emergency surgery).	Lecture, discussion, Proper peripheral Oximetry (in details).	Theoretical lectures learning vidios	practical test
9	2	Anesthesia for a minor general surgical procedure. Example taken : circumcision in Iraq.	Lecture, discussion,prese n Common types of Endotracheal tubes )in details.(	Theoretical lectures learning vidios	practical test
10	2	Anesthetic decisions during vaginal delivery	Lecture, discussion, Laryngeal masks sizes , applications Airways.	Theoretical lectures learning vidios	practical test
11	2	Anesthesia during caesarian section. Resuscitation of a newly – born baby. APGAR Score.	Lecture, discussion, Airways ; laryngoscopes (in details).	Theoretical lectures learning vidios	practical test
12	2	Anesthesia for gynecological procedures. Example taken : Hysterectomy.	Lecture, discussion, Urinary bladder	Theoretical lectures learning	practical test

			catheterization )Paed ., Males , Females.(	vidios	
13	2	Anesthetic requirements for ENT procedures in general.	Lecture, discussion, presentation Effects of Different Positions under G.A.	Theoretic al lectures learning vidios	test
14	2	Anesthesia for Tonsillectomy Adenoidectomy . Anesthesia for S.M.R	Lecture, discussion, presentation Protection Measures for cornea under G.A.	Theoretic al lectures learning vidios	practical test
15	2	Indications for Tracheotomy surgery. Indications for Laryngotomy .	Lecture, discussion, presentation,How to fix endotracheal tubes properly . . oral packing.	Theoretic al lectures learning vidios	practical test

## 12.Infrastructure

Required reading:

**Main references (sources)**


### 13. Course development plan

- Access to modern scientific literature
- 26- Participation in relevant scientific conferences
- 27- The teaching and training staff is partially devoted to applying and working in hospitals
- 28- Hosting specialized professors
- 29- Academic pairing with other universities and corresponding colleges

1. Teaching Institution	Ministry of Higher Education and Scientific Research / Northern Technical University
2. University/ Department	Mosul Medical Technical Institute/ Anesthesia Techniques Department
3. Course title/code	Specialized Anesthesia ANET205
4. Programme (s) to which it contributes	Anesthetic technical/ deploma
5. Modes of Attendance offered	* Weekly lesson schedule (theoretical and practical) * Scientific discussions, seminars, other activities
6. Semester/Year	Annual
7. Number of hours tuition (total)	120
8. Date of production/revision of this specification	8/1/2024
<b>9. Aims of the Course</b> <b>GENERAL AIMS:-</b> <input type="checkbox"/> The student must be able to help, efficiently, clinical anesthesiologist with good theoretical back ground and reasonable practice. <b>SPECIAL AIMS:-</b> <input type="checkbox"/> Proper maintenance of anesthetic machines. <input type="checkbox"/> Proper preparation and labeling of drugs. <input type="checkbox"/> proper monitoring of the patient all over stages of anesthesia.	
<b>10. Course outcomes and teaching, learning and evaluation methods</b>	

<p>A.Cognitive objectives</p> <p>A1_The primary goal of general anesthesia is to render a patient unconscious and unable to feel painful stimuli while controlling autonomic reflexes.</p> <p>A2_ Identify the risks of Anaesthetic drug exposure.</p> <p>A3- Identify the nature of the work inside the operating theater (team work).because the work of anesthesiologist is related to the surgeon.</p>
<p>B - The skills objectives of the course.</p> <p>B1 – Training how to patient reception and dealing friendly with him.</p> <p>B2 - Training students to prepare the suitable position of patient after consults the surgeon.</p> <p>B3 – Training students to prepare the anesthetic drugs and labeling them.</p> <p>B4 – Training the students how to monitoring the general situation of patient by monitor observation.</p>
<p>Teaching and learning methods</p>
<p>Traditional lecture, report writing, seminar conduct, practical training in the laboratory, methodological training in the hospital, and summer training.</p>
<p><b>Evaluation methods</b></p>
<p>Daily written and oral tests, applied tests, seminars, semester and final exams, obligations to assignments, attendance and commitment, feedback (testing the student on the previous subject), self-evaluation (questions are set for the student by the teacher and the student answers the questions, and the teacher also answers the same questions and asks The student is asked to evaluate himself in light of the teacher’s answers, reports on scientific developments in the field of specialization, and asks analytical and deductive questions.</p>
<p>C- Emotional and value goals</p> <p>C1- Training on how to deal with the patients regardless the age of old ..because the psychology factor is very important to patient who will undergoing operation.</p> <p>C2_ Training the students to know names and doses of analgesic drugs that will be administer to patients before operation for analgesic them.</p>
<p><b>Teaching and learning methods</b></p>
<p>Traditional lecture, self-learning, feedback, deductive and analytical thinking questions, methodological training in laboratories, applied training in hospitals, and summer training.</p>
<p><b>Evaluation methods</b></p>
<p>Simulating the medical condition, written, oral, and applied tests, semester and final exams, daily tests, and commitments to assignments such as making reports in the field of specialization and then discussing the reports, attendance and commitment, feedback (testing the student on the previous subject), self-evaluation (questions are</p>

put to the student by the teacher The student answers the questions, and the teacher also answers the same questions. The student is asked to evaluate himself in light of the teacher's answers) and deductive and deductive questions.

D - Transferable general and qualifying skills (other skills related to employability and personal development).

D1- Field visits to gain experience from others.

D2- Access to scientific developments in the field of specialization (educational videos).

D3- Practical training in hospitals.

### 11. Course Structure

Week	Hours	Unit/Module or Topic Title	ILOs	Teaching Method	Assessment Method
1	2	Anesthesia for Ophthalmologic procedures . Example taken Open Eye Injury – (Emergency case )	Lecture, discussion, presentation Resuscitation Measures related to anesthesia (details)	Theoretical lectures learning vidios	test
2	2	Anesthesia for Thoracotomy & Bronchoscope .Anesthesia for Fascio –Maxillary surgeries.	Lecture, discussion, presentation, Resuscitation Measures related to anesthesia (details)	Theoretical lectures learning vidios	test
3	2	Anesthesia for Orthopedic procedures. Example taken : Hip Replacement )Prolonged cold case(	Lecture, discussion, presentation Proper labeling of anesthetic syringes.	Theoretical lectures learning vidios	test



4	2	Anesthesia for emergency orthopedic procedures : Amputations. Reducing fractures & dislocations	Lecture, discussion, presentation Details of proper preparation & percentiles of emergency drugs	Theoretic al lectures learning vidios	test
5	2	Anesthesia for Urological procedures. Examples taken : Nephrolithiasis , Ureterolithiasis & Cystoscopy.	Lecture, discussion, presentation Details of anesthetic drugs applications.	Theoretic al lectures learning vidios	test
6	2	Anesthesia in out – patients procedures. Anesthesia in Radiology Dept. (e.g . Angiography(	Lecture, discussion, presentation Details of Muscle Relaxants applied clinically.	Theoretic al lectures learning vidios	test
7	2	Important Medical Problems that affect the anesthetic Decision . Emergency Drugs used in Theaters.	Lecture, discussion, presentation Details : How to check blood units properly . blood banking	Theoretic al lectures learning vidios	test
8	2	Common causes of dysrhythmia during anesthesia (Diagnosis &	Lecture , presentation discussion, Different i.v.	Theoretic al lectures learning	test

		treatment).(	fluids & blood constituents used during anesthesia.	vidios	
9	2	Hypotension & Hypertension during anesthesia (diagnosis & treatment	Lectures, discussion ,presentation Details of any recovery room : Drugs , Equipments	Theoretic al lectures learning vidios	test
10	2	Shock states :Types ,Diagnosis &Treatment. Anesthesia & Shock (General Outline.(	Lecture, discussion, Proper stale Recovery from G.A..GCS : .	Theoretic al lectures learning vidios	practical test
11	2	Heart Failure & Anesthesia )Diagnosis & Treatment.(	Lecture, discussion, Proper stale recovery from G.A.. GCS : .	Theoretic al lectures learning vidios	practical test
12	2	Resp. Insufficiency state Resp . failure (Diagnosis & Treatment ) . Anesthesia & Resp. Insufficiency + Resp. Failure.	Lecture, discussion, How to deliver the patient properly post – operating \ legal points.(.	Theoretic al lectures learning vidios	practical test
13	2	Blood Interactions under G.A . )Diagnosis of treatment .( Complication of Massive Blood Transfusions	Lecture, discussion, Proper Electrical Blanketing for children..	Theoretic al lectures learning vidios	test
14	2	Outline about Diabetes	Lecture How to	Theoretic	test

		Mellitus Anesthesia. Anesthesia & D.M.	give blood rapidly properly ?	al lectures learning vidios	
15	2	Anesthesia in certain sub-speculation-: a- Craniotomy , as example of neuro-surgery. b- B- Open – Heart surgery ,as example of cardiac procedures. c- major vascular surgery	General review.	Theoretic al lectures learning vidios	practical test

### 12.Infrastructure

Required reading:	
<b>Main references (sources)</b>	

### 13.Course development plan

- Access to modern scientific literature
- 30- Participation in relevant scientific conferences
  - 31- The teaching and training staff is partially devoted to applying and working in hospitals
  - 32- Hosting specialized professors
  - 33- Academic pairing with other universities and corresponding colleges

1. Teaching Institution	Ministry of Higher Education and Scientific Research / Northern Technical University
2. University/ Department	Mosul Medical Technical Institute/ Anesthesia Techniques Department
3. Course title/code	<b>Intensive Care Basics ANET206</b>
4. Programme (s) to which it contributes	Anesthesia technician

5. Modes of Attendance offered	* Weekly lesson schedule (theoretical and practical) * Scientific discussions, seminars, other activities
6. Semester/Year	Annual
7. Number of hours tuition (total)	90 hr.
8. Date of production/revision of this specification	8/ 1 / 2024
<b>9. Aims of the Course</b>	
<p>1- Teaching and training the student on how to care for the patient inside the intensive care rooms.</p> <p>2- Teaching and training students on the most important devices and tools found in intensive care rooms.</p> <p>3-Teaching and training the student on all the skills necessary for the cases and how to perform cardiopulmonary resuscitation.</p> <p>4- Teaching and training students on the most important medications for intensive care, how to use them, and the conditions for which they are used.</p>	
<b>10. Course outcomes and teaching, learning and evaluation methods</b>	
<p>A- Cognitive objectives</p> <p>A1- . Identify the types of intensive care rooms and the nature of work in each type</p> <p>A2-Identifying the most important cases that require the patient to be admitted to the intensive care room</p> <p>A3-Identify all care devices and medications, how to use them, and the situations that require their use.</p>	
<p>B - The skills objectives of the course.</p> <p>B1 - Training on how to deal with various cases in intensive care rooms.</p> <p>B2 - Training students on how to deal with medications in intensive care, how to dilute, and how to administer.</p> <p>B3 - Training the student on all care devices accurately to preserve the patient's life</p>	
Teaching and learning methods	
Traditional lecture, report writing, seminar conduct, practical training in the laboratory, methodological training in the hospital, and summer training.	
<b>Evaluation methods</b>	

Daily written and oral tests, applied tests, seminars, semester and final exams, obligations to assignments, attendance and commitment, feedback (testing the student on the previous subject), self-evaluation (questions are set for the student by the teacher and the student answers the questions, and the teacher also answers the same questions and asks The student is asked to evaluate himself in light of the teacher's answers, reports on scientific developments in the field of specialization, and asks analytical and deductive questions.

- C- Emotional and value goals  
 C1- Training on how to handle care medications  
 C2- Training on the use and maintenance of care devices  
 C3- Training on how to deal with critical situations.  
 C4- Training on how to perform cardiopulmonary resuscitation on a patient.  
 C5 -Training on how to keep the patient's condition stable.  
 C6-Training on humane dealing with all patients.

**Teaching and learning methods**

Traditional lecture, self-learning, feedback, deductive and analytical thinking questions, methodological training in laboratories, applied training in hospitals, and summer training.

**Evaluation methods**

Simulating the medical condition, written, oral, and applied tests, semester and final exams, daily tests, and commitments to assignments such as making reports in the field of specialization and then discussing the reports, attendance and commitment, feedback (testing the student on the previous subject), self-evaluation (questions are put to the student by the teacher The student answers the questions, and the teacher also answers the same questions. The student is asked to evaluate himself in light of the teacher's answers) and deductive and deductive questions.

- D - Transferable general and qualifying skills (other skills related to employability and personal development).  
 D1- Field visits to gain experience from others.  
 D2- Access to scientific developments in the field of specialization (educational videos).  
 D3- Practical training in hospitals.

11. Course Structure					
Week	Hours	Unit/Module or Topic Title	ILOs	Teaching Method	Assessment Method

1	2	-Types of different ICUS available universally. -Disinfection & antiseptics methods	-introducing the types of different ICUS available universally Disinfection & antiseptics methods	Theoretical lectures, educational videos	Daily test, daily posts, quarterly and final exams, weekly reports
2	2	Vital signs to be monitored in ICUS. -Disinfection & antiseptics methods	-- introducing the Vital signs to be monitored in ICUS	Theoretical lectures, educational videos	Daily test, daily posts, quarterly and final exams, weekly reports
3	2	Duties of staff in any ICU.	-. -introducing the duties of staff in any ICU	Theoretical lectures, educational videos	Daily test, daily posts, quarterly and final exams, weekly reports
4	2	Contents of ICU( instruments , machines, equipments).	-introducing the contents of ICU( instruments, machines, equipments).	Theoretical lectures, educational videos	Daily test, daily posts, quarterly and final exams, weekly reports
5	2	Different types of i.v. fluids used in ICU.	-introducing the different types of i.v. fluids used in ICU.	Theoretical lectures, educational videos	Daily test, daily posts, quarterly and final exams, weekly reports
6	2	Types of parental nutrition (in some details).	-introducing the Types of parental nutrition (in some details).	Theoretical lectures, educational videos	Daily test, daily posts, quarterly and final exams, weekly reports
7	2	A Comparison between normal resp. , and controlled resp.	-introducing the comparison between normal resp. , and controlled resp.	Theoretical lectures, educational videos	Daily test, daily posts, quarterly and final exams, weekly reports
8	2	Classification of Resp. failure (with diagnosis and treatment) outline:- a-Clinically (central , peripheral , mixed) . b-On Acid-Base lab .	-introducing the classification of Resp. failure (with diagnosis and treatment) outline:-	Theoretical lectures, educational videos	Daily test, daily posts, quarterly and final exams, weekly

		(Type I , Type II).			reports
9	2	Details of treatment of Resp. Failure.	introducing the details of treatment of Resp. Failure.	Theoretical lectures, educational videos	Daily test, daily posts, quarterly and final exams, weekly reports
10	2	Details of treatment of Resp. Failure.	introducing the details of treatment of Resp. Failure	Theoretical lectures, educational videos	Daily test, daily posts, quarterly and final exams, weekly reports
11	2	Diagnosis of anginal attacks . Diagnosis of myocardial infarction	introducing the diagnosis of anginal attacks . Diagnosis of myocardial infarction	Theoretical lectures, educational videos	Daily test, daily posts, quarterly and final exams, weekly reports
12	2	Diagnosis of heart failure. Outline of treatment .	introducing the diagnosis of heart failure. Outline of treatment	Theoretical lectures, educational videos	Daily test, daily posts, quarterly and final exams, weekly reports
13	2	Outline of drugs and application.	introducing the outline of drugs and application.	Theoretical lectures, educational videos	Daily test, daily posts, quarterly and final exams, weekly reports
14	2	Diagnosis of status asthmatics. Outline of treatment.	introducing the diagnosis of status asthmatics.	Theoretical lectures, educational videos	Daily test, daily posts, quarterly and final exams, weekly reports
15	2	Diagnosis of myasthenia gravis with Resp. failure . Outline of treatment.	introducing the diagnosis of myasthenia gravis with Resp. failure Outline of treatment	Theoretical lectures, educational videos	Daily test, daily posts, quarterly and final exams, weekly reports

## 12.Infrastructure

Required reading:	
<b>Main references (sources)</b>	
Recommended books and references (scientific journals, reports,...)	
B - Electronic references, Internet sites...	

### 13.Course development plan

Access to modern scientific literature

34- Participation in relevant scientific conferences

35- The teaching and training staff is partially devoted to applying and working in hospitals

36- Hosting specialized professors

37- Academic pairing with other universities and corresponding colleges

1. Teaching Institution	Ministry of Higher Education and Scientific Research / Northern Technical University
2. University/ Department	Mosul Medical Technical Institute/ Anesthesia Techniques Department
3. Course title/code	<b>Intensive Care application( ANET207 )</b>
4. Programme (s) to which it contributes	Anesthesia technician
5. Modes of Attendance offered	* Weekly lesson schedule (theoretical and practical) * Scientific discussions, seminars, other activities
6. Semester/Year	Annual
7. Number of hours tuition (total)	90 hr.
8. Date of production/revision of this specification	8/ 1 / 2024
<b>9. Aims of the Course</b> 1- Teaching and training the student on how to care for the patient inside the intensive care rooms. 2- Teaching and training students on the most important devices and tools found in intensive care rooms.	



- 3-Teaching and training the student on all the skills necessary for the cases and how to perform cardiopulmonary resuscitation.
- 4- Teaching and training students on the most important medications for intensive care, how to use them, and the conditions for which they are used.

### **10. Course outcomes and teaching, learning and evaluation methods**

#### A- Cognitive objectives

- A1- . Identify the types of intensive care rooms and the nature of work in each type
- A2-Identifying the most important cases that require the patient to be admitted to the intensive care room
- A3-Identify all care devices and medications, how to use them, and the situations that require their use.

#### B - The skills objectives of the course.

- B1 - Training on how to deal with various cases in intensive care rooms.
- B2 - Training students on how to deal with medications in intensive care, how to dilute, and how to administer.
- B3 - Training the student on all care devices accurately to preserve the patient's life

#### Teaching and learning methods

Traditional lecture, report writing, seminar conduct, practical training in the laboratory, methodological training in the hospital, and summer training.

#### **Evaluation methods**

Daily written and oral tests, applied tests, seminars, semester and final exams, obligations to assignments, attendance and commitment, feedback (testing the student on the previous subject), self-evaluation (questions are set for the student by the teacher and the student answers the questions, and the teacher also answers the same questions and asks The student is asked to evaluate himself in light of the teacher's answers, reports on scientific developments in the field of specialization, and asks analytical and deductive questions.

#### C- Emotional and value goals

- C1- Training on how to handle care medications
- C2- Training on the use and maintenance of care devices
- C3- Training on how to deal with critical situations.
- C4- Training on how to perform cardiopulmonary resuscitation on a patient.
- C5 -Training on how to keep the patient's condition stable.

C6-Training on humane dealing with all patients.
<b>Teaching and learning methods</b>
Traditional lecture, self-learning, feedback, deductive and analytical thinking questions, methodological training in laboratories, applied training in hospitals, and summer training.
<b>Evaluation methods</b>
Simulating the medical condition, written, oral, and applied tests, semester and final exams, daily tests, and commitments to assignments such as making reports in the field of specialization and then discussing the reports, attendance and commitment, feedback (testing the student on the previous subject), self-evaluation (questions are put to the student by the teacher The student answers the questions, and the teacher also answers the same questions. The student is asked to evaluate himself in light of the teacher's answers) and deductive and deductive questions.
D - Transferable general and qualifying skills (other skills related to employability and personal development). D1- Field visits to gain experience from others. D2- Access to scientific developments in the field of specialization (educational videos). D3- Practical training in hospitals.

<b>11. Course Structure</b>					
<b>Week</b>	<b>Hours</b>	<b>Unit/Module or Topic Title</b>	<b>ILOs</b>	<b>Teaching Method</b>	<b>Assessment Method</b>
1	2	<b>Diagnosis of status epileptics . Outline of treatment.</b>	<b>Introducing the diagnosis of status epileptics . Outline of treatment.</b>	Theoretical lectures, educational videos	Daily test, daily posts, quarterly and final exams, weekly reports
2	2	<b>Diagnosis of Guillian - Barre Syndrome. Outline of treatment.</b>	<b>Introducing the diagnosis of Guillian - Barre Syndrome. Outline of treatment.</b>	Theoretical lectures, educational videos	Daily test, daily posts, quarterly and final exams, weekly reports
3	2	<b>ICU specialized in Multiple Sever Trauma.</b>	<b>Introducing the ICU specialized in Multiple Sever Trauma.</b>	Theoretical lectures, educational videos	Daily test, daily posts, quarterly and final exams, weekly reports

4	2	<b>ICU specialized in post-operative care:- General surgery , pediatrics , thoracotomy , craniotomy</b>	<b>Introducing the ICU specialized in post- operative care:- General surgery , pediatrics , thoracotomy , craniotomy</b>	Theoretical lectures, educational videos	Daily test, daily posts, quarterly and final exams, weekly reports
5	2	<b>ICU specialized in postoperative care:- General surgery , pediatrics , thoracotomy , craniotomy</b>	<b>Introducing the ICU specialized in postoperative care:- General surgery , pediatrics , thoracotomy , craniotomy</b>	Theoretical lectures, educational videos	Daily test, daily posts, quarterly and final exams, weekly reports
6	2	<b>ICU specialized in post- operative renal transplantation .</b>	<b>Introducing the ICU specialized in post- operative renal transplantation .</b>	Theoretical lectures, educational videos	Daily test, daily posts, quarterly and final exams, weekly reports
7	2	<b>ICU specialized in neonatology</b>	<b>Introducing the ICU specialized in neonatology</b>	Theoretical lectures, educational videos	Daily test, daily posts, quarterly and final exams, weekly reports
8	2	<b>ICU for Tetraplegic patients .</b>	<b>Introducing the ICU for Tetraplegic patients</b>	Theoretical lectures, educational videos	Daily test, daily posts, quarterly and final exams, weekly reports
9	2	<b>Indications for emergency laryngotomy+ tracheostomy . Why they are indicated in ICUS.</b>	<b>Introducing the indications for emergency laryngotomy+ tracheostomy . Why they are indicated in ICUS</b>	Theoretical lectures, educational videos	Daily test, daily posts, quarterly and final exams, weekly reports
10	2	<b>Acid - Base Lab. Readings in some details .</b>	<b>Introducing the Acid - Base Lab. Readings in some details</b>	Theoretical lectures, educational videos	Daily test, daily posts, quarterly and final exams, weekly reports
11	2	<b>Pulmonary functions tests lab. in some details .</b>	<b>Introducing the pulmonary functions tests lab. in some details .</b>	Theoretical lectures, educational videos	Daily test, daily posts, quarterly and final exams, weekly reports
12	2	<b>Types of IPPV in some</b>	<b>Introducing the</b>	Theoretical	Daily test, daily

		<b>details . Sepsis in I.C.U in general</b>	<b>types of IPPV in some details . Sepsis in I.C.U in general</b>	lectures, educational videos	posts, quarterly and final exams, weekly reports
13	2	<b>Cardio – Pulmonary Resuscitation (in details).</b>	<b>Introducing the Cardio – Pulmonary Resuscitation (in details)</b>	Theoretical lectures, educational videos	Daily test, daily posts, quarterly and final exams, weekly reports
14	2	<b>Brain Death Phenomenon :- Diagnosis , Relation to ICUS.</b>	<b>Introducing the Brain Death Phenomenon :- Diagnosis , Relation to ICUS.</b>	Theoretical lectures, educational videos	Daily test, daily posts, quarterly and final exams, weekly reports
15	2	<b>General Information about chest X-Ray. Indications for portable chest X-Ray in ICU.</b>	<b>Introducing the general Information about chest X-Ray. Indications for portable chest X-Ray in ICU</b>	Theoretical lectures, educational videos	Daily test, daily posts, quarterly and final exams, weekly reports

## 12. Infrastructure

Required reading:

**Main references (sources)**

Recommended books and references  
(scientific journals, reports,...)

B - Electronic references, Internet sites...

## 13. Course development plan

Access to modern scientific literature

38- Participation in relevant scientific conferences

39- The teaching and training staff is partially devoted to applying and working in hospitals

40- Hosting specialized professors

41- Academic pairing with other universities and corresponding colleges

1. Teaching Institution	Ministry of Higher Education and Scientific Research / Northern Technical University
2. University/ Department	Mosul Medical Technical Institute/ Anesthesia Techniques Department
3. Course title/code	Anesthesia Equipment Technology ( <b>ANET208</b> )
4. Programme (s) to which it contributes	Anesthesia technician
5. Modes of Attendance offered	* Weekly lesson schedule (theoretical and practical) * Scientific discussions, seminars, other activities
6. Semester/Year	Annual
7. Number of hours tuition (total)	90 hr.
8. Date of production/revision of this specification	8/1/2024
<b>9. Aims of the Course</b>	
1- Teaching and training the student on Types of different equipment and apparatus in theaters.	
2- Teaching and training the student ways of using different anesthetic equipment.	
3- Teaching and training the student maintain and take care of anesthetic equipment.	
4- Teaching and training students to connect anesthetic equipment to patient.	
<b>10. Course outcomes and teaching, learning and evaluation methods</b>	
A- Cognitive objectives A1- Identify the terminology of the devices. A2- Identify the nature of the devices and their parts. A3- Identify the different types of anesthesia devices in operating rooms.	
B - The skills objectives of the course. B1 - Training on how to use and operate anesthesia machines. B2 - Training students on how to deal with various anesthesia machines, care for them, and maintain them. B3 - Training the student to connect anesthesia machines to the patient and operate them.	
Teaching and learning methods	
Traditional lecture, report writing, seminar conduct, practical training in the	

laboratory, methodological training in the hospital, and summer training.
<b>Evaluation methods</b>
Daily written and oral tests, applied tests, seminars, semester and final exams, obligations to assignments, attendance and commitment, feedback (testing the student on the previous subject), self-evaluation (questions are set for the student by the teacher and the student answers the questions, and the teacher also answers the same questions and asks The student is asked to evaluate himself in light of the teacher’s answers, reports on scientific developments in the field of specialization, and asks analytical and deductive questions.
<p>C- Emotional and value goals</p> <p>C1- Training on how to deal with anesthesia machines in operating rooms.</p> <p>C2- Training on methods of connecting different anesthesia devices to the patient.</p> <p>C3- Training on how to deal with potential problems with the devices and solve them.</p> <p>C4- Training on how to care for, maintain anesthesia devices.</p> <p>C5- Training on how to connect devices for special cases such as the elderly, children, and pregnant women.</p> <p>C6- Training on how to avoid incorrect use of devices.</p>
<b>Teaching and learning methods</b>
Traditional lecture, self-learning, feedback, deductive and analytical thinking questions, methodological training in laboratories, applied training in hospitals, and summer training.
<b>Evaluation methods</b>
Simulating the medical condition, written, oral, and applied tests, semester and final exams, daily tests, and commitments to assignments such as making reports in the field of specialization and then discussing the reports, attendance and commitment, feedback (testing the student on the previous subject), self-evaluation (questions are put to the student by the teacher The student answers the questions, and the teacher also answers the same questions. The student is asked to evaluate himself in light of the teacher’s answers) and deductive and deductive questions.
<p>D - Transferable general and qualifying skills (other skills related to employability and personal development).</p> <p>D1- Field visits to gain experience from others.</p> <p>D2- Access to scientific developments in the field of specialization (educational videos).</p>

D3- Practical training in hospitals.

<b>11.Course structure</b>					
<b>Assessment Method</b>	<b>Teaching method</b>	<b>Unit/Module or Topic Title</b>	<b>ILOs</b>	<b>Hours</b>	<b>Week</b>
Daily written tests, daily contributions, quarterly and final exams, weekly reports	Theoretical lectures, educational videos	Medical gas supplies. Cylinders: types, components, markings.	Introducing the medical gas supplies. Cylinders: types, components, markings	2hrs Theoretical	1
	Practice in labs and hospitals	Cylindres: types, colors, sizes, pressure.	Introducing the Cylindres	4hrs practical	
Daily written tests, daily contributions, quarterly and final exams, weekly reports	Theoretical lectures, educational videos	Cylinders: safety measures, hazards.	Introducing the Cylinders: safety measures, hazards	2hrs Theoretical	2
	Practice in labs and hospitals	Cylinders: testing, storage, problems in practice and safety features.	Introducing the Cylinders: testing, storage, problems in practice and safety features	4hrs practical	
Daily written tests, daily contributions, quarterly and final exams, weekly reports	Theoretical lectures, educational videos	Pipeline systems: components, problems.	Introducing the Pipeline systems: components, problems	2hrs Theoretical	3
	Practice in labs and hospitals	Cylinders& pipeline systems: components, problems, practical applications.	Introducing the Cylinders& pipeline systems: components, problems, practical applications.	4hrs practical	
Daily written tests, daily contributions, quarterly and final exams, weekly reports	Theoretical lectures, educational videos	Anesthesia machine: components, diagrammatic representation of continuous flow anesthetic machine.	Introducing the Anesthesia machine	2hrs Theoretical	4
	Practice in labs and hospitals	Anesthesia machine: components, practical applications.	Introducing the Anesthesia machine practical applications.	4hrs practical	
Daily written tests, daily contributions, quarterly and final exams, weekly reports	Theoretical lectures, educational videos	Anesthesia machine: accessories, pressure through the system, safety devices of modern machines.	Introducing the Anesthesia machine: accessories, pressure through the system, safety devices of modern machines.	2hrs Theoretical	5
	Practice in labs and	Anesthesia machine: accessories, drawing, testing.		4hrs practical	

	hospitals				
Daily written tests, daily contributions, quarterly and final exams, weekly reports	Theoretical lectures, educational videos	Pressure gauges: types, faults.	Introducing the Pressure gauges: types, faults	2hrs Theoretical	6
	Practice in labs and hospitals	Pressure gauges: calibration, problems in practice and safety features.		4hrs practical	
Daily written tests, daily contributions, quarterly and final exams, weekly reports	Theoretical lectures, educational videos	- Pressure regulator: purposes, problems in practice & safety feature. -Non-return valve "between the cylinders": functions.	Introducing the Pressure regulator	2hrs Theoretical	7
	Practice in labs and hospitals	Pressure regulator: components, problems in practice & safety features.		4hrs practical	
Daily written tests, daily contributions, quarterly and final exams, weekly reports	Theoretical lectures, educational videos	-Oxygen failure warning devices: ideal features. Flow restrictors.	Introducing the oxygen failure warning devices: ideal features. Flow restrictors	2hrs Theoretical	8
	Practice in labs and hospitals	-Oxygen failure warning device. - Flow restrictor: mechanism of action.		4hrs practical	
Daily written tests, daily contributions, quarterly and final exams, weekly reports	Theoretical lectures, educational videos	Flowmeters: types, components, ideal features.	Introducing the Flowmeters	2hrs Theoretical	9
	Practice in labs and hospitals	Flowmeters: inaccuracies & dangers, types of bobbins.		4hrs practical	
Daily written tests, daily contributions, quarterly and final exams, weekly reports	Theoretical lectures, educational videos	-Flowmeters: inaccuracies & dangers. - Electronic flowmeter: advantage.	Introducing the Flowmeters: inaccuracies & dangers. - Electronic flowmeter: advantage	2hrs Theoretical	10
	Practice in labs and hospitals	Flowmeters: inaccuracies and dangers, drawing.		4hrs practical	
Daily written tests, daily contributions, quarterly and final exams, weekly reports	Theoretical lectures, educational videos	Vaporizer: physics, components, vaporizer mounting system, factors influencing the vaporization rate.	Introducing the vaporizer mounting system	2hrs Theoretical	11
	Practice in labs and hospitals	Vaporizers: mechanism of action, components.		4hrs practical	
Daily written tests, daily contributions, quarterly and final exams, weekly reports	Theoretical lectures, educational videos	Vaporizer: ideal characteristics, hazards.	Introducing the Vaporizer: ideal characteristics, hazards.	2hrs Theoretical	12
	Practice in labs and hospitals	Vaporizers: problems in practice and safety features.		4hrs practical	



Daily written tests, daily contributions, quarterly and final exams, weekly reports	Theoretical lectures, educational videos	The systems at end of the back bar: types, the aim of use, problems in practice & safety features.	Introducing the: types, the aim of use, problems in practice & safety features. of the Vaporizer	2hrs Theoretical	13
	Practice in labs and hospitals	The systems at end of the back bar, mechanism of action, advantages and disadvantages, problems in practice & safety features.		4hrs practical	
Daily written tests, daily contributions, quarterly and final exams, weekly reports	Theoretical lectures, educational videos	Breathing systems: physics, classification, components, ideal features.	Introducing the Breathing systems	2hrs Theoretical	14
	Practice in labs and hospitals	Breathing systems: types, components, classic from, how to connect them.		4hrs practical	
Daily written tests, daily contributions, quarterly and final exams, weekly reports	Theoretical lectures, educational videos	Breathing systems: functions, advantage & disadvantage, problems in practice & safety features.	Introducing : functions, advantage & disadvantage, problems in practice & safety of the Breathing systems	2hrs Theoretical	15
	Practice in labs and hospitals	Breathing system: problems in practices & safety features, testing, drawing.		4hrs practical	

<b>12. Infrastructure</b>	
Required reading:	
<b>Main references (sources)</b>	
Recommended books and references (scientific journals, reports,...)	
B - Electronic references, Internet sites...	

<b>13. Course development plan</b>
Access to modern scientific literature 1- Participation in relevant scientific conferences 2- The teaching and training staff is partially devoted to applying and working in

- hospitals
- 3- Hosting specialized professors
  - 4- Academic pairing with other universities and corresponding colleges

1. Teaching Institution	Ministry of Higher Education and Scientific Research / Northern Technical University
2. University/ Department	Mosul Medical Technical Institute/ Anesthesia Techniques Department
3. Course title/code	<b>Intensive Care Equipment Technology ANET209</b>
4. Programme (s) to which it contributes	Anesthesia technician
5. Modes of Attendance offered	* Weekly lesson schedule (theoretical and practical) * Scientific discussions, seminars, other activities
6. Semester/Year	Annual
7. Number of hours tuition (total)	
8. Date of production/revision of this specification	
<b>9. Aims of the Course</b>	
1- Teaching and training the student on Types of different equipment and apparatus in theaters.	
2- Teaching and training the student ways of using different intensive care equipment.	
3- Teaching and training the student maintain and take care of I.C.U equipment.	
4- Teaching and training students to connect intensive care equipment to patient.	
<b>10. Course outcomes and teaching, learning and evaluation methods</b>	
A- Cognitive objectives	
A1- Identify the terminology of the devices.	
A2- Identify the nature of the devices and their parts.	
A3- Identify the different types of intensive care devices in hospitals.	
B - The skills objectives of the course.	
B1 - Training on how to use and operate intensive care devices.	

<p>B2 - Training students on how to deal with various intensive care devices, care for them, and maintain them.</p> <p>B3 - Training the student to connect intensive care devices to the patient and operate them.</p>
<p><b>Teaching and learning methods</b></p>
<p>Traditional lecture, report writing, seminar conduct, practical training in the laboratory, methodological training in the hospital, and summer training.</p>
<p><b>Evaluation methods</b></p>
<p>Daily written and oral tests, applied tests, seminars, semester and final exams, obligations to assignments, attendance and commitment, feedback (testing the student on the previous subject), self-evaluation (questions are set for the student by the teacher and the student answers the questions, and the teacher also answers the same questions and asks The student is asked to evaluate himself in light of the teacher's answers, reports on scientific developments in the field of specialization, and asks analytical and deductive questions.</p>
<p>C- Emotional and value goals</p> <p>C1- Training on how to deal with anesthesia machines in operating rooms.</p> <p>C2- Training on methods of connecting different intensive care devices to the patient.</p> <p>C3- Training on how to deal with potential problems with the devices and solve them.</p> <p>C4- Training on how to care for, maintain intensive care devices.</p> <p>C5- Training on how to connect devices for special cases such as the elderly, children, and pregnant women.</p> <p>C6- Training on how to avoid incorrect use of devices.</p>
<p><b>Teaching and learning methods</b></p>
<p>Traditional lecture, self-learning, feedback, deductive and analytical thinking questions, methodological training in laboratories, applied training in hospitals, and summer training.</p>
<p><b>Evaluation methods</b></p>
<p>Simulating the medical condition, written, oral, and applied tests, semester and final exams, daily tests, and commitments to assignments such as making reports in the field of specialization and then discussing the reports, attendance and commitment, feedback (testing the student on the previous subject), self-evaluation (questions are put to the student by the teacher The student answers the questions, and the teacher also answers the same questions. The student is asked to evaluate himself in light of the teacher's answers) and deductive and deductive questions.</p>
<p>D - Transferable general and qualifying skills (other skills related to employability and personal development).</p>

- D1- Field visits to gain experience from others.  
 D2- Access to scientific developments in the field of specialization (educational videos).  
 D3- Practical training in hospitals.

<b>11. Course structure</b>					
<b>Assessment Method</b>	<b>Teaching method</b>	<b>Unit/Module or Topic Title</b>	<b>ILOs</b>	<b>Hours</b>	<b>Week</b>
Daily written tests, daily contributions, quarterly and final exams, weekly reports	Theoretical lectures, educational videos	Endotracheal tubes (ETT): ideal features , types , purpose ,uses.		2hrs Theoretical	1
	Practice in labs and hospitals	ETT: types, uses.		4hrs practical	
Daily written tests, daily contributions, quarterly and final exams, weekly reports	Theoretical lectures, educational videos	-Faults with the use of ETT. -Tracheostomy tubes: purpose. - Laryngeal mask airway (LMA): uses, complications, contraindications, sizes.		2hrs Theoretical	2
	Practice in labs and hospitals	ETT , LMA : size, drawing, tube markings.		4hrs practical	
Daily written tests, daily contributions, quarterly and final exams, weekly reports	Theoretical lectures, educational videos	Suction equipment: the essential part, ideal components.		2hrs Theoretical	3
	Practice in labs and hospitals	Suction equipment : types , components , mechanism of action, drawing.		4hrs practical	

Daily written tests, daily contributions, quarterly and final exams, weekly reports	Theoretical lectures, educational videos	Suctioning techniques, types of suckers, hazards, faults.		2hrs Theoretical	4
	Practice in labs and hospitals	Suctioning techniques, problems in practice & safety features, drawing, practical applications.		4hrs practical	
Daily written tests, daily contributions, quarterly and final exams, weekly reports	Theoretical lectures, educational videos	Ventilators: types, components, cycling, advantages & disadvantages.		2hrs Theoretical	5
	Practice in labs and hospitals	Ventilators: types, components, cycling, modes.		4hrs practical	
Daily written tests, daily contributions, quarterly and final exams, weekly reports	Theoretical lectures, educational videos	Ventilators: modes, hazards, airway pressure, faults.		2hrs Theoretical	6
	Practice in labs and hospitals	Ventilators: modes, setting, faults, practical applications.		4hrs practical	
Daily written tests, daily contributions, quarterly and final exams, weekly reports	Theoretical lectures, educational videos	Noninvasive monitoring: electrocardiogram (ECG): types, components, standard leads.		2hrs Theoretical	7
	Practice in labs and hospitals	ECG: components, standard leads and their locations. features.		4hrs practical	
Daily written tests, daily contributions, quarterly and final exams, weekly reports	Theoretical lectures, educational videos	ECG, CM5: components, standard leads.		2hrs Theoretical	8
	Practice in labs and hospitals	ECG, CM5: components, standard leads.		4hrs practical	
Daily written tests, daily contributions,	Theoretical lectures, education	Pulse oximetry: equipment, site, limitations &		2hrs Theoretical	9

quarterly and final exams, weekly reports	al videos	disadvantages, problems in practice & safety features.			
	Practice in labs and hospitals	Pulse oximetry, problems in practice & safety features, practical applications.		4hrs practical	
Daily written tests, daily contributions, quarterly and final exams, weekly reports	Theoretical lectures, educational videos	Noninvasive blood pressure monitors (NBPM): types, equipment, factors that influence BP determinations, common mistakes affecting in BP assessment.		2hrs Theoretical	10
	Practice in labs and hospitals	- NBPM: equipment ,common mistakes affecting in BP assessment. - Mercury manometer :patient's position during measuring of BP.		4hrs practical	
Daily written tests, daily contributions, quarterly and final exams, weekly reports	Theoretical lectures, educational videos	- NBPM: equipment ,common mistakes affecting in BP assessment. - Mercury manometer :patient's position during measuring of BP.		2hrs Theoretical	11
	Practice in labs and hospitals	Mercury manometer: problems , faults, drawing ,practical applications.		4hrs practical	
Daily written tests, daily contributions, quarterly and final exams, weekly reports	Theoretical lectures, educational videos	Manual resuscitators; components, types, uses , hazards, advantages& disadvantages.		2hrs Theoretical	12
	Practice in labs and hospitals	Manual resuscitators: mechanism of action, drawing , practical		4hrs practical	

		applications.			
Daily written tests, daily contributions, quarterly and final exams, weekly reports	Theoretical lectures, educational videos	Defibrillator, cardioversion: components, types.		2hrs Theoretical	13
	Practice in labs and hospitals	Defibrillator: components, checking		4hrs practical	
Daily written tests, daily contributions, quarterly and final exams, weekly reports	Theoretical lectures, educational videos	Factors to be considered for successful defibrillation, reasons of failure to successfully defibrillation, precautions.		2hrs Theoretical	14
	Practice in labs and hospitals	Defibrillator: problems in practice, precautions, practical applications.		4hrs practical	
Daily written tests, daily contributions, quarterly and final exams, weekly reports	Theoretical lectures, educational videos	Review		2hrs Theoretical	15
	Practice in labs and hospitals	Review		4hrs practical	

<b>12. Infrastructure</b>	
Required reading:	
<b>Main references (sources)</b>	
Recommended books and references (scientific journals, reports,...)	
B - Electronic references, Internet sites...	

### 13. Course development plan

Access to modern scientific literature

- 1- Participation in relevant scientific conferences
- 2- The teaching and training staff is partially devoted to applying and working in hospitals
- 3- Hosting specialized professors
- 4- Academic pairing with other universities and corresponding colleges

<b>1. Teaching Institution</b>	Ministry of Higher Education and Scientific Research / Northern Technical University
<b>2. University/ Department</b>	Mosul Medical Technical Institute/ Anesthesia Techniques Department
<b>3. Course title/code</b>	Medical Surgical / ANET212
<b>4. Program (s) to which it contributes</b>	Technical Diploma in Nursing
<b>5. Modes of Attendance offered</b>	* Weekly lesson schedule (theoretical and practical) * Scientific discussions, seminars, other activities
<b>6. Semester/Year</b>	Modules
<b>7. Number of hours tuition (total)</b>	105 Hour
<b>8. Date of production/revision of this specification</b>	8 / 1 / 2024
<b>9. Aims of the Course</b>	The student will be able to: <ul style="list-style-type: none"><li>• Identify the human body's systems.</li><li>• Identify the relationship between devices.</li></ul>
<b>10. Course outcomes and teaching, learning and evaluation methods</b>	
B. <u>Cognitive objectives:</u>	
A1. Knows the basic needs of the patient.	
A2. Knows the nursing care and dealing with each medical case individually.	
B - <u>Skills objectives:</u>	
B1. Provides nursing care peri-operatively.	
B2. Provides nursing care peri-operatively.	
B3. Performs some of the procedures required for nursing care, such as dressing, measuring vital signs, ECG, and so on.	
C- <u>Emotional and Value-Based objectives:</u>	
C1. Correct and appropriate dealing with the patient according to the patient's condition.	



C2. Respecting the patient's customs, values and traditions.
D - <u>General and qualifying skills:</u>
D1. Access to scientific developments in the field of specialization (educational videos).
D2. Practical training in hospitals.
<b>Teaching and learning methods</b>
Traditional lecture, Writing reports, Seminar conduct, Practical training in the laboratory, Practical training in the hospital, and End of the course training.
<b>Evaluation methods</b>
Daily written and oral tests, Applied tests, Seminars, Semester and final exams, Commitments to assignments, Attendance and commitment, Feedback (Linking the current topic to the previous topic), Self-evaluation, Reports on scientific developments in the field of specialization, Asking analytical and deductive questions.

11. Course Structure				
Week	Hours	Unit/Module or Topic Title	Teaching Method	Assessment Method
1	7	Cardiovascular diseases principle of physical examination.	Lecture, discussion, presentation of videos, Clinical training	Test
2	7	Congenital heart diseases.	Lecture, discussion, presentation of videos, Clinical training	Test
3	7	Heart failure	Lecture, discussion, presentation of videos, Clinical training	Test
4	7	Blood pressure	Lecture, discussion, presentation of videos, Clinical training	Test
5	7	Angina and myocardial infarction.	Lecture, discussion, presentation of videos, Clinical training	practical test
6	7	Arrhythmia.	Lecture, discussion, presentation of videos, Clinical training	practical test
7	7	. Bronchitis	Lecture, discussion, presentation of videos, Clinical training	practical test
8	7	Asthma	Lecture, discussion, presentation of videos, Clinical training	practical test
9	7	Pneumonia and pneumothorax.	Lecture, discussion,	practical test

			presentation of videos, Clinical training	
10	7	Pleural effusion.and chest tube.	Lecture, discussion, presentation of videos, Clinical training	practical test
11	7	Thoracotomy.and bronchoscopy	Lecture, discussion, presentation of videos, Clinical training	practical test
12	7	Renal failure.	Lecture, discussion, presentation of videos, Clinical training	practical test
13	7	Blood diseases	Lecture, discussion, presentation of videos, Clinical training	practical test
14	7	Liver diseases and jaundice.	Lecture, discussion, presentation of videos, Clinical training	practical test
15	7	Gastro intestinal diseases.	Lecture, discussion, presentation of videos, Clinical training	practical test

<b>12..Infrastructure</b>	
<b>Required reading:</b>	<b>Anatomy</b>
<b>Main references (sources)</b>	1- مبادئ علم التشريح لطلبة معاهد المهن الصحية، الدكتور عبد الرحمن محمود، الرحيم / وزارة الصحة 1983
<b>Recommended books and references (scientific journals, reports,...)</b>	<b>Atlas of anatomy (Grantes) / 1998. Kingham anatomy – Oxford – London / 1987 .</b>
<b>B - Electronic references, Internet sites...</b>	

<b>13.Course development plan</b>
<p>Access to modern scientific literature through:</p> <p>1-Participation in relevant scientific conferences</p> <p>2-The teaching and training staff is partially devoted to applying and working in hospitals</p> <p>3-Hosting specialized professors</p> <p>4-Academic pairing with other universities and corresponding colleges</p>

1. Teaching Institution	Ministry of Higher Education and
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	Scientific Research / Northern Technical University
2. University/ Department	Mosul Medical Technical Institute/ Anesthesia Techniques Department
3. Course title/code	Hematology <b>ANET215</b>
4. Programme (s) to which it contributes	Diploma in anesthesia techniques
5. Modes of Attendance offered	* Weekly lesson schedule (theoretical and practical) * Scientific discussions, seminars, other activities
6. Semester/Year	Semester
7. Number of hours tuition (total)	45hr
8. Date of production/revision of this specification	8 / 1 / 2024
<b>9. Aims of the Course</b> 1- Teaching and training students on the basic concepts of blood diseases and the principles of blood testing. 2- Teaching and training the student on how to take a blood sample and identify the components of blood in special ways. 3- Teaching and training the student on how to prepare blood sample smears and how to distinguish between abnormal and normal cells from blood cells. 4- Teaching and training students on the methods of pathological analyzes that are conducted to reach a pathological diagnosis. 5- Teaching and training students on how to handle and use different chemical dyes to diagnose blood diseases.	
<b>10. Course outcomes and teaching, learning and evaluation methods</b>	
A.Cognitive objectives A1- Identifying the various devices and tests available and learning about the different components of blood. A2- Getting to know the procedure of special analyzes and knowing the clinical conditions accompanying these tests A3- Identify and detect routine blood diseases and their causes using special tests..	
B - The skills objectives of the course. 1 - Acquire knowledge of dealing with pathological samples, laboratory materials and equipment, and be aware of the importance of their danger, how to deal with them, and conduct the necessary medical analyzes. B2 - Building and developing students' talents and abilities in the field of medical analysis and how to use the microscope to examine samples.	

B3 - Ensure that laboratory safety measures are taken to preserve the safety of workers and the safety of public and private property of the laboratory.
<b>Teaching and learning methods</b>
Traditional lecture, report writing, seminar conduct, practical training in the laboratory, summer training.in the hospital.
<b>Evaluation methods</b>
Daily written and oral tests, applied tests, seminars, semester and final exams, obligations to assignments, attendance and commitment, feedback (testing the student on the previous subject), self-evaluation (questions are set for the student by the teacher and the student answers the questions, and the teacher also answers the same questions and asks The student is asked to evaluate himself in light of the teacher's answers, reports on scientific developments in the field of specialization, and asks analytical and deductive questions.
C- Emotional and value goals C1- Training on pathological variables and their relationship to clinical diseases. C2- Training on how to analyze laboratory results in light of clinical examinations and provide accurate and rapid results. C3- Training on how to deal with unconscious patients and the elderly when drawing blood. C4- Explaining and understanding the reason for taking a blood sample and not another sample when conducting medical tests. C5- The ability to archive patient information for reference when needed.
<b>Teaching and learning methods</b>
Traditional lecture, self-learning, feedback, deductive and analytical thinking questions, methodological training in laboratories, summer training in hospitals,.
<b>Evaluation methods</b>
Sick case simulation ,Simulating the medical condition, written, oral, and applied tests, semester and final exams, daily tests, and commitments to assignments such as making reports in the field of specialization and then discussing the reports, attendance and commitment, feedback (testing the student on the previous subject), self-evaluation (questions are put to the student by the teacher The student answers the questions, and the teacher also answers the same questions. The student is asked to evaluate himself in light of the teacher's answers) and deductive and deductive questions.
D - Transferable general and qualifying skills (other skills related to employability and personal development). D1- Field visits to gain experience from others. D2- Access to scientific developments in the field of specialization (educational videos).

**11. Course Structure**

Week	Hours	Unit/Module or Topic Title	ILOs	Teaching Method	Assessment Method
1	1	Introduction importance of haematology. study the blood contains.	Lecture, discussion,	1	Test
2	1	The haemopoiesis in fetus, children and adult.	Lecture, discussions	1	test
3	1	The normal red blood cells, importance. Structure erythropoiesis and Function.	Lecture, discussion,	1	test
4	1	Polycythemia ,causes Clinical Signs and Laboratory diagnosis.	Lecture, discussion,	1	Test
5	1	Study the red cell morphology in health and disease. Abnormality of R.B.C in size.	Lecture, discussion,	1	test
6	1	Abnormality of R.B.C in shape.	Lecture, discussion	1	test
7	1	Abnormality of R.B.C in colour.	Lecture, discussion,	1	test
8	1	The normal Hb. Of the blood, contain and importance	Lecture, discussion,	1	test
9	1	Study the types of normal Hb. Types	Lecture, discussion,	1	test
10	1	Common Hb. Variant	Lecture, discussion,	1	test
11	1	Anemia, definition, classification and types	Lecture, discussion,	1	Test
12	1	Anemia. Causes .clinical signs and laboratory Finding.	Lecture, discussion,	1	test
13	1	Megaloblastic anemia and Pernicious anemia	Lecture, discussion,	1	test
14	1	Apahastic anemia and	Lecture,	1	test

		hemolytic anemia,	discussion,		
15	1	Sickle Cell an. And acquired and autoimmune hemolytic anemia.	Lecture, discussion,	1	Test

<b>12. Infrastructure</b>	
Required reading:	Hematology
<b>Main references (sources)</b>	-1 Keohane, Elaine M., Catherine N. Otto, and Jeanine M. Walenga. Rodak's hematology-e-book: clinical principles and applications. Elsevier Health Sciences, 2019. -2 Ciesla, Betty. Hematology in practice. Fa Davis, 2018. -3 Hoffbrand, Victor, et al. Color Atlas of Clinical Hematology: Molecular and Cellular Basis of Disease. John Wiley & Sons, 2019.
Recommended books and references (scientific journals, reports,...)	Sternbergq surgical pathology Williams Hematology British journal of pathology Human pathology journal
B - Electronic references, Internet sites...	Webpath.com

<b>13. Course development plan</b>
<p>Access to modern scientific literature</p> <ol style="list-style-type: none"> <li>1- Looking forward to developing practical education plans using the digital and virtual pathology method.</li> <li>2- integrated education method between theory and practical.</li> <li>3- Looking forward to developing practical education plans using the digital and virtual pathology method.</li> <li>4- Integrated education method between theory and practical. Participation in relevant scientific conferences</li> <li>5- The teaching and training staff is partially devoted to applying and working in hospitals</li> <li>6- Hosting specialized professors</li> <li>7- Academic pairing with other universities and corresponding colleges</li> </ol>