

Republic of Yemen

Ministry of Higher Education & Scientific Research

21 SEPTEMBER UNIVERSITY of MEDICALS & APPLIEED

SCIENCES



Anesthesia Technician

Program Specifications

Course Specification of Basic Pharmacology

Course No. (02 01 822)

2024

Template for Course Specification

I. Course Identification and General Information:				
1	Course Title:	Basic Pharmacology		
2	Course Code & Number:	02 01 822		
3	Credit Hours:	Credit Hours	Theory Hours Lecture Field	Lab. Hours
		2	2 --	--
4	Study Level/ Semester at which this Course is offered:	Level2\1term		
5	Pre –Requisite (if any):	None		
6	Co –Requisite (if any):	None		
7	Program (s) in which the Course is Offered:	Bachelor of Anesthesia Technician		
8	Language of Teaching the Course:	English		
9	Study System:	Semester Based System		
10	Mode of Delivery:	Full Time		
11	Location of Teaching the Course:	Science Faculty of Medical Applied Science		
12	Prepared by:	Associate Prof. Ally Al-yahwi		
13	Date of Approval:	2024-1446 ^{Ah}		

Prepared by:	Reviewed by:	Head of the artment:	Quality Unit:	Dean
Dr. Ally Al-yahwi	Dr. abdulala thabet	Dr.Fares Mahdi	Dr.Fadl Shujaa Al-deen	Dr. Abdulsalam Dallak

II. Course Description:

A Pharmacology is designed to prepare the students integrates comprehensive knowledge of pharmacology to formulate a treatment plan intended to mitigate emergencies and improve the overall health of the patient. This course will give an overview of pharmacology, including historical trends in pharmacology, general properties of drugs, mechanisms of drug action, drug profiles and special considerations in drug therapy, drugs that affect cardiovascular, nervous, blood and respiratory system.

III. Course Intended Learning Outcomes (CILOs) : (مخرجات تعلم المقرر)

A. Knowledge and Understanding: Upon successful completion of the course, students will be able to:

a1	Recognize the four types of drug names, and the factors that influence drug absorption, distribution, and elimination.	A1	. Demonstrate the concepts and principles of anesthesia and different basic and humanities courses and its applications in anesthesia practice
a2	Identify drugs that affect the blood, cardiovascular, respiratory system, and mention special considerations for administering pharmacologic agents to pregnant patients, pediatric patients, and older patients.	A4	Demonstrate knowledge of the basic general pharmacodynamics and pharmacokinetics of drugs at all age groups and the pharmacology of all anaesthetic drugs including inhalational, intravenous, muscle relaxants and local anaesthetics as well as sedatives and hypnotics.

B. Intellectual Skills: Upon successful completion of the course, students will be able to:

b1	Differentiate between characteristics of routes of drug administration	B4	Demonstrate competence in the use of language, libraries, and databases and in basic concepts of research methodology
----	--	----	---

Prepared by:	Reviewed by:	Head of the artment:	Quality Unit:	Dean
Dr. Ally Al-yahwi	Dr. abdulala thabet	Dr.Fares Mahdi	Dr.Fadl Shujaa Al-deen	Dr. Abdulsalam Dallak

			and epidemiology and be able to critically analyze relevant published research literature.
b2	Distinguish among drug forms, respiratory depressants and cough suppressants	B3	Interpret the basic normal anatomical structures on radiographs, C.T. scans and magnetic resonance images and readings of the standard monitors attached to the patient as well as additional monitors as central venous pressure monitoring.
C. Professional and Practical Skills: Upon successful completion of the course, students will be able to:			
c1	Explain variables that can influence drug interactions	C1	Administer a range of assessment techniques, procedures and management appropriate to patient condition and maintain fluid therapy and blood transfusion.
c2	Mention drug actions and care considerations when administering drugs for the nervous, cardiovascular, respiratory, endocrine, and gastrointestinal systems.	C2	Perform an approach to the assessment of risk and need for consultation for an anesthetics, identify appropriate laboratory investigations, pre-medications and fasting guidelines and Set up anesthesia machine and its connections and demonstrate appropriate application and interpretation of commonly used monitors in anesthesia preoperatively
D. Transferable Skills: Upon successful completion of the course, students will be able to:			
d1	Communicate with the patient and his family effectively in professional manner	D1	Communicate effectively with individuals and groups and members of the health

Prepared by:	Reviewed by:	Head of the artment:	Quality Unit:	Dean
Dr. Ally Al-yahwi	Dr. abdulala thabet	Dr.Fares Mahdi	Dr.Fadl Shujaa Al-deen	Dr. Abdulsalam Dallak

	using the principles of communication techniques		team in order to promote effective interpersonal relationships and teamwork
d2	Discuss the legal and ethical issues that arise in the emergency care setting.	D2	Demonstrate professional, ethical, moral, legal, and spiritual concepts into one's practice within a global environment

(A) Alignment of Course Intended Learning Outcomes (Knowledge and Understanding) to Teaching Strategies and Assessment Methods:			
Course Intended Learning Outcomes		Teaching Strategies	Assessment Strategies
a1	Recognize the four types of drug names, and the factors that influence drug absorption, distribution, and elimination.	- Interactive lecture - Seminars and student presentations - Brain storming, role-play and simulation - Small group for discussing	- Assignments - Quizzes - Mid-term Exam - Final exam - Presentations
a2	Identify drugs that affect the blood, cardiovascular, respiratory system, and mention special considerations for administering pharmacologic agents to pregnant patients, pediatric patients, and older patients.	- Interactive lecture - Seminars and student presentations - Brain storming, role-play and simulation - Small group for discussing	- Assignments - Quizzes - Mid-term Exam - Final exam - Presentations
(B) Alignment of Course Intended Learning Outcomes (Intellectual Skills) to Teaching Strategies and Assessment Methods:			
Course Intended Learning Outcomes		Teaching Strategies	Assessment Strategies
b1	Differentiate between characteristics of routes of drug administration	- Interactive lecture - Brain storming - Role-play & simulation - Small group discussions - Seminars and student presentations	- Assignments - Quizzes - Mid-term Exam - Final exam

Prepared by:	Reviewed by:	Head of the artment:	Quality Unit:	Dean
Dr. Ally Al-yahwi	Dr. abdulala thabet	Dr.Fares Mahdi	Dr.Fadl Shujaa Al-deen	Dr. Abdulsalam Dallak

b2	Distinguish among drug forms, respiratory depressants and cough suppressants	- Interactive lecture - Brain storming - Role-play & simulation - Small group discussions - Seminars and student presentations	- Assignments - Quizzes - Mid-term Exam - Final exam
(C) Alignment of Course Intended Learning Outcomes (Professional and Practical Skills) to Teaching Strategies and Assessment Methods:			
Course Intended Learning Outcomes		Teaching Strategies	Assessment Strategies
c1	Explain variables that can influence drug interactions	- Active learning, - Small group learning. - Learning tasks and activities	- Assignments - Quizzes - Mid-term Exam - Final exam
c2	Mention drug actions and care considerations when administering drugs for the nervous, cardiovascular, respiratory, endocrine, and gastrointestinal systems.	- Active learning, - Small group learning. - Learning tasks and activities	- Assignments - Quizzes - Mid-term Exam - Final exam
(D) Alignment of Course Intended Learning Outcomes (Transferable Skills) to Teaching Strategies and Assessment Methods:			
Course Intended Learning Outcomes		Teaching Strategies	Assessment Strategies
d1	Communicate with the patient and his family effectively in professional manner using the principles of communication techniques	- Classroom discussions, - Problems solving - Case study analysis	- Presentations - Case Studies - Learning activities
d2	Discuss the legal and ethical issues that arise in the emergency care setting.	- Classroom discussions, - Problems solving	- Presentations - Case Studies - Learning activities

Prepared by:	Reviewed by:	Head of the artment:	Quality Unit:	Dean
Dr. Ally Al-yahwi	Dr. abdulala thabet	Dr.Fares Mahdi	Dr.Fadl Shujaa Al-deen	Dr. Abdulsalam Dallak

		▪ Case study analysis	
--	--	-----------------------	--

IV. Course Contents:

A. Theoretical Aspect:

No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours	Learning Outcomes (CLOs)
1	Historical Trends in Pharmacology	▪ History of drug ○ Ancient and modern health care ▪ Drug Names ○ Chemical name ○ Generic name ○ Trade name ○ Official name ▪ Sources of Drug information ▪ Drug Standards and Legislation ▪ Drug Regulatory Agencies	1	2	a1,
2	General properties of Drugs	▪ Pharmacologic Terminology ▪ Pharmaceutical Phase ▪ Pharmacokinetic Phase ○ Drug Absorption ○ Routes of Drug Administration ○ Excretion ○ Biotransformation ○ Excretion ○ Factors That Influence the Action of Drugs ▪ Pharmacodynamic Phase ○ Drug-Receptor Interaction ○ Drug-Response Assessment ○ Biologic Half-Life ○ Therapeutic Index	1	2	a1, b1
3	Mechanisms of drug action and considerations in drug therapy	General Properties of Drugs ○ Introduction ○ Pharmaceutical Phase ○ Pharmacokinetic Phase	1	2	a1, b1, c1, d1

Prepared by:	Reviewed by:	Head of the department:	Quality Unit:	Dean
Dr. Ally Al-yahwi	Dr. Abdulala thabet	Dr. Fares Mahdi	Dr. Fadl Shujaa Al-deen	Dr. Abdulsalam Dallak

		○ Routes of Drug Administration ○ Parenteral Route (by injection) ○ Pulmonary Route ○ Topical Route ○ Drug Distribution ○ Pharmacodynamic Phase Drug Interactions ○ Variables that Influence Drug Interaction ○ Drug-Drug Interactions ○ Other Factors that can Influence Drug Interactions Drug Storage ○ Certain Precepts Should Guide the Manner in which Drugs are Secured, Stored, Distributed, and Accounted For ○ Factors that Affect Drug Potency ○ Applies also to Diluents ○ Security of Controlled Medications			
4	Drugs That Affect the Nervous System	▪ Autonomic Division of Peripheral Nervous System ▪ Neurochemical Transmission ▪ Transmission of Nerve Impulses in the Autonomic Nervous System ▪ Drugs That Affect the Autonomic Nervous System ○ Classifications ▪ Narcotic Analgesics and Antagonists ▪ Non-narcotic Analgesics ▪ Anesthetics ▪ Antianxiety and Sedative-Hypnotic Agents and Alcohol ○ Classifications	3	6	a1, c1, d1

Prepared by:	Reviewed by:	Head of the Department:	Quality Unit:	Dean
Dr. Ally Al-yahwi	Dr. Abdulata Thabet	Dr. Fares Mahdi	Dr. Fadl Shujaa Al-deen	Dr. Abdulsalam Dallak

		- Alcohol Intake and Behavioral Effects - Anticonvulsants - CNS Stimulants - Anorexiant - Amphetamines - Psychotherapeutic Drugs - CNS and Emotions - Antipsychotic Agents - Antidepressants - Drugs for Specific CNS–Neuromuscular Dysfunction - Parkinson Disease - Huntington Disease - Drugs With Central Anticholinergic Activity - Drugs That Affect Dopamine in the Brain - Monoamine Oxidase Inhibitors - Skeletal Muscle Relaxants - Central-Acting Muscle Relaxants - Direct-Acting Muscle Relaxants - Neuromuscular Blockers			
5	Midterm exam	Midterm exam	1	2	a1, b1, c1, d1
6	Drug Profiles	Drug Profiles and Special Considerations in Drug Therapy - The Paramedic should be Familiar with the Drug Profiles of any Drug that He or She Administers - Components of a Drug Profile - Special Considerations in Drug Therapy Various Forms of Drug Preparations Special Considerations in Drug	2	4	a2, b2, c2, d2

Prepared by:	Reviewed by:	Head of the artment:	Quality Unit:	Dean
Dr. Ally Al-yahwi	Dr. abdulala thabet	Dr.Fares Mahdi	Dr.Fadl Shujaa Al-deen	Dr. Abdulsalam Dallak

		Therapy ○ Pregnant Patients ○ Pediatric Patients ○ Older Adult Patients			
7	Drugs That Affect the Cardiovascular System	▪ Review of Anatomy and Physiology ▪ Cardiac Glycosides ▪ Antidysrhythmics ○ Classifications ▪ Antihypertensives ○ Classifications	2	4	a2, c2, d2
8	Drugs That Affect the Blood	▪ Anticoagulants ▪ Antihemophilic Agents ▪ Hemostatic Agents ▪ Hemorrhagic Agents ▪ Antifibrinolytic Agents ▪ Blood and Blood Components ▪ Antihyperlipidemic Drugs	2	4	a2, c2, d2
9	Drugs That Affect the Respiratory System	▪ Review of Anatomy and Physiology ▪ Bronchodilators ○ Sympathomimetic Drugs ○ Anticholinergic Bronchodilator ○ Xanthine Derivatives ○ Other Respiratory Drugs ▪ Microkinetic Drugs ▪ Oxygen and Other Respiratory Agents ○ Direct Respiratory Stimulants ○ Reflex Respiratory Stimulants ○ Respiratory Depressants ○ Cough Suppressants ○ Antihistamines ○ Serotonin ○ Selective Serotonin Reuptake Inhibitors ○ Antiserotonins	2	4	a2, b2, c2, d2
	Final term exam	Final term exam	1	2	a2, b2, c2, d2

Prepared by:	Reviewed by:	Head of the artment:	Quality Unit:	Dean
Dr. Ally Al-yahwi	Dr. abdulala thabet	Dr.Fares Mahdi	Dr.Fadl Shujaa Al-deen	Dr. Abdulsalam Dallak

Number of Weeks /and Units Per Semester	16	32	
---	----	----	--

B. Case Studies and Practical Aspect:				
No.	Tasks/ Experiments	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1	None			
Number of Weeks /and Units Per Semester				

C. Tutorial Aspect:				
No.	Tutorial	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1	None			
Number of Weeks /and Units Per Semester				

V. Teaching Strategies of the Course:	
○ Interactive lecture ○ Seminars and student presentations ○ Brain storming ○ Role-play and simulation ○ Small group discussion ○ Learning tasks and activities ○ Problems solving ○ Case study analysis	

VI. Assessment Methods of the Course:

Prepared by:	Reviewed by:	Head of the artment:	Quality Unit:	Dean
Dr. Ally Al-yahwi	Dr. abdulala thabet	Dr.Fares Mahdi	Dr.Fadl Shujaa Al-deen	Dr. Abdulsalam Dallak

- Assignments
- Quizzes
- Mid-term exam
- Final term exam

VII. Assignments:

No.	Assignments	Week Due	Mark	Aligned CILOs (symbols)
1	Assignment 1: common abbreviations	W5	5	a1, b1
2	Assignment 2: drug classification	W11	5	a2, b2,
Total			10	

VIII. Schedule of Assessment Tasks for Students During the Semester:

No.	Assessment Method	Week Due	Mark	Proportion of Final Assessment	Aligned Course Learning Outcomes
1	Assignments	W5,11	10	10%	a1, b1, a2, b2
2	Quizzes 1 & 2	W3, 9	10	10%	a1, a2
3	Mid-Term Theoretical Exam	W7	20	20%	a1, b1, c1, d1
4	Final Theoretical Exam	W16	60	60%	a2, b2, c2, d2
Total			100	100%	

IX. Learning Resources:

- *Written in the following order:* Author, Year of publication, **Title**, Edition, Place of publication,

Prepared by:	Reviewed by:	Head of the artment:	Quality Unit:	Dean
Dr. Ally Al-yahwi	Dr. abdulala thabet	Dr.Fares Mahdi	Dr.Fadl Shujaa Al-deen	Dr. Abdulsalam Dallak

Publisher.
1- Required Textbook(s) (maximum two) : مثال example
- Robert J. Kizior R., and Hodgson K., (2019). Saunders Nursing Drug Handbook. 27th Ed. Saunders Nursing Drug Handbook, St. Louis, Missouri - Watkins C., (2018). Pharmacology clear & simple: a guide to drug classifications and dosage calculations. 3rd Ed. Davis Company,
2- Essential References:
- Burchum J., and Rosenthal L., (2019).Lehne's Pharmacology for Nursing Care. 10th Ed., Elsevier Inc. St. Louis, Missouri - Bryant B., & Knights K., (2015). Pharmacology For Health Professionals. 4th Ed. Elsevier Australia.
3- Electronic Materials and Web Sites etc.:
Websites: - American Journal of Emergency Medicine - Annals of Emergency Medicine - Journal of Emergency Medicine - Journal of Trauma and Acute Care Surgery - Prehospital Emergency Care

X. Course Policies: (Based on the Uniform Students' By law (2007) تترك كما هي)	
1	Class Attendance: Class Attendance is mandatory. A student is considered absent and shall be banned from taking the final exam if his/her absence exceeds 25% of total classes.
2	Tardiness: A student will be considered late if he/she is not in class after 10 minutes of the start time of class.
3	Exam Attendance/Punctuality: No student shall be allowed to the exam hall after 30 minutes of the start time, and shall not leave the hall before half of the exam time has passed.
4	Assignments & Projects: Assignments and projects must be submitted on time. Students who delay their assignments or

Prepared by:	Reviewed by:	Head of the artment:	Quality Unit:	Dean
Dr. Ally Al-yahwi	Dr. abdulala thabet	Dr.Fares Mahdi	Dr.Fadl Shujaa Al-deen	Dr. Abdulsalam Dallak

	projects shall lose the mark allocated for the same.
5	Cheating: Cheating is an act of fraud that results in the cancelation of the student's exam or assignment. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply.
6	Forgery and Impersonation: Forgery/Impersonation is an act of fraud that results in the cancelation of the student's exam, assignment or project. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply.
7	Other policies: The University official regulations in force will be strictly observed and students shall comply with all rules and regulations of the examination set by the Department, Faculty and University Administration.

Prepared by:	Reviewed by:	Head of the artment:	Quality Unit:	Dean
Dr. Ally Al-yahwi	Dr. abdulala thabet	Dr.Fares Mahdi	Dr.Fadl Shujaa Al-deen	Dr. Abdulsalam Dallak



Republic of Yemen

Ministry of Higher Education & Scientific Research

21 SEPTEMBER UNIVERSITY of MEDICALS & APPLIED

SCIENCES



Prepared by:	Reviewed by:	Head of the artment:	Quality Unit:	Dean
Dr. Ally Al-yahwi	Dr. abdulala thabet	Dr.Fares Mahdi	Dr.Fadl Shujaa Al-deen	Dr. Abdulsalam Dallak

Course Specification of Pharmacology

Basic

Course No. (02 01 822)

2024

Template for Course Syllabus

i. معلومات عن أستاذ المقرر Information about Faculty Member Responsible for the Course						
(3 أسبوعيا)		الساعات المكتبية (أسبوعيا) Office Hours			Dr. Ally Al-yahwi	
الخميس THU	الأربعاء WED	الثلاثاء TUE	الاثنين MON	الأحد SUN	السبت SAT	
					الاسم Name	
					المكان ورقم الهاتف Location & Telephone No.	
					البريد الإلكتروني E-mail	
I. Course Identification and General Information:						
1	Course Title:				Basic Pharmacology	
2	Course Code & Number:				02 01 822	
3	Credit Hours:				Credit Hours	Theory Hours
						Lecture
				2	2	--
4	Study Level/ Semester at which this Course is				Level2\term1	

16

Prepared by:	Reviewed by:	Head of the artment:	Quality Unit:	Dean
Dr. Ally Al-yahwi	Dr. abdulala thabet	Dr.Fares Mahdi	Dr.Fadl Shujaa Al-deen	Dr. Abdulsalam Dallak

	offered:	
5	Pre –Requisite (if any):	None
6	Co –Requisite (if any):	None
7	Program (s) in which the Course is Offered:	Bachelor of Anesthesia Technician
8	Language of Teaching the Course:	English
9	Study System:	Semester Based System
10	Mode of Delivery:	Full Time
11	Location of Teaching the Course:	Science Faculty of Medical Applied Science
12	Prepared by:	Dr. Ally Al-yahwi
13	Date of Approval:	2024-1446 ^{Ah}

II. Course Description:

Pharmacology is designed to prepare the students integrates comprehensive knowledge of pharmacology to formulate a treatment plan intended to mitigate emergencies and improve the overall health of the patient. This course will give an overview of pharmacology, including historical trends in pharmacology, general properties of drugs, mechanisms of drug action, drug profiles and special considerations in drug therapy, drugs that affect cardiovascular, nervous, blood and respiratory system.

Course Intended Learning Outcomes (CILOs)

a1	recognize the four types of drug names, and the factors that influence drug absorption, distribution, and elimination.
a2	identify drugs that affect the blood, cardiovascular, respiratory system, and mention special considerations for administering pharmacologic agents to pregnant patients, pediatric patients, and

Prepared by:	Reviewed by:	Head of the artment:	Quality Unit:	Dean
Dr. Ally Al-yahwi	Dr. abdulala thabet	Dr.Fares Mahdi	Dr.Fadl Shujaa Al-deen	Dr. Abdulsalam Dallak

	older patients.
b1	Differentiate between characteristics of routes of drug administration
b2	Distinguish among drug forms, respiratory depressants and cough suppressants
c1	Explain variables that can influence drug interactions
c2	Mention drug actions and care considerations when administering drugs for the nervous, cardiovascular, respiratory, endocrine, and gastrointestinal systems.
d1	Communicate with the patient and his family effectively in professional manner using the principles of communication techniques
d2	Discuss the legal and ethical issues that arise in the emergency care setting.

IV. Course Contents:

A. Theoretical Aspect:

No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours	
1	Historical Trends in Pharmacology	▪ History of drug ○ Ancient and modern health care ▪ Drug Names ○ Chemical name ○ Generic name ○ Trade name ○ Official name ▪ Sources of Drug information ▪ Drug Standards and Legislation ▪ Drug Regulatory Agencies	1	2	
2	General properties of Drugs	▪ Pharmacologic Terminology ▪ Pharmaceutical Phase ▪ Pharmacokinetic Phase ○ Drug Absorption ○ Routes of Drug Administration ○ Excretion ○ Biotransformation ○ Excretion ○ Factors That Influence the Action of Drugs	1	2	

Prepared by:	Reviewed by:	Head of the department:	Quality Unit:	Dean
Dr. Ally Al-yahwi	Dr. Abdulala thabet	Dr. Fares Mahdi	Dr. Fadl Shujaa Al-deen	Dr. Abdulsalam Dallak

		- Pharmacodynamic Phase - Drug–Receptor Interaction - Drug-Response Assessment - Biologic Half-Life - Therapeutic Index			
3	Mechanisms of drug action and considerations in drug therapy	General Properties of Drugs - Introduction - Pharmaceutical Phase - Pharmacokinetic Phase - Routes of Drug Administration - Parenteral Route (by injection) - Pulmonary Route - Topical Route - Drug Distribution - Pharmaco-dynamic Phase Drug Interactions - Variables that Influence Drug Interaction - Drug-Drug Interactions - Other Factors that can Influence Drug Interactions Drug Storage - Certain Precepts Should Guide the Manner in which Drugs are Secured, Stored, Distributed, and Accounted For - Factors that Affect Drug Potency - Applies also to Diluents - Security of Controlled Medications	1	2	
4	Drugs That Affect the Nervous System	- Autonomic Division of Peripheral Nervous System - Neurochemical Transmission - Transmission of Nerve Impulses in the Autonomic Nervous System	3	6	

Prepared by:	Reviewed by:	Head of the artment:	Quality Unit:	Dean
Dr. Ally Al-yahwi	Dr. abdulala thabet	Dr.Fares Mahdi	Dr.Fadl Shujaa Al-deen	Dr. Abdulsalam Dallak



		- Drugs That Affect the Autonomic Nervous System - Classifications - Narcotic Analgesics and Antagonists - Non-narcotic Analgesics - Anesthetics - Antianxiety and Sedative-Hypnotic Agents and Alcohol - Classifications - Alcohol Intake and Behavioral Effects - Anticonvulsants - CNS Stimulants - Anorexians - Amphetamines - Psychotherapeutic Drugs - CNS and Emotions - Antipsychotic Agents - Antidepressants - Drugs for Specific CNS–Neuromuscular Dysfunction - Parkinson Disease - Huntington Disease - Drugs With Central Anticholinergic Activity - Drugs That Affect Dopamine in the Brain - Monoamine Oxidase Inhibitors - Skeletal Muscle Relaxants - Central-Acting Muscle Relaxants - Direct-Acting Muscle Relaxants - Neuromuscular Blockers			
5	Midterm exam	Midterm exam	1	2	
6	Drug Profiles	Drug Profiles and Special Considerations in Drug Therapy The Paramedic should be Familiar with the Drug	2	4	

Prepared by:	Reviewed by:	Head of the artment:	Quality Unit:	Dean
Dr. Ally Al-yahwi	Dr. abdulala thabet	Dr.Fares Mahdi	Dr.Fadl Shujaa Al-deen	Dr. Abdulsalam Dallak

		Profiles of any Drug that He or She Administers ○ Components of a Drug Profile ○ Special Considerations in Drug Therapy ▪ Various Forms of Drug Preparations ▪ Special Considerations in Drug Therapy ○ Pregnant Patients ○ Pediatric Patients ○ Older Adult Patients			
7	Drugs That Affect the Cardiovascular System	▪ Review of Anatomy and Physiology ▪ Cardiac Glycosides ▪ Antidysrhythmics ○ Classifications ▪ Antihypertensives ○ Classifications	2	4	
8	Drugs That Affect the Blood	▪ Anticoagulants ▪ Antihemophilic Agents ▪ Hemostatic Agents ▪ Hemorrhagic Agents ▪ Antifibrinolytic Agents ▪ Blood and Blood Components ▪ Antihyperlipidemic Drugs	2	4	
9	Drugs That Affect the Respiratory System	▪ Review of Anatomy and Physiology ▪ Bronchodilators ○ Sympathomimetic Drugs ○ Anticholinergic Bronchodilator ○ Xanthine Derivatives ○ Other Respiratory Drugs ▪ Mucokinetic Drugs ▪ Oxygen and Other Respiratory Agents ○ Direct Respiratory Stimulants ○ Reflex Respiratory Stimulants	2	4	

Prepared by:	Reviewed by:	Head of the artment:	Quality Unit:	Dean
Dr. Ally Al-yahwi	Dr. abdulala thabet	Dr.Fares Mahdi	Dr.Fadl Shujaa Al-deen	Dr. Abdulsalam Dallak

		○ Respiratory Depressants ○ Cough Suppressants ○ Antihistamines ○ Serotonin ○ Selective Serotonin Reuptake Inhibitors ○ Antiserotonins			
	Final term exam	Final term exam	1	2	
Number of Weeks /and Units Per Semester			16	32	

B. Case Studies and Practical Aspect:

No.	Tasks/ Experiments	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1	None			
Number of Weeks /and Units Per Semester				

C. Tutorial Aspect:

No.	Tutorial	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1	None			
Number of Weeks /and Units Per Semester				

V. Teaching Strategies of the Course:

- Interactive lecture
- Seminars and student presentations
- Brain storming
- Role-play and simulation
- Small group discussion

Prepared by:	Reviewed by:	Head of the artment:	Quality Unit:	Dean
Dr. Ally Al-yahwi	Dr. Abdulala thabet	Dr. Fares Mahdi	Dr. Fadl Shujaa Al-deen	Dr. Abdulsalam Dallak

- Learning tasks and activities
- Problems solving
- Case study analysis

VI. Assessment Methods of the Course:

- Assignments
- Quizzes
- Mid-term exam
- Final term exam

VII. Assignments:

No.	Assignments	Week Due	Mark	Aligned CILOs (symbols)
1	Assignment 1: common abbreviations	W5	5	a1, b1
2	Assignment 2: drug classification	W11	5	a2, b2,
Total			10	

VIII. Schedule of Assessment Tasks for Students During the Semester:

No.	Assessment Method	Week Due	Mark	Proportion of Final Assessment	Aligned Course Learning Outcomes
1	Assignments	W5,11	10	10%	a1, b1, a2, b2
2	Quizzes 1 & 2	W3, 9	10	10%	a1, a2
3	Mid-Term Theoretical Exam	W7	20	20%	a1, b1, c1, d1
4	Final Theoretical Exam	W16	60	60%	a2, b2, c2, d2

Prepared by:	Reviewed by:	Head of the artment:	Quality Unit:	Dean
Dr. Ally Al-yahwi	Dr. abdulala thabet	Dr.Fares Mahdi	Dr.Fadl Shujaa Al-deen	Dr. Abdulsalam Dallak

Total	100	100%	
-------	-----	------	--

IX. Learning Resources:

- *Written in the following order:* Author, Year of publication, **Title**, Edition, Place of publication, Publisher.

1- Required Textbook(s) (maximum two): مثال example

3. Robert J. Kizior R., and Hodgson K., (2019). Saunders Nursing Drug Handbook. 27th Ed. Saunders Nursing Drug Handbook, St. Louis, Missouri
4. Watkins C., (2018). Pharmacology clear & simple: a guide to drug classifications and dosage calculations. 3rd Ed. Davis Company,

2- Essential References:

3. Burchum J., and Rosenthal L., (2019).Lehne's Pharmacology for Nursing Care. 10th Ed., Elsevier Inc. St. Louis, Missouri
4. Bryant B., & Knights K., (2015). Pharmacology For Health Professionals. 4th Ed. Elsevier Australia.

3- Electronic Materials and Web Sites etc.:

Websites:

- American Journal of Emergency Medicine
- Annals of Emergency Medicine
- Journal of Emergency Medicine
- Journal of Trauma and Acute Care Surgery
- Prehospital Emergency Care

X. Course Policies: (Based on the Uniform Students' By law (2007) تترك كما هي)

Class Attendance:

- 1 Class Attendance is mandatory. A student is considered absent and shall be banned from taking the final exam if his/her absence exceeds 25% of total classes.

Tardiness:

Prepared by:	Reviewed by:	Head of the artment:	Quality Unit:	Dean
Dr. Ally Al-yahwi	Dr. abdulala thabet	Dr.Fares Mahdi	Dr.Fadl Shujaa Al-deen	Dr. Abdulsalam Dallak

	A student will be considered late if he/she is not in class after 10 minutes of the start time of class.
3	Exam Attendance/Punctuality: No student shall be allowed to the exam hall after 30 minutes of the start time, and shall not leave the hall before half of the exam time has passed.
4	Assignments & Projects: Assignments and projects must be submitted on time. Students who delay their assignments or projects shall lose the mark allocated for the same.
5	Cheating: Cheating is an act of fraud that results in the cancelation of the student's exam or assignment. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply.
6	Forgery and Impersonation: Forgery/Impersonation is an act of fraud that results in the cancelation of the student's exam, assignment or project. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply.
7	Other policies: The University official regulations in force will be strictly observed and students shall comply with all rules and regulations of the examination set by the Department, Faculty and University Administration.

Prepared by:	Reviewed by:	Head of the Department:	Quality Unit:	Dean
Dr. Ally Al-yahwi	Dr. Abdulala thabet	Dr. Fares Mahdi	Dr. Fadl Shujaa Al-deen	Dr. Abdulsalam Dallak