Ministry of Higher Education and

Scientific Research

Scientific Supervision and Evaluation

Authority

Diyala University/ College of Medicine

Quality Assurance and Academic

Accreditation Division

Medical Academic Program Description Form

2021

Academic description of the Faculty of Medicine

University of Diyala

College of Medicine

Scientific Department: Medicine

File filling date: 15/6/2021

Signature

Department Head

Prof. Dr. Ismail Ibrahim Latif

Signature

Associate Dean for Scientific Affairs

Jalil Ibrahim Kadhim

The file has already been checked by:

Quality Assurance and University Performance Division

Director of the Division of Quality Assurance and University Performance of the Faculty of Medicine

Assistant Lecturer. Mannar Abdul Razzaq Hassan

Date 15/6/2021

Signature

Dean's Authentication

Academic Description Program for the Faculty of Medicine

The description of the academic program of the College of Medicine provides a requisite summary of the most important characteristics of the program and the teaching and learning objectives that the college aims to achieve by the student, proving whether he has made maximum use of the available opportunities. It is accompanied by a description of each branch in the College of Medicine, methods of teaching and learning, methods of evaluating students, and the emotional and evaluation goals of those scientific branches in the college.

General Description

1- Educational institution
College of Medicine/University of Diyala
2- Scientific Department / Center
College of Medicine
3- The name of the academic or professional program
Human Medicine
4- Final certificate name
Bachelor of Medicine and General Surgery
5- The academic system (annual / courses / semesters)
Courses (first course + second course)
6- Accredited Accreditation Program
Theoretical and practical study and discussions of the blended learning, attendance and electronic (via the Classroom platform)
7- Other external influences
A Teaching hospital, library, internet, community, doctors' syndicate
8- Description creation date
2021/6/15

9- Academic Program Objectives

1- Graduated doctors and scientists with scientific backgrounds, clinical and research skills

2- Striving to obtain a degree of specialization in various medical specialties

3- Contribute to the preparation of future leaders in the health and educational fields

4- Introducing modern educational means and advanced technologies in teaching methods and preparing educational programs for the college and employing information and communication technologies in the process of transferring production, knowledge and scientific research and in preparing scientific programs.

5- Activating participation, coordination and integration between the college and the community through holding seminars, conferences and seminars to discuss the health and scientific issues of the country.

6- Establishing cultural exchange relations and bilateral or collective agreements with universities and Arab and international professional organizations.

10- Required program objectives and methods of teaching, learning and assessment

➢ Cognitive goals

1- That the student recognizes the organs of the human body and the function of each part of it.

2- That the student recognize the components of each part of the body and study its functions, starting with the smallest component.

3- To distinguish between the normal and abnormal state by studying the functions of the body.

4- To devise appropriate solutions to correct abnormal cases.

5- To be able to know the external influences on the health of the individual and society, avoid their harm, and use the beneficial ones

➢ Program specific objectives

1 .Being able to apply the results of the theoretical study in practice while dealing with disease states.

2 .Being able to use modern devices in studying the functions of body organs and diagnosing disease conditions.

3. Being able to conduct scientific studies and research to solve the problems of the individual and society**.**

- **Teaching and learning method**

1 .Theoretical lectures using illustrations.

2 .Practical application of the concepts that have been studied in specialized laboratories and teaching hospitals

3 .Seminars (students are assigned a topic within the curriculum for presentation and discussion)

4 .Solving scientific and medical problems by discussing their merits within small groups to reach the correct solution.

5. In-person and electronic blended learning via the e-learning platform (Classroom).

- **Evaluation Method**

1 .Daily theory and practical exams

2 .Half-course and end-of-course exams

3. Seminars (assigning each student a topic for presentation and discussion)

- **skills and value goals**

1 .Commitment to medical ethics in practicing the profession and in accordance with the values of society.

2 .Commitment to actively attend the seminars

3 .Commitment to respect the rights of colleagues to participate in scientific discussions to solve problems.

4. Appreciating the importance of continuous study and updating information to keep pace with scientific development.

- **Teaching and learning methods**

1 .Theoretical lectures using illustrations.

2 .Practical application of the concepts studied in laboratories and teaching hospitals

3 .Seminars (assignment and topic within the curriculum for presentation and discussion)

4 .Solving scientific and medical problems by discussing their merits within small groups to reach the correct solution.

5. Attendance and mass education via the e-learning platform (Classroom).

- **Evaluation Methods**

1 .Daily theory and practical exams

2 .Half-course and end-of-course exams

3. Seminars (assigning each student a topic for presentation and discussion)

- **Behavioral and value objectives**

1 . Commitment to medical ethics in practicing the profession and in accordance with the values of society.

2 .Commitment to actively attend the seminars

3 .Commitment to respect the rights of colleagues to participate in scientific discussions to solve problems.

4. Appreciating the importance of continuous study and updating information to keep pace with scientific development**.**

- **Teaching and learning methods**

1 . Theoretical lectures using illustrations

2 .Practical application of the concepts studied in specialized laboratories and teaching hospitals

3 .Seminars (students are assigned a topic within the curriculum for presentation and discussion)

4 .Solving scientific and medical problems by discussing their merits within small groups to reach the correct solution.

5. In-person and electronic blended learning via the e-learning platform (Classroom).

- **Evaluation Methods**

1 . Daily exams (theoretical and practical)

2 .Mid-course exams and end-of-course exams

3. Seminars and weekly seminars

- **Transferred general and qualification skills (other skills related to employability and personal development)**

1 . Using modern means to search for new parameters (scientific and medical websites).

2 .Attending specialized scientific symposiums to see the latest developments in the medical field.

3 .Active participation in practical sessions in specialized laboratories and teaching hospitals.

4. Apply the accumulated information in practice in teaching hospitals and conduct scientific research**.**

- **Teaching and learning method**

1 :.Theoretical lectures, practical application

2 .Weekly seminars and seminars

3 .Small group discussions to propose solutions to the problems of the individual and society.

4. In-person and electronic blended learning (via the Classroom platform).

- **Evaluation Methods**

Mid-course exams and end-course exams.

2 .Preparing reports.

3 .Discuss small groups.

4. Medical scientific activities

11-Program structure

➢ **Program structure for the first academic level**

Subject code	Subject name	Credit hours	
		Theoretical	Practical
COM111	Computers	1 hour	2 hours
COM112	Arabic	1 hour	-
ARAB113	Human rights	1 hour	-
ARAB114	Anatomy	2 hours	4 hours
HR115	Principle of Medical chemistry& Biochemistry	3 hours	2 hours
HR116	Medical Physics	2 hours	2 hours
BIOC103	Medical Biology	2 hours	3 hours
ANA102	Medical Terminology	1 hour	-
ENG208	English Language	2 hours	-
CLSK210	Clinical Skills	-	30

➢ **Program structure for the second academic level**

Subject code	Subject name	Credit hours	
		Theoretical	Practical
ANA203 ANA204	Anatomy	2hour	4 hours
HIS205	Histology	2hour	2 hours
EMB206	Embryology	1 hour	-
PHY207	Physiology	5 hours	3 hours
BIOC201 BIOC202	Biochemistry & Metabolism	3 hours	2 hours

- **Program structure for the third academic level**

Subject code	Subject name	Credit hours	
		Theoretical	Practical
MPR301	Medical Protozoology	2 hour	2 hours
MBM303	Medical bacteriology and mycology	2 hour	2 hours
BMV305	Basic medical virology and DNA viral diseases	1 hour	2 hours
BMI307	Basic medical immunology	2 hours	2 hours
PHA309	Pharmacology 1	3 hours	3 hours
PAT311	Pathology 1	2 hours	2 hours
COM313	Family &community medicine	1hours	2 hours
MED315	Medicine 1	1 hour	2 hours
SUR317	Surgery 1	2 hours	3 hours
MPH302	Parasitology Helminth	2 hours	2 hours
CLSK318	Clinical skills	-	2 hours
DM 319	Diagnostic Microbiology	2 hours	2 hours
DISR320	Dissertation	-	

- **Program structure for the fourth academic level**

Subject code	Subject name	Credit hours	
		Theoretical	Practical
MED400 MED401	Medicine	4hour	3 hours
SURG403 SURG404	Surgery	3hour	2 hours
OBGY405 OBGY406	Obstetrics	2 hour	2 hours
P407 PATH408	Pathology	2 hours	2 hours
FMED409 FMED410	Forensic medicine	1hours	2 hours
CMED411 CMED412	Family &community medicine	3hours	4 hours
ENT413	ENT	1hours	1 hours
MDIG414	Medical Dialogue	1 hour	-
CLSK415	Clinical skills	-	2 hours
PROJ416	Community Project	-	2 hours

➢ **Program structure for the fifth academic level**

Subject code	Subject name	Credit hours	
		Theoretical	Practical
URO501	Urosurgery	1hour	-
RAD503	Radiology	1hour	-
OPH505	Ophthalmology	1 hour	-
ORT509	Orthopedics	1hours	-
GYN511	Gynaecology	2hours	-
PSY513	Psychiatry	1hours	-
PED515	Pediatrics	2hours	3 hours
DER517	Dermatology	1 hour	-
HEM519	Haematology	1 hour	-
PHA521	Clinical pharmacology	1 hour	-
NUM525	Neuromedicine	1 hour	2 hours

➢ **Program structure for the sixth academic level**

Subject code	Subject name	Credit hours	
		Theoretical	Practical
ObGy 603	Obstetrics& Gynecology	-	300 hours
Ped 604	Pediatrics	-	360 hours
ULT 608	Sonography	Seminar 7 hour	15 hours
MED600	Internal medicine	4hours	20 hours
SURG601	Surgery	-	360 hours
OBGY602	Gynecology &Obstetrics	4hours	18 hours
	Sonography	-	15 hours
RAD605	Radiology Course	-	15 hours
END 606	Endoscopy Course	-	15 hours
PHST 607	Physiotherapy Course	-	15 hours

12 Planning for personal development

Seeking to develop, refine and master the necessary skills to be able to rise to the top through the use of capabilities, qualifications and information acquired during theoretical, practical and applied studies, and this is done through:

1 .Continuous learning by searching for developments using the library and the Internet

2 .Attending seminars and specialized scientific symposia

3. Active attendance in teaching hospitals to hone skills and break the barrier of fear and hesitation**.**

13- **Admission criterion (setting regulations related to admission to a college or institute)**
The admission is centralized through the Ministry of Higher Education and Scientific Research, based on the student's grades in the sixth scientific after preparing the online form for that Parallel Admission Channel
14- **The most important sources of information about the program**
1- The university and college website. 2- The website of the Ministry of Higher Education and Scientific Research. 3- The college library and the university's central library.

Curriculum Skills Outline

Transferred general and qualification skills (other skills related to employability and personal development)				Emotional and value goals				Program specific objectives				Cognitive goals				Subject name	Subject code	Level
4D	3 D	2 D	1 D	4 C	3 C	2 C	1 C	4B	3B	2B	1B	4A	3 A	2A	1A			
													√	√	√	Computers	COM111 COM112	
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Arabic	ARAB113 ARAB114	
√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	Human rights	HR115 HR116	
		√	√	√	√	√	√			√	√	√	√	√	√	Anatomy	ANA101 ANA102	
√	√	√	√			√	√			√	√		√	√	√	Principle of Medical chemistry& Biochemistry	BIOC103	**First level**
		√	√			√	√		√	√	√		√	√	√	Medical Physics	MPH105 MPH106	
							√		√	√	√	√	√	√	√	Medical Biology	MB107	
						√	√		√	√	√	√	√	√	√	Medical Terminology	MT109	
						√	√		√	√	√	√	√	√	√	Biology	BIO106	
						√	√		√	√	√	√	√	√	√	English	ENG208	

																Language		**Second level**
						√	√		√	√	√	√	√	√	√	Computers	COMP209	
						√	√		√	√	√	√	√	√	√	Clinical Skills	CLSK210	
	√	√	√								√	√	√	√	√	Anatomy	ANA203 ANA204	
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Histology	HIS205	
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Embryology	EMB206	
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Physiology	PHY207	
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Biochemistry & Metabolism	BIOC201	
√				√				√				√				English language	ENG321	**Third level**
							√		√	√	√	√	√	√	√	Computers	COMP322	
																Medical Protozoology	MPR301	
				√	√	√	√	√	√	√			√	√	√	Medical bacteriology and mycology	MBM303	
			√	√	√	√	√	√	√	√			√	√	√	Basic medical virology and DNA viral diseases	BMV305	
√	√	√	√	√	√	√	√	√	√	√			√	√	√	Basic medical immunology	BMI307	
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Pharmacology 1	PHA309	
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Pathology 1	PAT311	
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Family &community medicine	COM313	
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Medicine 1	MED315	
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Parasitology Helminth	MPH302	

√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Surgery 1	SUR317	
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Clinical skills	CLSK318	
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Medicine	MED400 MED401	
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Surgery	SURG403 SURG404	
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Obstetrics	OBGY405 OBGY406	
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Pathology	PATH407 PATH408	**Fourth level**
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Forensic medicine	FMED409 FMED410	
√		√				√				√				√		Family &cmunity medicine	CMED411 CMED412	
√		√				√				√				√		ENT	ENT413	
√		√				√				√				√		Medical Dialogue	MDIG414	
√		√				√				√				√		Clinical skills	CLSK415	
√		√				√				√				√		Community Project	PROJ416	
√		√				√				√				√		Medical Dialogue	MDIG414	
√		√				√				√				√		Urosurgery	URO501	
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Radiology	RAD503	
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Ophthalmology	OPH505	
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Orthopedics	ORT509	
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Gynecology	GYN511	
√		√				√				√				√		Psychiatry	PSY513	
√		√				√				√				√		Pediatrics	PED515	**Fifth level**
√		√				√				√				√		Dermatology	DER517	
√		√				√				√				√		Hematology	HEM519	
√		√				√				√				√		Clinical	PHA521	

																pharmacology		
√		√		√	√	√		√	√	√		√	√	√		Neuromedicine	NUM525	
√		√		√	√	√		√	√	√		√	√	√		Obstetrics& Gynecology	ObGy 603	**Sixth level**
√		√		√	√	√		√	√	√		√	√	√		Pediatrics	Ped 604	
√		√		√	√	√		√	√	√		√	√	√		Sonography	ULT 608	
√		√		√	√	√		√	√	√		√	√	√		Internal medicine	MED600	
√		√		√	√	√				√				√		Surgery	SURG601	
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Gynecology &Obstetrics	OBGY602	
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Pediatrics	PED603	
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Sonography		
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Radiology Course	RAD605	
√		√				√				√				√		Endoscopy Course	END 606	
√		√				√				√				√		Physiotherapy Course	PHST 607	
√		√		√		√		√	√	√		√	√	√		Internal medicine	MED600	
√		√		√		√		√	√	√		√	√	√		Surgery	SURG601	

Academic description forms for the branches of the College of Medicine/University of Diyala

1- • Academic description form for the pathology branch

2- • Academic description form for the community and family medicine branch

3- • Academic description form for the biochemistry branch

4- • Academic description form for the physiology and medical physics branch

5- • Academic description form for the human anatomy branch

6- • Academic description form for the medicine branch

7- • Academic description form for the pediatric branch

8 • Academic description form for the Obstetrics and Gynecology branch

9- • Academic description form for the surgery branch

10- • Academic description form for the pharmacology branch

11- • Academic description form for the microbiology branch

1- • *Academic Description Form For The Pathology Branch*

This course description provides a summary of the most important characteristics and objectives of education that the student is expected to achieve, demonstrating whether he has made maximum use of the available learning opportunities. It must be linked to the description of the program.

1- educational institution
University of Diyala \college of medicine
2-Scientific Department / Center
Pathology and forensic medicine (medical terms / forensic medicine / general diseases / tissue diseases)
3-Academic or professional program name
Human medicine
4-Final certificate name
Bachelor of Medicine and General Surgery
5-Academic system (annual / courses / semesters)
Semesters
6- Semester/year
First course + second course / 2021
7-Available forms of attendance
Actual mandatory attendance
8-The number of study hours
Medical Terminology....30 hours Forensic medicine.... 90 hours General pathology.... 60 hours Histopathology.... 60 hours
9-Accredited Accreditation Program
Theoretical and practical study and discussions of blended learning, attendance and electronic (via the Classroom platform)
10-Other external influences
TeA teachingospital, library, internet, community, doctors' syndicate
11-Description creation date
15/6/2021
12-Academic Program Objectives
1. Getting to know this vital science and its increasing importance to the doctor in particular and society in general. 2. -Providing the student with the forensic medical information necessary for them to practice the general medical profession in the future, especially about how they face various forensic medical cases and how to act in a good way. 3. How to write forensic medical reports and death certificates of all kinds. 4. Identifying all kinds of diseases and studying them clinically and histologically. **5.** 5- Acquaintance with medical terms, which facilitates their use in the primary and higher school years.

13-Required program outcomes and methods of teaching, learning and assessment

- **Cognitive goals**

1. To introduce the student to the diseases of the human body
2. The effects of the disease on every part of the body.
3. Differentiating between normal and abnormal conditions by studying general diseases and identifying them clinically and histologically.
4. Learn about forensic science
5. How to deal with forensic cases received by health institutions.
6. How to write medical reports on the living and the dead.
7. How to write different death certificates and their importance.
8. Get acquainted with the rest of the relevant forensic sciences.
9. Encouraging students to engage in this rare specialty in the future.

- **Skills objectives of the program**

1- Avoid making mistakes when writing forensic medical reports.
2 -Knowing how and safely sending forensic medical cases to the forensic medicine office when living and dead
3-Knowing the legal methods when receiving forensic medical cases from neighborhoods received to medical institutions.
4- The correct methods for diagnosing general diseases of humans.

- **Teaching and learning methods**

1 .Theoretical lectures using the data show to display the various medical images.
2 .Practical application of the concepts that have been studied in specialized laboratories.
3 .Seminars (students are assigned a topic within the curriculum for presentation and discussion)
4 -Field visits to the forensic medicine department to learn how to examine the living and dissection of the dead.
5- In-person and electronic blended education via e-learning platforms (Classroom).

- **Evaluation Methods**

1 -Theoretical and practical assessment exam for the middle and end of the course
3 -Short exams during the semester
4- Evaluate the reports prepared by the students

- **Behavioral and value objectives**

1 . Commitment to medical ethics in practicing the profession and following the values of society.
2 .Commitment to actively attend the seminars
3 .Commitment to respect the rights of his colleagues to participate in scientific discussions to solve problems.
4. Appreciating the importance of continuous study and updating information to keep pace with scientific development.

- **Teaching and learning methods**

1 .Theoretical lectures using illustrations
2 .Practical application of the concepts studied in specialized laboratories and teaching hospitalsوال
3 .Seminars (students are assigned a topic within the curriculum for presentation and discussion)
4 .Solving scientific and medical problems by discussing their merits within small groups to reach the correct solution.
5. In-person and electronic blended learning via the e-learning platform (Classroom).

- **Evaluation Methods**

1 .Daily exams (theoretical and practical)
2 .Mid-course exams and end-of-course exams
3. Seminars and weekly seminars

- **Transferred general and qualification skills (other skills related to employability and personal development)**

1 .Using modern means to search for new parameters (scientific and medical websites).
2 .Attending specialized scientific symposiums to see the latest developments in the medical field.
3 .Active participation in practical classes in specialized laboratories and teaching hospitals.
4 .Apply the accumulated information in practice in hospitals and disease labs, and conduct scientific research.
5 -Using PowerPoint to display educational models.
6 -Using the Internet to search for recent topics to develop medical information.
7- Using e-books to develop lectures

- **Teaching and learning methods**

1 .Theoretical lectures using illustrations
2 .Practical application of the concepts studied in specialized laboratories and teaching hospitalsوال
3 .Seminars (students are assigned a topic within the curriculum for presentation and discussion)
4 .Solving scientific and medical problems by discussing their merits within small groups to reach the correct solution.
5. In-person and electronic blended learning via the e-learning platform (Classroom).

- **Evaluation Methods**

1. Daily exams (theoretical and practical)
2. Mid-course exams and end-of-course exams
3. Seminars and weekly seminars

- **Transferred general and qualification skills (other skills related to employability and personal development)**

1 .Using modern means to search for new parameters (scientific and medical websites).
2 .Attending specialized scientific symposiums to see the latest developments in the medical field.
3 .Active participation in practical classes in specialized laboratories and teaching hospitals.
4 .Apply the accumulated information in practice in hospitals and disease labs, and conduct scientific research.
5 -Using PowerPoint to display educational models.
6 -Using the Internet to search for recent topics to develop medical information.
7- Using e-books to develop lectures

- **Teaching and learning methods**

1 :.Theoretical lectures, practical application
2 .Weekly seminars and seminars
3 .Small group discussions to propose solutions to the problems of the individual and society.
4. In-person and electronic blended learning (via the Classroom platform)

- **Evaluation Methods**

1- Mid-course exams and end-course exams.

2- Preparing reports.
3- .Discuss small groups.
4- Medical scientific activities.

14- The structure of the course for theoretical medical terminology / first academic level / the first course

Week	hours	Required educational goals	Unit name and/or topic	evaluation method	education method
1	1	Orientation of medical terminology	Medical Terminology	exam	lecture
2	1	Objectives of medical terminology	Medical Terminology	exam	lecture
3	1	Term of position and colors	Medical Terminology	exam	lecture
4	1	Term of numbers	Medical Terminology	exam	lecture
5	1	Term of negatives	Medical Terminology	exam	lecture
6	1	Term of skin disorder	Medical Terminology	exam	lecture
7	1	Term of musculoskeletal disorder	Medical Terminology	exam	lecture
8	1	Term of cardiovascular disorder (part 1)	Medical Terminology	exam	lecture
9	1	Term of cardiovascular disorder (part 2)	Medical Terminology	exam	lecture
10	1	Term of blood and blood formation organs	Medical Terminology	exam	lecture
11	1	Term of blood and blood formation organs	Medical Terminology	exam	lecture
12	1	Term of respiratory disorder	Medical Terminology	exam	lecture
13	1	Condition general	Medical Terminology	exam	lecture
14	1	Seminar	Medical Terminology	exam	lecture
15	1	Exam	Medical Terminology	exam	lecture

** There is no practical in medical terminology first course

15- The structure of the course for theoretical medical terminology / first academic level / the second course

Week	hours	Required educational goals	Unit name and/or topic	evaluation method	education method
1	1	Digestive disorders	Medical Terminology	exam	lecture

2	1	Urogenetal disorder	Medical Terminology	exam	lecture
3	1	Gynecological disorders	Medical Terminology	exam	lecture
4	1	Obstetrical disorders	Medical Terminology	exam	lecture
5	1	Fetal neonatal disorder	Medical Terminology	exam	lecture
6	1	Endocrine disorder	Medical Terminology	exam	lecture
7	1	Endocrine disorder	Medical Terminology	exam	lecture
8	1	Disorders of sense	Medical Terminology	exam	lecture
9	1	Disorders of vision	Medical Terminology	exam	lecture
10	1	Disorder of hearing	Medical Terminology	exam	lecture
11	1	Diagnostic disorders	Medical Terminology	exam	lecture
12	1	Symptomatic disorder	Medical Terminology	exam	lecture
13	1	Symptomatic disorder	Medical Terminology	exam	lecture
14	1	Seminar	Medical Terminology	exam	lecture
15	1	Exam	Medical Terminology	exam	lecture

** There is no practical in medical terminology second course

16- The infrastructure of medical terminology	
1-Required course books	Medical Terminology
2- main references (sources)	Medical Terminology: Latin and Greek Origin with Arabic and English Explanations
3- Recommended books and references (scientific journals, reports)	Prefixes denoting numbers Medical Terminology Noun Suffixes
4- Electronic references, websites	https://globalrph.com/medterm/r/ https://aimseducation.edu/blog/all-essential-medical-terms

17- The structure of the course for theoretical forensice medicine / fourth academic level / first course					
Week	**hours**	**Required educational goals**	**Unit name and/or topic**	**evaluation method**	**education method**
1	2	Definition of death and signs of denial and emphatic death	forensic medicine	exam	lecture
2	2	Suspended life or apparent death, death spots or bloody regression	forensic medicine	exam	lecture
3	2	Dead tic granulation	forensic medicine	exam	lecture
4	2	Decomposition, roles or stages of decomposition, cirrhosis, embalming	forensic medicine	exam	lecture
5	2	Wounds, the mechanism or mechanism of the occurrence of wounds, classification of wounds, bruises, types of traumatic injuries	forensic medicine	exam	lecture
6	2	Acute wounds, stab wounds, puncture wounds, puncture wounds, wound complications	forensic medicine	exam	lecture
7	2	Forensic medical reports	forensic medicine	exam	lecture
8	2	seminal spots	forensic medicine	exam	lecture
9	2	miscarriage	forensic medicine	exam	lecture
10	2	Asphyxia and its types, roles of violent suffocation, signs of violent suffocation, classification of cases of mechanical suffocation	forensic medicine	exam	lecture
11	2	Self-mutting and its signs Stinging and how it occurs	forensic medicine	exam	lecture
12	2	recognition	forensic medicine	exam	lecture
13	2	sexual assaults	forensic medicine	exam	lecture
14	2	blood spots	forensic medicine	exam	lecture
15	2	salivary spots	forensic medicine	exam	lecture

18- The structure of the course for practical fornisic medicine / fourth academic level / first course					
Week	**hours**	**Required educational goals**	**Unit name and/or topic**	**education method**	**evaluation method**
1	1	Definition of death and signs of denial and emphatic death	fornisic medicine	forensic medicine laboratory	exam/lab
2	1	Suspended life or apparent death, death spots or bloody regression	fornisic medicine	forensic medicine laboratory	exam/lab
3	1	Dead tic granulation	fornisic medicine	forensic medicine laboratory	exam/lab
4	1	Decomposition, roles or stages of decomposition, cirrhosis, embalming	fornisic medicine	forensic medicine laboratory	exam/lab
5	1	Wounds, the mechanism or mechanism of the occurrence of wounds, classification of wounds, bruises, types of traumatic injuries	fornisic medicine	forensic medicine laboratory	exam/lab
6	1	Acute wounds, stab wounds, puncture wounds, puncture wounds, wound complications	fornisic medicine	forensic medicine laboratory	exam/lab
7	1	Forensic medical reports	fornisic medicine	forensic medicine laboratory	exam/lab
8	1	seminal spots	fornisic medicine	forensic medicine laboratory	exam/lab
9	1	miscarriage	fornisic medicine	forensic medicine laboratory	exam/lab
10	1	Asphyxia and its types, roles of violent suffocation, signs of violent suffocation, classification of cases of mechanical suffocation	forensic medicine	forensic medicine laboratory	exam/lab
11	1	Self-mutting and its signs Stinging and how it occurs	forensic medicine	forensic medicine laboratory	exam/lab
12	1	recognition	fornisic medicine	forensic medicine laboratory	exam/lab
13	1	sexual assaults	forensic medicine	forensic medicine laboratory	exam/lab

14	1	blood spots	fornisic medicine	forensic medicine laboratory	exam/lab
15	1	salivary spots	fornisic medicine	forensic medicine laboratory	exam/lab

19- The structure of the course for theoretical fornisic medicine / fourth academic level / second course

Week	hours	Required educational goals	Unit name and/or topic	evaluation method	education method
1	2	The dead newborn and the killing of the child's temporal tortured meaning	fornisic medicine	exam	lecture
2	2	Criminal Forensic medicine	fornisic medicine	exam	lecture
3	2	Writing medical and forensic reports	fornisic medicine	exam	lecture
4	2	Birth and death certificates	fornisic medicine	exam	lecture
5	2	toxicology- Introduction to poisons and their diagnosis	fornisic medicine	exam	lecture
6	2	Eating toxins	fornisic medicine	exam	lecture
7	2	Invasive toxins, volatile toxins	fornisic medicine	exam	lecture
8	2	Plant and genetic toxins - insecticides	fornisic medicine	exam	lecture
9	2	food poisoning	fornisic medicine	exam	lecture
10	2	Professional behavior throughout history In the Babylonian era - Hammurabi and Greek law	fornisic medicine	exam	lecture
11	2	In Islamic times The development of the Hippocratic oath by Arab doctors	fornisic medicine	exam	lecture
12	2	The responsibility of the doctor is more important than the fault	fornisic medicine	exam	lecture
13	2	Doctor and government laws Abortion, contraception, medical advice, and the involvement of colleagues in the responsibility of treating the patient and	fornisic medicine	exam	lecture

		transmitting disease among themselves			
14	2	Patient fees and charges Medical experiments on humans and the autopsy of the dead	fornisic medicine	exam	lecture
15	2	The character of the doctor and his relationship with people, patients and colleagues	fornisic medicine	exam	lecture

20- The structure of the course for practical fornisic medicine / fourth academic level / second course

Week	hours	Required educational goals	Unit name and/or topic	education method	evaluation method
1	1	Hair and fiber check	fornisic medicine	forensic medicine laboratory	exam/lab
2	1	Chemical changes in the blood after death	fornisic medicine	forensic medicine laboratory	exam/lab
3	1	Firearm wounds	fornisic medicine	forensic medicine laboratory	exam/lab
4	1	dry burns	fornisic medicine	forensic medicine laboratory	exam/lab
5	1	scalded burns	fornisic medicine	forensic medicine laboratory	exam/lab
6	1	Burn complications	fornisic medicine	forensic medicine laboratory	exam/lab
7	1	Introduction to forensic toxicology	fornisic medicine	forensic medicine laboratory	exam/lab
8	1	Coal gas poisoning	fornisic medicine	forensic medicine laboratory	exam/lab
9	1	collection of visceral sample	fornisic medicine	forensic medicine laboratory	exam/lab
10	1	The fate of toxins in the body	fornisic medicine	forensic medicine laboratory	exam/lab
11	1	Sudden death	fornisic medicine	forensic medicine laboratory	exam/lab

12	1	Estimated time spent on wounds	fornisic medicine	forensic medicine laboratory	exam/lab
13	1	Road accidents and lightning injuries	fornisic medicine	forensic medicine laboratory	exam/lab
14	1	Hymen and forensic medicine	fornisic medicine	forensic medicine laboratory	exam/lab
15	1	age estimate	fornisic medicine	forensic medicine laboratory	exam/lab

21-Infrastructure of fornisic medicine	
1-Required course books	Textbook of Forensic Medicine and Toxicology. Jaypee Brothers, Medical Publishers.2010. 2. Principles of Forensic Medicine and Toxicology. Rajesh Bardale. 2011
2- main references (sources)	Forensic Toxicology
3- Recommended books and references (scientific journals, reports)	Journal of Forensic Medicine
4- Electronic references, websites	http://www.ijfmt.com/ https://www.bmj.com/content/2/5548/361

22- The structure of the course for theoretical General pathology / third academic level / first course

Week	hours	Required educational goals	Unit name and/or topic	evaluation method	education method
1	2	Introduction	General pathology	exam	lecture
2	2	Cell injury	General pathology	exam	lecture
3	2	Necrosis	General pathology	exam	lecture
4	2	Degeneration	General pathology	exam	lecture
5	2	Cellular adaption	General pathology	exam	lecture
6	2	Calcification	General pathology	exam	lecture

7	2	Healing and repair	General pathology	exam	lecture
8	2	Bone fracture	General pathology	exam	lecture
9	2	Acute and chronic inflammation	General pathology	exam	lecture
10	2	Neoplasm	General pathology	exam	lecture
11	2	Differentiation and anaplasia	General pathology	exam	lecture
12	2	Preinvasive malignancy	General pathology	exam	lecture
13	2	Hemodynamic disorder edema	General pathology	exam	lecture
14	2	Hemorrhage and thrombosis	General pathology	exam	lecture
15	2	Embolism and infraction	General pathology	exam	lecture

23- The structure of the course for practical General pathology /third academic level / first course					
Week	**hours**	**Required educational goals**	**Unit name and/or topic**	**education method**	**evaluation method**
1	2	Introduction	General pathology	forensic medicine laboratory	exam/lab
2	2	Cell injury	General pathology	forensic medicine laboratory	exam/lab
3	2	Necrosis	General pathology	Pathology laboratory	exam/lab
4	2	Degeneration	General pathology	Pathology laboratory	exam/lab
5	2	Cellular adaption	General pathology	Pathology laboratory	exam/lab
6	2	Calcification	General pathology	Pathology laboratory	exam/lab

7	2	Healing and repair	General pathology	Pathology laboratory	exam/lab
8	2	Bone fracture	General pathology	Pathology laboratory	exam/lab
9	2	Acute and chronic inflammation	General pathology	Pathology laboratory	exam/lab
10	2	Neoplasm	General pathology	Pathology laboratory	exam/lab
11	2	Differentiation and anaplasia	General pathology	Pathology laboratory	exam/lab
12	2	Preinvasive malignancy	General pathology	Pathology laboratory	exam/lab
13	2	Hemodynamic disorder edema	General pathology	Pathology laboratory	exam/lab
14	2	Hemorrhage and thrombosis	General pathology	Pathology laboratory	exam/lab
15	2	Embolism and infraction	General pathology	Pathology laboratory	exam/lab

24- The structure of the course for theoretical General pathology / third academic level / the second course					
Week	**hours**	**Required educational goals**	**Unit name and/or topic**	**evaluation method**	**education method**
1	2	Hematopoiesis	General pathology	exam	lecture
2	2	Anemia : classification	General pathology	exam	lecture
3	2	Leukemia : classification	General pathology	exam	lecture
4	2	Myeloproliferative disorder	General pathology	exam	lecture
5	2	Coagulation disorder	General pathology	exam	lecture
6	2	General pathology of infections disease	General pathology	exam	lecture
7	2	General pathology of bacterial infections	General pathology	exam	lecture

8	2	General pathology of viral infections'	General pathology	exam	lecture
9	2	General pathology of parasitic and fungal infections	General pathology	exam	lecture
10	2	Sexually transmitted disease	General pathology	exam	lecture
11	2	Classification of genetic Disease	General pathology	exam	lecture
12	2	Single gene disease	General pathology	exam	lecture
13	2	Immunopathology	General pathology	exam	lecture
14	2	Immunodeficiency	General pathology	exam	lecture
15	2	Autoimmune disease, - Transfusion medicine	General pathology	exam	lecture

25- The structure of the course for practical General pathology /third academic level / the second course

Week	hours	Required educational goals	Unit name and/or topic	education method	evaluation method
1	2	Hematopoiesis	General pathology	forensic medicine laboratory	exam/lab
2	2	Anemia : classification	General pathology	forensic medicine laboratory	exam/lab
3	2	Leukemia : classification	General pathology	Pathology laboratory	exam/lab
4	2	Myeloproleferatine disorder	General pathology	Pathology laboratory	exam/lab
5	2	Coagulation disorder	General pathology	Pathology laboratory	exam/lab
6	2	General pathology of infectious disease	General pathology	Pathology laboratory	exam/lab
7	2	General pathology of bacterial infections	General pathology	Pathology laboratory	exam/lab

8	2	General pathology of viral infections'	General pathology	Pathology laboratory	exam/lab
9	2	General pathology of parasitic and fungal infections	General pathology	Pathology laboratory	exam/lab
10	2	Sexual transmitted disease	General pathology	Pathology laboratory	exam/lab
11	2	Classification of genetic Disease	General pathology	Pathology laboratory	exam/lab
12	2	Single gene disease	General pathology	Pathology laboratory	exam/lab
13	2	Immunopathology	General pathology	Pathology laboratory	exam/lab
14	2	Immunodeficiency	General pathology	Pathology laboratory	exam/lab
15	2	Autoimmune disease, - Transfusion medicine	General pathology	Pathology laboratory	exam/lab

26-Infrastructure of general pathology	
1-Required course books	Robbins Basic Pathology
2- main references (sources)	Robbins and Cotran reviews of Pathology Rapid Review Pathology by Edward F. Goljan Robbins and Cotran Review of Pathology by Klatt and Kumar
3- Recommended books and references (scientific journals, reports)	The American Journal of pathology Wiley, T*he Journal of Pathology*
4- Electronic references, websites	https://webpath.med.utah.edu/GENERAL.html https://diagnosticpathology.biomedcentral.com/

27- The structure of the course for theoretical histopathology / fourth academic level / the first course					
Week	**hours**	**Required educational goals**	**Unit name and/or topic**	**evaluation method**	**education method**
1	2	Gastrointestinal pathology ,oral cavity oropharynx, and salivary glands	Histopathology	exam	lecture
2	2	Esophagus pathology ,stomach, gastritis	Histopathology	exam	lecture
3	2	Tumors of stomach	Histopathology	exam	lecture
4	2	Duodenal peptic ulcer ,intestinal tumors	Histopathology	exam	lecture
5	2	Liver pathology,patterns of hepatic injury	Histopathology	exam	lecture
6	2	Pathogenesis of liver cirrhosis, alcoholic liver disease	Histopathology	exam	lecture
7	2	Breast anatomy and histology ,pathological classification of breast disease	Histopathology	exam	lecture
8	2	Who pathological classification of breast tumors	Histopathology	exam	lecture
9	2	The male breast	Histopathology	exam	lecture
10	2	diseases of female genital system, malignant tumors	Histopathology	exam	lecture
11	2	Endometrial tumors, classification of ovarian tumors	Histopathology	exam	lecture
12	2	Pathology of male genital tract	Histopathology	exam	lecture
13	2	Diseases of kidney and urinary tract, nephritis , haematuria .	Histopathology	exam	lecture

14	2	Renal changes in hypertension UTI	Histopathology	exam	lecture
15	2	Tuberculosis in kidney ,renal tumors	Histopathology	exam	lecture

28- The structure of the course for practical histopathology /fourth academic level / first course					
Week	**hours**	**Required educational goals**	**Unit name and/or topic**	**education method**	**evaluation method**
1	2	Gastrointestinal pathology ,oral cavity oropharynx, and salivary glands	histopathology	Pathology laboratory	exam/lab
2	2	Esophagus pathology ,stomach, gastritis	histopathology	Pathology laboratory	exam/lab
3	2	Tumors of stomach	histopathology	Pathology laboratory	exam/lab
4	2	Duodenal peptic ulcer ,intestinal tumors	histopathology	Pathology laboratory	exam/lab
5	2	Liver pathology ,patterns of hepatic injury	histopathology	Pathology laboratory	exam/lab
6	2	Pathogenesis of liver cirrhosis, alcoholic liver disease	histopathology	Pathology laboratory	exam/lab
7	2	Breast anatomy and histology ,pathological classification of breast disease	histopathology	Pathology laboratory	exam/lab
8	2	Who pathological classification of breast tumors	histopathology	Pathology laboratory	exam/lab
9	2	The male breast	histopathology	Pathology laboratory	exam/lab
10	2	diseases of female genital system, malignant tumors	histopathology	Pathology laboratory	exam/lab
11	2	Endometrial tumors, classification of ovarian tumors	histopathology	Pathology laboratory	exam/lab

12	2	Pathology of male genital tract	histopathology	Pathology laboratory	exam/lab
13	2	Diseases of kidney and urinary tract, nephritis , haematuria .	histopathology	Pathology laboratory	exam/lab
14	2	Renal changes in hypertension UTI	histopathology	Pathology laboratory	exam/lab
15	2	Tuberculosis in kidney ,renal tumors	histopathology	Pathology laboratory	exam/lab

29- The structure of the course for theoretical histopathology / fourth academic level / second course

Week	hours	Required educational goals	Unit name and/or topic	evaluation method	education method
1	2	Bone pathology	Histopathology	exam	lecture
2	2	Diseases of blood and lymphatic vessels ,atherosclerosis,hypertension	Histopathology	exam	lecture
3	2	Inflammation diseases of blood vessels	Histopathology	exam	lecture
4	2	Ischemic heart diseases	Histopathology	exam	lecture
5	2	Cardiomyopathy	Histopathology	exam	lecture
6	2	Congenital heart diseases	Histopathology	exam	lecture
7	2	Respiratory system, bronchitis	Histopathology	exam	lecture
8	2	Pneumonia	Histopathology	exam	lecture
9	2	Occupational lung diseases	Histopathology	exam	lecture

10	2	The pleura	Histopathology	exam	lecture
11	2	Pathology of endocrine system, thyroid gland	Histopathology	exam	lecture
12	2	Thyroiditis, adrenal gland	Histopathology	exam	lecture
13	2	parathyroid gland	Histopathology	exam	lecture
14	2	Diseases of the skin	Histopathology	exam	lecture
15	2	Diseases of nervous system	Histopathology	exam	lecture

30- The structure of the course for practical histopathology /fourth academic level / the second course

Week	hours	Required educational goals	Unit name and/or topic	education method	evaluation method
1	2	Bone pathology	histopathology	Pathology laboratory	exam/lab
2	2	Diseases of blood and lymphatic vessels ,atherosclerosis ,hypertension	histopathology	Pathology laboratory	exam/lab
3	2	Inflammation diseases of blood vessels	histopathology	Pathology laboratory	exam/lab
4	2	Ischemic heart diseases	histopathology	Pathology laboratory	exam/lab
5	2	Cardiomyopathy	histopathology	Pathology laboratory	exam/lab
6	2	Congenital heart diseases	histopathology	Pathology laboratory	exam/lab
7	2	Respiratory system, bronchitis	histopathology	Pathology laboratory	exam/lab
8	2	Pneumonia	histopathology	Pathology laboratory	exam/lab
9	2	Occupational lung diseases	histopathology	Pathology laboratory	exam/lab
10	2	The pleura	histopathology	Pathology laboratory	exam/lab
11	2	Pathology of endocrine system, thyroid gland	histopathology	Pathology laboratory	exam/lab

12	2	Thyroiditis, adrenal gland	histopathology	Pathology laboratory	exam/lab
13	2	parathyroid gland	histopathology	Pathology laboratory	exam/lab
14	2	Diseases of the skin	histopathology	Pathology laboratory	exam/lab
15	2	Diseases of nervous system	histopathology	Pathology laboratory	exam/lab

26-Infrastructure of histopathology	
1-Required course books	Robbins and Cotran reviews of Pathology
2- main references (sources)	Rosai and Ackerman surgical Pathology Rapid Review Pathology by Edward F. Goljan Robbins and Cotran Review of Pathology by Klatt and Kumar
3- Recommended books and references (scientific journals, reports)	The American Journal of pathology Pathology outlines
4- Electronic references, websites	https://webpath.med.utah.edu/GENERAL.html https://diagnosticpathology.biomedcentral.com/

2- • Academic Description Form For The Community And Family Medicine Branch

This course description provides a summary of the most important characteristics of the course and the learning objectives that the student is expected to achieve, demonstrating whether he has made maximum use of the available learning opportunities. It must be linked to the description of the program.

1- educational institution
University of Diyala \college of medicine
2-Scientific Department / Center
Family & Community medicine
3-Academic or professional program name
Human medicine
4-Final certificate name
Bachelor of Medicine and General Surgery
5-Academic system (annual / courses / semesters)
Semesters
6- Semester/year
First course + second course / 2021
7-Available forms of attendance
Actual mandatory attendance
8-The number of study hours
Total number of hours..... 120 theoretical hours + 150 practical hours third stage .....30 hours theoretical + 30 hours practical Fourth stage.....90 theoretical hours + 120 practical hours
9-Accredited Accreditation Program
Theoretical and practical study and discussions of blended learning, attendance and electronic (via the Classroom platform)
10-Other external influences
A teaching hospital, library, internet, community, doctors' syndicate
11-Description creation date
15/6/2021
12-Academic Program Objectives
The course seeks to prepare a high-level medical staff capable of assessing the health needs of the community, solving its medical problems and developing a healthy lifestyle**.**

13-Required program outcomes and methods of teaching, learning and assessment

- **Cognitive goals**

1-Introducing students to the principles of family and community medicine and their relationship to the health system followed.
2 -Providing students with the knowledge to conduct appropriate studies to know the health problems that society suffers from, their causes, and how to use statistics and statistical tests to solve these problems.
3 -Emphasis on the preventive aspect of various diseases, especially in the field of nutrition and environmental problems.
4- Providing study and training opportunities and acquiring knowledge and skills in family and community medicine**.**

- **Skills objectives of the program**

1-Providing students with special skills to know the health problems that society suffers from, their causes, how diseases are distributed and the influence of various factors in them, and to know the most appropriate ways and means to solve these problems.
2 -Providing students with basic skills to perform various statistical tests.
3- Providing students with the skills to measure the nutritional status of the population.

- **Teaching and learning methods**

1- Giving theoretical lectures
2 -Special practical laboratories to gain skills in solving statistical problems.
3 -Laboratory applications of nutritional measurements.
4- In-person and electronic blended education (via the Classroom platform).

- **Evaluation Methods**

1-Half-course and end-of-course exams
2- Sudden short exams
3-degrees of practical issues

- **Behavioral and value objectives**

1 -Gain the ability to optimally deal with medical records and statistics.
2- Acquiring the skill to deal ethically with participants in medical research, whether they are sick or healthy.

- **Teaching and learning methods**

1 -Giving theoretical lectures.
2 -Special practical laboratories to gain skills in solving statistical problems.
3-. Integrated, in-person and e-learning (via the Classroom platform).

- **Evaluation Methods**

1-Half-course exam
2 -Sudden short exams
3-degrees of practical issues
4- End of course exam

14- The structure of the course for theoretical biostatistics / third academic level / first course					
Week	**hours**	**Required educational goals**	**Unit name and/or topic**	**education method**	**Evaluation method**
1	1	Introduction & Definitions	biostatistic	The discussions are theoretical and practical lectures	Discussions, reports, tests and exams (theoretical and practical)
2	1	Data Collection	biostatistic	The discussions are theoretical and practical lectures	Discussions, reports, tests and exams (theoretical and practica
3	1	Sampling Methods	biostatistics	The discussions are theoretical and practical lectures	Discussions, reports, tests and exams (theoretical and practica
4	1	Data Presentation	biostatistic	The discussions are theoretical and practical lectures	Discussions, reports, tests and exams (theoretical and practica
5	1	Measurements of Central Tendency	biostatistics	The discussions are theoretical and practical lectures	Discussions, reports, tests and exams (theoretical and practica
6	1	Measurements of Variability	biostatistics	The discussions are theoretical and practical lectures	Discussions, reports, tests and exams (theoretical and practica
7	1	Range & Variance	biostatistic	The discussions are theoretical and practical lectures	Discussions, reports, tests and exams (theoretical and practica
8	1	Standard Deviation & Coefficient of Variation	biostatistics	The discussions are theoretical and practical lectures	Discussions, reports, tests and exams (theoretical and practica
9	1	Probability (Part 1	biostatistics	The discussions are theoretical and practical lectures	Discussions, reports, tests and exams (theoretical and practica

10	1	Probability (Part 2)	biostatistic	The discussions are theoretical and practical lectures	Discussions, reports, tests and exams (theoretical and practica
11	1	Student's t-Test	biostatistics	The discussions are theoretical and practical lectures	Discussions, reports, tests and exams (theoretical and practica
12	1	Chi-square Test (Part 1)	biostatistic	The discussions are theoretical and practical lectures	Discussions, reports, tests and exams (theoretical and practica
13	1	Chi-square Test (Part 2)	biostatistic	The discussions are theoretical and practical lectures	Discussions, reports, tests and exams (theoretical and practica
14	1	Correlation & Regression (Part 1)	biostatistic	The discussions are theoretical and practical lectures	Discussions, reports, tests and exams (theoretical and practica
15	1	Correlation & Regression (Part 2)	biostatistic	The discussions are theoretical and practical lectures	Discussions, reports, tests and exams (theoretical and practica

15- The structure of the course for practical biostatistics / third academic level / first course					
Week	**hours**	**Required educational goals**	**Unit name and/or topic**	**education method**	**Evaluation method**
1	2	Introduction & Definitions	biostatistic	The discussions practical lectures	Discussions, reports, tests and exams (theoretical and practical)
2	2	Data Collection	biostatistics	The discussions practical lectures	Discussions, reports, tests and exams (theoretical and practica
3	2	Sampling Methods	biostatistics	The discussions practical lectures	Discussions, reports, tests and exams (theoretical and practica

4	2	Data Presentation	biostatistics	The discussions practical lectures	Discussions, reports, tests and exams (theoretical and practica
5	2	Measurements of Central Tendency	biostatistics	The discussions practical lectures	Discussions, reports, tests and exams (theoretical and practica
6	2	Measurements of Variability	biostatistics	The discussions practical lectures	Discussions, reports, tests and exams (theoretical and practica
7	2	Range & Variance	biostatistics	The discussions practical lectures	Discussions, reports, tests and exams (theoretical and practica
8	2	Standard Deviation & Coefficient of Variation	biostatistics	The discussions practical lectures	Discussions, reports, tests and exams (theoretical and practica
9	2	Probability (Part 1	biostatistics	The discussions practical lectures	Discussions, reports, tests and exams (theoretical and practica
10	2	Probability (Part 2)	biostatistics	The discussions practical lectures	Discussions, reports, tests and exams (theoretical and practica
11	2	Student’s t-Test	biostatistics	The discussions practical lectures	Discussions, reports, tests and exams (theoretical and practica
12	2	Chi-square Test (Part 1)	biostatistics	The discussions practical lectures	Discussions, reports, tests and exams (theoretical and practica
13	2	Chi-square Test (Part 2)	biostatistics	The discussions practical lectures	Discussions, reports, tests and exams (theoretical and practica

14	2	Correlation & Regression (Part 1)	biostatistics	The discussions practical lectures	Discussions, reports, tests and exams (theoretical and practica
15	2	Correlation & Regression (Part 2)	biostatistics	The discussions practical lectures	

15- The structure of the course/ third academic level / the second course					
Week	**hours**	**Required educational goals**	**Unit name and/or topic**	**education method**	**Evaluation method**
1	2	Introduction & Definitions	nutrition	theoretical lectures	Discussions, reports, tests and exams (theoretical and practical)
2	2	Nutrients	nutrition	theoretical lectures	Discussions, reports, tests and exams (theoretical and practica
3	2	Proteins	nutrition	theoretical lectures	Discussions, reports, tests and exams (theoretical and practica
4	2	Fats & Lipids	nutrition	theoretical lectures	Discussions, reports, tests and exams (theoretical and practica
5	2	Carbohydrates	nutrition	theoretical lectures	Discussions, reports, tests and exams (theoretical and practica
6	2	Vitamins	nutrition	theoretical lectures	Discussions, reports, tests and exams (theoretical and practica
7	2	Minerals	nutrition	theoretical lectures	Discussions, reports, tests and exams (theoretical and practica
8	2	Nutrition of Pregnant & Lactating Women	nutrition	theoretical lectures	Discussions, reports, tests and exams

					(theoretical and practica
9	2	Nutrition in the Course of Hypertension & Diabetes Mellitus	nutrition	theoretical lectures	Discussions, reports, tests and exams (theoretical and practica
10	2	Nutrition in the Course of Thyroid Disorders	nutrition	theoretical lectures	Discussions, reports, tests and exams (theoretical and practica
11	2	Nutrition in the Course of Anemia & Heart Failure	nutrition	theoretical lectures	Discussions, reports, tests and exams (theoretical and practica
12	2	Nutrition in the Course of Renal Failure	nutrition	theoretical lectures	Discussions, reports, tests and exams (theoretical and practica
13	2	Total Energy Requirements (Part 1)	nutrition	theoretical lectures	Discussions, reports, tests and exams (theoretical and practica
14	2	Total Energy Requirements (Part 2)	nutrition	theoretical lectures	Discussions, reports, tests and exams (theoretical and practica
15	2	Nutritional Assessment & Recommended Dietary Allowance	nutrition	theoretical lectures	Discussions, reports, tests and exams (theoretical and practica

16- The structure of the course/ fourth academic level / the first course					
Evaluation method	**education method**	**Unit name and/or topic**	**Required educational goals**	**hours**	**week**
Discussions, reports, tests and exams (theoretical and practica	theoretical and practical lectures	general epidemiology	Introduction & Definitions	1	1
		Occupational medicine	Definition, History, and Objectives	1	
		Primary health care system	PHC System (Health & Population)	1	
		Practical/clinical aspects of the above topics	Practical / Clinical Training	4	

Discussions, reports, tests and exams (theoretical and practica	theoretical and practical lectures	general epidemiology	Incidence & Prevalence	1	2
		Occupational medicine	Functions of Occupational Health Centers	1	
		Primary health care system	PHC System (Public Health & Principles of PHC System)	1	
		Practical/clinical aspects of the above topics	Practical / Clinical Training	4	
Discussions, reports, tests and exams (theoretical and practica	theoretical and practical lectures	general epidemiology	Measurements of Risk	1	3
		Occupational medicine	Heat	1	
		Primary health care system	PHC System (Al-Mata Declaration & Components of PHC System)	1	
		Practical/clinical aspects of the above topics	Practical / Clinical Training	4	
Discussions, reports, tests and exams (theoretical and practica	theoretical and practical lectures	general epidemiology	Sources of Infections	1	4
		Occupational medicine	Cold	1	
		Primary health care system	PHC System (Levels of Care)	1	
		Practical/clinical aspects of the above topics	Practical / Clinical Training	4	
Discussions, reports, tests and exams (theoretical and practica	theoretical and practical lectures	general epidemiology	Definitions & Common Terms of Communicable Diseases	1	5
		Occupational medicine	Pressure	1	
		Primary health care system	PHC System (Needs & Benefits)	1	
		Practical/clinical aspects of the above topics	Practical / Clinical Training	4	
Discussions, reports, tests and exams (theoretical and practica	theoretical and practical lectures	general epidemiology	Study Design	1	6
		Occupational medicine	Noise	1	
		Primary health care system	PHC System (Referral System)	1	

		Practical/clinical aspects of the above topics	Practical / Clinical Training	4	
Discussions, reports, tests and exams (theoretical and practica	theoretical and practical lectures	general epidemiology	Screening for Diseases	1	7
		Occupational medicine	Vibration	1	
		Primary health care system	PHC System (Strategies of PHC System)	1	
		Practical/clinical aspects of the above topics	Practical / Clinical Training	4	
Discussions, reports, tests and exams (theoretical and practica	theoretical and practical lectures	general epidemiology	Evaluation of Screening Tests	1	8
		Occupational medicine	Ionizing & Non-ionizing Radiation	1	
		Primary health care system	Child Health Care (Part 1)	1	
		Practical/clinical aspects of the above topics	Practical / Clinical Training	4	
Discussions, reports, tests and exams (theoretical and practica	theoretical and practical lectures	general epidemiology	Investigation of Epidemics	1	9
		Occupational medicine	Chemical Hazards (Toxicology & Body Defense)	1	
		Primary health care system	Child Health Care (Part 2)	1	
		Practical/clinical aspects of the above topics	Practical / Clinical Training	4	
Discussions, reports, tests and exams (theoretical and practica	theoretical and practical lectures	general epidemiology	Acute Respiratory Infection (ARI)	1	10
		Occupational medicine	Lung Diseases (Asbestosis & Pneumoconiosis)	1	
		Primary health care system	Maternal Health Care (Antenatal Care & Nutrition during Pregnancy)	1	
		Practical/clinical aspects of the above topics	Practical / Clinical Training	4	
Discussions, reports, tests and exams (theoretical and practica	theoretical and practical lectures	general epidemiology	Whooping Cough	1	11
		Occupational medicine	Lung Diseases (Silicosis & Byssinosis)	1	
		Primary health care system	Maternal Health Care (Maternal Mortality)	1	
		Practical/clinical aspects of the above topics	Practical / Clinical Training	4	
Discussions, reports, tests	theoretical and	general epidemiology	Mumps	1	12
		Occupational	Occupational Skin Diseases	1	

and exams (theoretical and practica	practical lectures	medicine			
		Primary health care system	Vaccination (Part 1)	1	
		Practical/clinical aspects of the above topics	Practical / Clinical Training	4	
Discussions, reports, tests and exams (theoretical and practica	theoretical and practical lectures	general epidemiology	Diphtheria	1	13
		Occupational medicine	Heavy Metals	1	
		Primary health care system	Vaccination (Part 2)	1	
		Practical/clinical aspects of the above topics	Practical / Clinical Training	4	
Discussions, reports, tests and exams (theoretical and practica	theoretical and practical lectures	general epidemiology	Tetanus	1	14
		Occupational medicine	Occupational Accidents	1	
		Primary health care system	Administration (Part 1)	1	
		Practical/clinical aspects of the above topics	Practical / Clinical Training	4	
Discussions, reports, tests and exams (theoretical and practica	theoretical and practical lectures	general epidemiology	Poliomyelitis	1	15
		Occupational medicine	Biological Hazards	1	
		Primary health care system	Administration (Part 2)	1	
		Practical/clinical aspects of the above topics	Practical / Clinical Training	4	

17- The structure of the course/ fourth academic level / the second course					
Evaluation method	**education method**	**Unit name and/or topic**	**Required educational goals**	**hours**	**week**
Discussions, reports, tests and exams (theoretical and practica	theoretical and practical lectures	Infectious diseases	Amebic Dysentery	1	1
		environmental medicine	Definition, and Biological, Physical, and Social Environment (Part 1)	1	
		Primary health care system	Health Education (Part 1)	1	
		Practical/clinical aspects of the above topics	Practical / Clinical Training	4	
Discussions, reports, tests and exams (theoretical	theoretical and practical lectures	Infectious diseases	Typhoid Fever	1	2
		environmental medicine	Definition, and Biological, Physical, and Social	1	

and practica			Environment (Part 2)		
		Primary health care system	Health Education (Part 2)	1	
		Practical/clinical aspects of the above topics	Practical / Clinical Training	4	
Discussions, reports, tests and exams (theoretical and practica	theoretical and practical lectures	Infectious diseases	Meningococcal Meningitis	1	3
		environmental medicine	Air Pollution (Part 1)	1	
		Primary health care system	Family Medicine (Part 1)	1	
		Practical/clinical aspects of the above topics	Practical / Clinical Training	4	
Discussions, reports, tests and exams (theoretical and practica	theoretical and practical lectures	Infectious diseases	Leishmaniasis	1	4
		environmental medicine	Air Pollution (Part 2)	1	
		Primary health care system	Family Medicine (Part 2)	1	
		Practical/clinical aspects of the above topics	Practical / Clinical Training	4	
Discussions, reports, tests and exams (theoretical and practica	theoretical and practical lectures	Infectious diseases	Hepatitis A	1	5
		environmental medicine	Water Pollution (Part 1)	1	
		Primary health care system	School Health Services	1	
		Practical/clinical aspects of the above topics	Practical / Clinical Training	4	
Discussions, reports, tests and exams (theoretical and practica	theoretical and practical lectures	Infectious diseases	Hepatitis B	1	6
		environmental medicine	Water Pollution (Part 2)	1	
		Primary health care system	Mental Health & Mental Disorders (Part 1)	1	
		Practical/clinical	Practical / Clinical Training	4	

		aspects of the above topics			
Discussions, reports, tests and exams (theoretical and practica	theoretical and practical lectures	Infectious diseases	Hemorrhagic Fever	1	7
		environmental medicine	Acid Rain	1	
		Primary health care system	Mental Health & Mental Disorders (Part 2)	1	
		Practical/clinical aspects of the above topics	Practical / Clinical Training	4	
Discussions, reports, tests and exams (theoretical and practica	theoretical and practical lectures	Infectious diseases	Brucellosis	1	8
		environmental medicine	Soil Pollution	1	
		Primary health care system	Millenium Development Goals	1	
		Practical/clinical aspects of the above topics	Practical / Clinical Training	4	
Discussions, reports, tests and exams (theoretical and practica	theoretical and practical lectures	Infectious diseases	Measles	1	9
		environmental medicine	Global Warming	1	
		Primary health care system	Acquired Immunodeficiency Syndrome (AIDS)	1	
		Practical/clinical aspects of the above topics	Practical / Clinical Training	4	
Discussions, reports, tests and exams (theoretical and practica	theoretical and practical lectures	Infectious diseases	Tuberculosis	1	10
		environmental medicine	Green House Effects	1	
		Primary health care system	Sexually Transmitted Diseases (Part 1)	1	
		Practical/clinical aspects of the above topics	Practical / Clinical Training	4	
Discussions, reports, tests and exams (theoretical and practica	theoretical and practical lectures	Infectious diseases	Cholera	1	11
		environmental medicine	Ozone Depletion and Ultraviolet Radiation Health Effects (Part 1)	1	
		Primary health care system	Sexually Transmitted Diseases (Part 2)	1	
		Practical/clinical aspects of the above topics	Practical / Clinical Training	4	
Discussions,	theoretical	Infectious diseases	Cancer	1	12

reports, tests and exams (theoretical and practica	and practical lectures	environmental medicine	Ozone Depletion and Ultraviolet Radiation Health Effects (Part 2)	1	
		Primary health care system	Reproductive Health	1	
		Practical/clinical aspects of the above topics	Practical / Clinical Training	4	
Discussions, reports, tests and exams (theoretical and practica	theoretical and practical lectures	Infectious diseases	Ischemic Heart Diseases	1	13
		environmental medicine	Environmental Sanitation and Hygiene	1	
		Primary health care system	Family Planning (Part 1)	1	
		Practical/clinical aspects of the above topics	Practical / Clinical Training	4	
Discussions, reports, tests and exams (theoretical and practical	theoretical and practical lectures	Infectious diseases	Hypertension	1	14
		environmental medicine	Hospital Waste	1	
		Primary health care system	Family Planning (Part 2)	1	
		Practical/clinical aspects of the above topics	Practical / Clinical Training	4	
Discussions, reports, tests and exams (theoretical and practical	theoretical and practical lectures	Infectious diseases	ICD-10	1	15
		environmental medicine	Sewage Disposal	1	
		Primary health care system	Population Pyramid	1	
		Practical/clinical aspects of the above topics	Practical / Clinical Training	4	

18-Infrastructure of histopathology	
1-Required course books	Biostatistics, Danials… 2004, Weyee
2- main references (sources)	Statistics in medicine.
3- Recommended books and references (scientific journals, reports)	
4- Electronic references, websites	WHO website CDC

3- • Academic Description Form For The Biochemistry Branch

This course description provides a summary of the most important characteristics of the course and the learning objectives that the student is expected to achieve, demonstrating whether he has made maximum use of the available learning opportunities, and it must be linked to the program description.

1- educational institution
University of Diyala \college of medicine
2-Scientific Department / Center
Biochemistry and Medicinal Chemistry Branch
3-Academic or professional program name
Human medicine
4-Final certificate name
Bachelor of Medicine and General Surgery
5-Academic system (annual / courses / semesters)
Semesters
6- Semester/year
First course + second course / 2021
7-Available forms of attendance
Actual mandatory attendance
8-The number of study hours
150 hours / first stage 150 hours / second stage
9-Accredited Accreditation Program
Theoretical and practical study and discussions of blended learning, attendance, and electronic (via the Classroom platform)
10-Other external influences
A teaching hospital, library, internet, community, doctors' syndicate
11-Description creation date
15/6/2021
12-Academic Program Objectives
1. Preparing scientifically and practically competent students in the field of clinical biochemistry analyses. 2. 2. Understand the basics of the biochemical variable that occurs in the case of disease. 3. 3. Follow modern methods of analysis 150 hours / first stage **4.** 150 hours / second stage for satisfactory results.

13-Required program outcomes and methods of teaching, learning and assessment

- **Cognitive goals**

1-Preparing highly qualified students in the theoretical and practical foundations of biochemistry and the methods of conducting pathological analyzes using modern techniques.

2- Explaining the steps of the biological metabolism of carbohydrates, lipids and proteins inside the human body, and teaching students how to conduct clinical chemistry and cancer tumor analyzes.

- **Skills objectives of the program**

Studying the metabolism of carbohydrates, fats, proteins, nucleic acids, hormones and vitamins, as well as the functions of various body organs and the biochemical changes that occur in cancer cells.

- **Teaching and learning methods**

1 -Providing students with the theoretical basics to know the biochemical variables in case of disease.
2 -Visiting clinical chemistry laboratories in teaching hospitals
3- Integrated, in-person and electronic education and via e-learning platforms (classroom)

- **Evaluation Methods**

1 -daily exams
2 -The student's scientific and practical ability to solve health problems
3- Mid-course exams and end-of-course exams

- **Behavioral and value objectives**

1- Preparing the student scientifically to know the relationship between diseases and causes.
2- Creating a suitable environment for students to maintain human health.
4. Appreciating the importance of continuous study and updating information to keep pace with scientific development.

- **Teaching and learning methods**

1 -Giving theoretical lectures.
2 -Special operation laboratories.
3-. Integrated, in-person and e-learning (via the Classroom platform).

- **Evaluation Methods**

1 -Half-course exam.
2 -Sudden short exams.
3 -Practical laboratory degrees.
4- End of course exam

- **Transferred general and qualification skills (other skills related to employability and personal development)**

1 -Preparing scientifically competent students to solve health problems.
2- Students' participation in training courses during the summer vacation and the preparation of a program for that.

14- The structure of the course for theoretical medical chemistry / first academic level / the first course					
Week	**hours**	**Required educational goals**	**Unit name and/or topic**	**evaluation method**	**education method**
1	3	Basic Principles and Perspectives in Medical Chemistry and Biochemistry Biomolecules, water the universal solvent, solutions	medical chemistry	exam	lecture
2	3	Basic Principles and Perspectives in Medical Chemistry and Biochemistry Acid-base properties and balance in the body, buffers, pH and osmolality.	medical chemistry	exam	lecture
3	3	Basic Principles and Perspectives in Medical Chemistry and Biochemistry Buffers, pH and osmolality.	medical chemistry	exam	lecture
4	3	Chemistry of Carbohydrates: Nomenclature and stereoisomers.	medical chemistry	exam	lecture
5	3	Chemistry of Carbohydrates: . Monosaccharides and their reactions. Disaccharides with examples	medical chemistry	exam	lecture
6	3	Chemistry of Carbohydrates: Nomenclature and stereoisomers. Monosaccharides and their reactions. Disaccharides with examples	medical chemistry	exam	lecture
7	3	Chemistry of Carbohydrates Polysaccharides and heteroglycans. Glycoproteins and Mucoproteins.	medical chemistry	exam	lecture
8	3	Mid Semester Exam	medical chemistry	exam	lecture
9	3	Chemistry of Lipids Classification of lipids and fatty acids. Saturated and unsaturated fatty acids,	medical chemistry	exam	lecture

		trans fatty acids, neutral fats.			
10	3	Chemistry of Lipids Phospholipids and Sphingolipids.	medical chemistry	exam	lecture
11	3	Chemistry of Lipids Prostaglandins, Thromboxanes and Leukotrienes. Steroidal lipids.	medical chemistry	exam	lecture
12	3	Chemistry of Lipids Steroidal lipids.	medical chemistry	exam	lecture
13	3	Biological Membranes and Transport Lipid bilayers and their properties.The plasma membrane, structure and functions.	medical chemistry	exam	lecture
14	3	Biological Membranes and Transport Biological Membranes and Transport, Solute transport mechanisms across membranes. Membrane dynamics and membrane	medical chemistry	exam	lecture
15	3	Final Semester Exam	medical chemistry	exam	lecture

15- The structure of the course for practical medical chemistry /first academic level / first course

Week	hours	Required educational goals	Unit name and/or topic	education method	evaluation method
1	2	Lab safety and security	Medical chemistry	chemistry laboratory	exam/lab
2	2	Units and references values	Medical chemistry	chemistry laboratory	exam/lab
3	2	Introduction to commonly used instruments	Medical chemistry	chemistry laboratory	exam/lab
4	2	General urine examination	Medical chemistry	chemistry laboratory	exam/lab
5	2	Analysis of normal constituents of urine	Medical chemistry	chemistry laboratory	exam/lab
6	2	Analysis of abnormal constituents of urine	Medical chemistry	chemistry laboratory	exam/lab
7	2	pH and significance	Medical chemistry	chemistry laboratory	exam/lab
8	2	General stool examination	Medical chemistry	chemistry laboratory	exam/lab

9	2	Hematological test	Medical chemistry	chemistry laboratory	exam/lab
10	2	Blood components	Medical chemistry	chemistry laboratory	exam/lab
11	2	Buffer in blood	Medical chemistry	chemistry laboratory	exam/lab
12	2	Preparation of plasma and serum for analysis	Medical chemistry	chemistry laboratory	exam/lab
13	2	Blood samples	Medical chemistry	chemistry laboratory	exam/lab
14	2	Blood collection and handling	Medical chemistry	chemistry laboratory	exam/lab
15	2	First- semester practical examination	Medical chemistry	chemistry laboratory	exam/lab

16- The structure of the course for theoretical medical chemistry / first academic level / the second course					
Week	**hours**	**Required educational goals**	**Unit name and/or topic**	**evaluation method**	**education method**
1	3	Proteins: Structure and Function Structure and physical properties of proteins.	medical chemistry	exam	lecture
2	3	Proteins: Structure and Function Classification, fibrous and globular proteins Simple and conjugate proteins.	medical chemistry	exam	lecture
3	3	Proteins: Structure and Function Functions and clinical significance.	medical chemistry	exam	lecture
4	3	Chemistry of Nucleotides and Nucleic Acid Purine and pyrimidine bases.Nucleosides and Nucleotides.	medical chemistry	exam	lecture
5	3	Chemistry of Nucleotides and Nucleic Acid Purine and pyrimidine bases. Structure, constituents, properties and biochemical roles.	medical chemistry	exam	lecture
6	3	Chemistry of Nucleic Acids Nucleic acid's types, structures and properties.	medical chemistry	exam	lecture
7	3	Chemistry of Nucleic Acids Biochemical roles and constituents of nucleic acids. Protein synthesis	medical chemistry	exam	lecture

8	3	Mid Second Semester Exam	medical chemistry	exam	lecture
9	3	Enzymoloqy Enzyme specificity and mechanism of action.Classification of enzymes, coenzymes and isoenzymes.Enzyme activities, active site	medical chemistry	exam	lecture
10	3	Enzymoloqy Factors influencing enzyme activity. Michaelis-Menten theory. Enzyme inhibition and Enzyme Regulation.	medical chemistry	exam	lecture
11	3	Nutrition and Vitamins Nutrients, micronutrients and macronutrients, types and their roles in nutrition. Vitamins, vitamers, nomenclature and classification of vitamins.	medical chemistry	exam	lecture
12	3	Nutrition and Vitamins Water-soluble vitamins (Folic acid, B12) chemical constituents, coenzymes biosynthesis and their roles in metabolism. Ascorbic acid or vitamin C, chemical properties and biochemical roles.	medical chemistry	exam	lecture
13	3	Body Fluids Blood, composition, plasma proteins, clotting factors	medical chemistry	exam	lecture
14	3	Body Fluids Milk, CSF, seminal fluids, synovial fluid and saliva composition and functions.	medical chemistry	exam	lecture
15	3	Final Second Semester Exam	medical chemistry	exam	lecture

17- The structure of the course for practical medical chemistry /first academic level / the second course					
Week	**Hours**	**Required educational goals**	**Unit name and/or topic**	**education method**	**evaluation method**
1	2	Lab safety and security	Medical chemistry	chemistry laboratory	exam/lab
2	2	Units and references value	Medical chemistry	chemistry laboratory	exam/lab

3	2	Introduction to commonly used instruments	Medical chemistry	chemistry laboratory	exam/lab
4	2	General urine examinatior	Medical chemistry	chemistry laboratory	exam/lab
5	2	Analysis of normal constituents of urine	Medical chemistry	chemistry laboratory	exam/lab
6	2	Analysis of abnormal constituents of urine	Medical chemistry	chemistry laboratory	exam/lab
7	2	pH and significance	Medical chemistry	chemistry laboratory	exam/lab
8	2	General stool examination	Medical chemistry	chemistry laboratory	exam/lab
9	2	Hematological test	Medical chemistry	chemistry laboratory	exam/lab
10	2	Blood components	Medical chemistry	chemistry laboratory	exam/lab
11	2	Buffer in blood	Medical chemistry	chemistry laboratory	exam/lab
12	2	Preparation of plasma and serum for analysis	Medical chemistry	chemistry laboratory	exam/lab
13	2	Blood samples	Medical chemistry	chemistry laboratory	exam/lab
14	2	Blood collection and handling	Medical chemistry	chemistry laboratory	exam/lab
15	2	First- semester practical examination	Medical chemistry	chemistry laboratory	exam/lab

18- The structure of the course for theoretical biochemistry / second academic level / the first course					
Week	**hours**	**Required educational goals**	**Unit name and/or topic**	**evaluation method**	**education method**
1	3	Biological membrane and transport	Biochemistry	exam	lecture
2	3	Amino acid metabolism	Biochemistry	exam	lecture
3	3	Digestion and absorption of protein,catabolism of tissue protein,protein degradation	Biochemistry	exam	lecture
4	3	Neuclic acid metabolism	Biochemistry	exam	lecture
5	3	Genetic code and translation	Biochemistry	exam	lecture
6	3	Mineral metabolism and toxic metals	Biochemistry	exam	lecture
7	3	Hormones(catechol amines hormones)	Biochemistry	exam	lecture

8	3	Hormones(thyroid hormones,pituitary hormones)	Biochemistry	exam	lecture
9	3	Hormones(steroid hormones and PTH)	Biochemistry	exam	lecture
10	3	Liver function test	Biochemistry	exam	lecture
11	3	Renal function test	Biochemistry	exam	lecture
12	3	Biochemistry of cancer and tumor marker	Biochemistry	exam	lecture
13	3	Hb,porphyrin and heam bio synthesis and porphyria	Biochemistry	exam	lecture
14	3	Clinical enzymology (enzymes in clinical diagnosis)	Biochemistry	exam	lecture
15	3	Detoxification	Biochemistry	exam	lecture

19-- The structure of the course for practical biochemistry /second academic level / the first course

Week	Hours	Required educational goals	Unit name and/or topic	education method	evaluation method
1	2	Collection and handling of blood samples	Biochemistry	chemistry laboratory	exam/lab
2	2	Collection and handling of blood samples	Biochemistry	chemistry laboratory	exam/lab
3	2	Case study: saturated fatty acid and levels of serum lipids	Biochemistry	chemistry laboratory	exam/lab
4	2	Case study: obesity and CHD	Biochemistry	chemistry laboratory	exam/lab
5	2	Case study: diabetes and cardiovascular diseases	Biochemistry	chemistry laboratory	exam/lab
6	2	Case study: hypercholesterolemia and CVD	Biochemistry	chemistry laboratory	exam/lab
7	2	Case study: dyslipidemia and obesity	Biochemistry	chemistry laboratory	exam/lab
8	2	Case study: hypervitaminosis D and dyslipidemia	Biochemistry	chemistry laboratory	exam/lab
9	2	Case study: primary prevention of CVD	Biochemistry	chemistry laboratory	exam/lab
10	2	Case study: alcohol consumption and hypertriglyceridemia	Biochemistry	chemistry laboratory	exam/lab

11	2	Case study: diabetes and cardiac risk	Biochemistry	chemistry laboratory	exam/lab
12	2	Case study: dyslipidemia in adults with diabetes	Biochemistry	chemistry laboratory	exam/lab
13	2	Blood HDL-C estimation	Biochemistry	chemistry laboratory	exam/lab
14	2	Case study: low HDL-C level in patients with type II DM	Biochemistry	chemistry laboratory	exam/lab
15	2	First- semester practical examination	Biochemistry	chemistry laboratory	exam/lab

20- The structure of the course for theoretical biochemistry / second academic level / the second course

Week	hours	Required educational goals	Unit name and/or topic	evaluation method	education method
1	3	CHO metabolism	Biochemistry	exam	lecture
2	3	Oxidation of monosaccharide, fructose intolerance, galactosemia, Oxidative decarboxylation o pyruvate	Biochemistry	exam	lecture
3	3	Gluconeogensis,Cor:and alanine cycle	Biochemistry	exam	lecture
4	3	Pentose phosphate pathway, G-6-P-D deficiency and favism	Biochemistry	exam	lecture
5	3	Glycogen metabolism, regulation , glycogen storage diseases	Biochemistry	exam	lecture
6	3	Biological oxidation and electrone transport chain	Biochemistry	exam	lecture
7	3	Digestion and absorption of CHO	Biochemistry	exam	lecture
8	3	Lipid metabolism	Biochemistry	exam	lecture
9	3	Cholesterol metabolism,regulation and bile salts	Biochemistry	exam	lecture
10	3	Ketone body metabolism	Biochemistry	exam	lecture
11	3	Fatty acids biosynthesis	Biochemistry	exam	lecture
12	3	Lipoprotein metabolism and hyperlipoproteinemia	Biochemistry	exam	lecture
13	3	Digestion and absorption, storage and metabolism of	Biochemistry	exam	lecture

		fat			
14	3	Ethanol metabolism	Biochemistry	exam	lecture
15	3	Free radicals and antioxidants	Biochemistry	exam	lecture

21- The structure of the course for practical biochemistry /second academic level / the second course					
Week	**hours**	**Required educational goals**	**Unit name and/or topic**	**education method**	**evaluation method**
1	2	Blood LDL-C estimation	Biochemistry	chemistry laboratory	exam/lab
2	2	Case study: high LDL-C level in a patient with type II DM	Biochemistry	chemistry laboratory	exam/lab
3	2	Case study: dyslipidemia in patients with renal diseases	Biochemistry	chemistry laboratory	exam/lab
4	2	BUN estimation	Biochemistry	chemistry laboratory	exam/lab
5	2	Creatinine estimation	Biochemistry	chemistry laboratory	exam/lab
6	2	Case study: tests for how well are the kidneys working	Biochemistry	chemistry laboratory	exam/lab
7	2	Case study: creatinine as a biomarker to determine when t initiate dialysis	Biochemistry	chemistry laboratory	exam/lab
8	2	Case study: renal failure	Biochemistry	chemistry laboratory	exam/lab
9	2	Case study: renal and urologic impairments	Biochemistry	chemistry laboratory	exam/lab
10	2	Case study: assessment of changes in blood urea and creatinine in patients with COVID-19	Biochemistry	chemistry laboratory	exam/lab
11	2	Uric acid estimation	Biochemistry	chemistry laboratory	exam/lab
12	2	Case study: uric acid level in patients with type II DM	Biochemistry	chemistry laboratory	exam/lab
13	2	Case study: uric acid level in patients with COVID-19	Biochemistry	chemistry laboratory	exam/lab
14	2	Case study: evaluation of biochemical parameters in breast cancer	Biochemistry	chemistry laboratory	exam/lab
15	2	Second-semester examination	Biochemistry	chemistry laboratory	exam/lab

22-Infrastructure of biochemistry	
1-Required course books	Harper's Illustrated Biochemistry (31st Edition)
2- main references (sources)	1-Basic Medical Biochemistry (4st Edition) 2-Lehninger Principles of Biochemistry (7st Edition)
3- Recommended books and references (scientific journals, reports)	Scientific journals in clinical biochemistry
4- Electronic references, websites	The website of the Faculty of Medicine in addition to the Internet

23-Medical chemistry and biochemistry branch development plan
Develop academic courses annually in line with the global development in the field of biochemistry and techniques for conducting clinical chemical analyzes.

4- • Academic Description Form For The Branch Of Physiology And Medical Physics

This course description provides a summary of the most important characteristics of the course and the educational goals the student is expected to achieve, demonstrating whether he has made the most of the available learning opportunities. It must be linked to the description of the program.

Academic Description Of Physiology

1- educational institution
University of Diyala \college of medicine
2-Scientific Department / Center
Physiology and medical physics
3-Academic or professional program name
Human medicine
4-Final certificate name
Bachelor of Medicine and General Surgery
5-Academic system (annual / courses / semesters)
semesters
6- Semester/year
First course + second course / 2021
7-Available forms of attendance
Actual mandatory attendance
8-The number of study hours
Theoretical 90 hours Practical 60 hours Research 150 hours
9-Accredited Accreditation Program
Theoretical and practical study and discussions of blended learning, attendance, and electronic (via the Classroom platform)
10-Other external influences
A teaching hospital, library, internet, community, doctors' syndicate
11-Description creation date
15/6/2021

12-Academic Program Objectives

1- Determining the functions of the different body systems.
2- Describe the mechanism of action of the various body systems and the accompanying sequence of physiological events.
3- Estimation of the normal values of biological activities in relation to different biological conditions.
4- Distinguish between the normal and abnormal functions of the different body systems.
5- Clarify the amount of change in the natural functions of different body systems and accompanying some disease states.
6- Expanding knowledge through periodicals, medical books and the Internet.
7- Apply the basic scientific building blocks he has acquired to conduct scientific research and medical studies.
8- Determining the functions of the various body systems.
9- Describe the mechanism of work of the various body systems and the accompanying sequence of physiological events.

13-Required program outcomes and methods of teaching, learning and assessment

➢ Cognitive goals

1-Learning the basics of human physiology and its various vocabulary.
2 -Developing mental abilities through various modern academic and practical education methods
3 -Linking basic sciences with applied sciences in the future
4 -Learn about the methods of action and effect of drugs
5 -Learn the method of scientific discussion
6- Acquisition of laboratory skills

➢ Skills objectives of the program

1-Methods of dealing with laboratory animals and scientific equipment
2 -How to use chemical and physical materials
3- Acquisition of clinical examination skills c

• Teaching and learning methods

1-Lectures, computers, plasma screens, modern scientific equipment, clinical tours, educational seminars, audio-visual equipment, discussions.
2- In-person and electronic blended education (via the Classroom platform).

• Evaluation Methods

1-Discussion in lectures
2-Mid-course exams and end-of-course exams
3-periodic evaluation
4-Small Education Groups
5-Practical exams

➢ Behavioral and value objectives

1-Ethical and professional discipline.
2 -Good interaction of students with each other.
3 -Develop a spirit of help.
4- Eliminate class differences.

- **Teaching and learning methods**

1 -Small scientific circles
2-Discussions
3 -Seminars
4- In-person and electronic blended education (via the Classroom platform).

- **Evaluation Methods**

1 -Half-course exam.
2 -Sudden short exams.
3 -Practical laboratory degrees.
4- End of course exam

- **Transferred general and qualification skills (other skills related to employability and personal development)**

1-The student should cooperate with his colleagues and teachers in an atmosphere of cordiality and understanding
2 -To work with his peers as a team
3- To interact with them on scientific trips and the media..

14- The structure of the course for theoretical physiology /second academic level / the first course

week	Hours	Required educational goals	Unit name and/or topic	education method	evaluation method
1	5	cell structure	cell	Lecture	Exam
		cell contents	cell	Lecture	Exam
		cell wall	cell	Lecture	Exam
		transport across the cell	cell	Lecture	Exam
		Cellular division	cell	Lecture	Exam
2	5	Nucleus	cell	Lecture	Exam
		energy houses	cell	Lecture	Exam
		cell proliferation	cell	Lecture	Exam
		internal transmitters of the cell	cell	Lecture	Exam
		The DNA	cell	Lecture	Exam
3	5	recipients	cell	Lecture	Exam
		Influences on cell division	cell	Lecture	Exam
		apoptosis	cell	Lecture	Exam
		Drugs that affect the cell	cell	Lecture	Exam
		discussions	cell	Lecture	Exam
4	5	Blood volume & plasma	Blood physiology	Lecture	Exam
		RBC	Blood physiology	Lecture	Exam
		Hemoglobin	Blood physiology	Lecture	Exam
		Anemia	Blood physiology	Lecture	Exam
		Blood groups	Blood physiology	Lecture	Exam
5	5	transfusion reaction	Blood physiology	Lecture	Exam

		platelets Homeostasis,	Blood physiology	Lecture	Exam
		external & internal pathways of coagulation	Blood physiology	Lecture	Exam
		Tests of homeostasis	Blood physiology	Lecture	Exam
		Hemophilia	Blood physiology	Lecture	Exam
6	5	Immunity	Blood physiology	Lecture	Exam
		Immunity	Blood physiology	Lecture	Exam
		Tissue typing & transplantation	Blood physiology	Lecture	Exam
		Plasma	Blood physiology	Lecture	Exam
		Platelets	Blood physiology	Lecture	Exam
7	4	The functional design of C.V.S., the structure of the heart & blood vessels	Circulatory physiology	Lecture	Exam
8	4	Properties of cardiac muscle- autorhythmicity & conductivity	Circulatory physiology	Lecture	Exam
9	4	Electrophysiology of the heart ECG	Circulatory physiology	Lecture	Exam
10	4	Mechanical events in cardiac cycle	Circulatory physiology	Lecture	Exam
11	4	Cardiac output	Circulatory physiology	Lecture	Exam
12	4	Blood pressure	Circulatory physiology	Lecture	Exam
13	4	Process of Respiration: Mechanics of Breathing	Respiratory physiology	Lecture	Exam
14	4	Lung Volumes and Capacities	Respiratory physiology	Lecture	Exam
15	4	Compliance of the Lung/ Pulmonary and Alveolar Ventilation	Respiratory physiology	Lecture	Exam
16	4	Transport of O2 by the blood	Respiratory physiology	Lecture	Exam
17	4	Acid- Base Regulation	Respiratory physiology	Lecture	Exam

15- The structure of the course for practical physiology /second academic level / the first course					
Week	Hours	**Required educational goals**	**Unit name and/or topic**	**education method**	**evaluation method**
1	3	Identify different lab tools and how to use the microscope.	Introduction	Lecture+lab	Exam
2	3	Learn how to count RBCs and discuss some medical aspects related to it.	RBC_s count	Lecture + laboratory experiment	Exam

3	3	Learn how to count WBCs and discuss some medical aspects related to it.	WBC_s count	Lecture + laboratory experiment	Exam
4	3	Identify different types of WBCs and discuss their function and related medical aspects.	Differential WBC_s count	Lecture + laboratory experiment	Exam
5	3	Learn how to estimate Hb and discuss some medical aspects related to it.	Estimation of hemoglobin concentration	Lecture + laboratory experiment	Exam
6	3	Learn how to count platelets and discuss some medical aspects related to it.	Platelets count	Lecture + laboratory experiment	Exam
7	3	Learn how to get ESR and discuss some medical aspects related to it.	Erythrocyte sedimentation rate (ESR)	Lecture + laboratory experiment	Exam
8	3	Learn how to get PCV (Hematocrit) and discuss some medical aspects related to it.	Packed cell volume (PCV)	Lecture + laboratory experiment	Exam
9	3	Discuss blood indices and their importance	Blood indices	Lecture + laboratory experiment	Exam
10	3	Learn how to get bleeding time and discuss some medical aspects related to it.	Bleeding time	Lecture + laboratory experiment	Exam
11	3	Learn how to get clotting time and discuss some medical aspects related to it.	Clotting time	Lecture + laboratory experiment	Exam
12	3	Learn how to get prothrombin time and discuss some medical aspects related to it.	Prothrombin time	Lecture + laboratory experiment	Exam
13	3	Learn how to get aPTT and PT time and discuss some medical aspects related to them.	APTT and TT	Lecture + laboratory experiment	Exam
14	3	Learn how to do blood grouping test and discuss some medical aspects related to it.	Blood grouping and cross matching tests	Lecture + laboratory experiment	Exam
15	3	Discuss different aspects of blood banking	Blood banking	Lecture + laboratory experiment	Exam

16- The structure of the course for theoretical physiology /second academic level / the second course					
Week	Hours	**Required educational goals**	**Unit name and/or topic**	**education method**	**evaluation method**
1	4	Renal circulation & glomerular filtration	Urinary system physiology	Lecture	Exam
2	4	Water excretion by the kidneys	Urinary system	Lecture	Exam

			physiology		
3	4	Tubular reabsorption	Urinary system physiology	Lecture	Exam
4	4	Tubular secretion	Urinary system physiology	Lecture	Exam
5	4	Excitable tissue	Muscle and nerve physiology	Lecture	Exam
6	4	Nervous tissue	Muscle and nerve physiology	Lecture	Exam
7	4	Types of nerves	Muscle and nerve physiology	Lecture	Exam
8	4	Excitation of muscle	Muscle and nerve physiology	Lecture	Exam
9	4	Neuromuscular transmission	Muscle and nerve physiology	Lecture	Exam
10	4	Sympathetic and parasympathetic N.S.	Brain physiology	Lecture	Exam
11	4	General Sensation	Brain physiology	Lecture	Exam
12	4	Spinal Cord pathway and Reflexes	Brain physiology	Lecture	Exam
13	4	Thalamus Central representation of Sensation	Brain physiology	Lecture	Exam
14	4	Learning and memory	Brain physiology	Lecture	Exam
15	4	Cerebellum	Brain physiology	Lecture	Exam
16	4	Saliva and swallowing	Digestive System Physiology	Lecture	Exam
17	4	Water excretion by the kidneys	Digestive System Physiology	Lecture	Exam
18	4	Different aspects of Endocrine glands	Digestive System Physiology	Lecture	Exam
19	4	Physiology of different parts of the reproductive system	Digestive System Physiology	Lecture	Exam

17- The structure of the course for practical physiology /second academic level / the second course					
Week	Hours	**Required educational goals**	**Unit name and/or topic**	**education method**	**evaluation method**
1	3	Teach students to measure BP	Blood pressure measurement	Lecture+lab	Exam

		correctly.			
2	3	Teach students to measure body temperature correctly.	Body temperature measurement	Lecture + laboratory experiment	Exam
3	3	Teach students how to examine peripheral pulses practically and correctly.	Examination of the peripheral pulses	Lecture + laboratory experiment	Exam
4	3	Teach students how to get the RR practically and correctly.	Respiratory rate	Lecture + laboratory experiment	Exam
5	3	Teach students how to examine the cranial nerves practically and correctly.	Examination of the cranial nerves	Lecture + laboratory experiment	Exam
6	3	Teach students how to examine the motor and sensory systems practically and correctly.	Examination of motor & sensory systems	Lecture + laboratory experiment	Exam
7	3	Teach students how to connect ECG electrodes and read ECG.	ECG	Lecture + laboratory experiment	Exam
8	3	Show students some abnormalities of ECG.	Interpretation of ECG	Lecture + laboratory experiment	Exam
9	3	Teach students how to work on spirometer and how to differentiate between obstructive and restrictive lung diseases.	Pulmonary function test (spirometer)	Lecture + laboratory experiment	Exam
10	3	Teach students how to do different tests to examine optic nerve.	Vision tests	Lecture + laboratory experiment	Exam
11	3	Teach students how to do different tests to	Hearing tests	Lecture + laboratory experiment	Exam

		examine the cochlear branch of the 8th cranial nerve.			
12	3	Teach students how to listen to different heart sounds.	Heart sounds	Lecture + laboratory experiment	Exam
13	3	Teach students how to work on EMG.	Electromyography (EMG)	Lecture + laboratory experiment	Exam
14	3	Teach students how to connect EEG electrodes and read EEG.	Electroencephalography (EEG)	Lecture + laboratory experiment	Exam
15	3	Show students the different steps and maneuvers of CPR.	Cardiopulmonary resuscitation (CPR).	Lecture + laboratory experiment	Exam

18-Infrastructure of histopathology	
1-Required course books	Ganong's Review of Medical Physiology, by Kim E. Barret, Susan M. Barman. Mc .Graw Hill LANGE. 2011 Guyton and Hall textbook of Medical Physiology. Saunders Comp. 2016
2- main references (sources)	-All medical physiology books and magazines
3- Recommended books and references (scientific journals, reports)	All medical physiology books and magazines
4- Electronic references, websites	

Academic description of medical physics

1- educational institution
University of Diyala \college of medicine
2-Scientific Department / Center
Physiology and medical physics
3-Academic or professional program name
Human medicine
4-Final certificate name
Bachelor of Medicine and General Surgery
5-Academic system (annual / courses / semesters)
semesters
6- Semester/year
First course + second course / 2021
7-Available forms of attendance
Actual mandatory attendance
8-The number of study hours
60 hours of theory 60 working hours 30 hours tetorial
9-Accredited Accreditation Program
Theoretical and practical study and discussions of blended learning, attendance, and electronic (via the Classroom platform)
10-Other external influences
A teaching hospital, library, internet, community, doctors' syndicate
11-Description creation date
15/6/2021
12-Academic Program Objectives
Familiarize yourself with the laboratory devices specialized in medical physics and how these physical devices work, and get acquainted with what is related to these physical devices and their medical work. The student is taught in a practical way to carry out practical experiments on various topics of physics and their applications in medicine and the relationship of various physical phenomena to the organs of the human body and the vital activities that take place inside the human body and it shows the extent of the impact of the body on natural conditions

13-Required program outcomes and methods of teaching, learning and assessment

- **Cognitive goals**

1 -Learning the basics of human physiology and its various vocabulary.
2 -Developing mental abilities through various modern academic and practical methods of education
3 -Linking basic sciences with applied sciences in the future
4 -Learn about the methods of action and effect of drugs
5 -Learn the method of scientific discussion
5- Acquisition of laboratory skills

- **Skills objectives of the program**

1 -Methods of dealing with devices and their work on the human body.
2 -How to use physical materials.
3- How to link the benefits of the experience and link them with the medical benefits.

- **Teaching and learning methods**

1 - Lectures - computers - plasma screens - modern scientific equipment - clinical tours - educational seminars, audio-visual equipment - discussions.
2- In-person and electronic blended education (via the Classroom platform).

- **Evaluation Methods**

1-Discussion in lectures
2 -Mid-course exams and end-of-course exams
3 -Periodic evaluation
4 -Small education groups
5- Practical exams

- **Behavioral and value objectives**

1-Ethical and professional discipline.
2 -Good interaction of students with each other.
3 -Develop a spirit of help.
4- Eliminate class differences.

- **Teaching and learning methods**

1- Small scientific circles
2- -2Discussions
3- -Seminars
4- In-person and electronic blended education (via the Classroom platform)

- **Evaluation Methods**

1 -Discussion in lectures
2 -Theoretical and practical exams for the half-course and the end of the course
3- Small education groups

- **Transferred general and qualification skills (other skills related to employability and personal development)**

1-The student should cooperate with his colleagues and teachers in an atmosphere of cordiality and understanding.
2 -To work with his peers as a team.
3- To interact with them on scientific trips and the media.

14- The structure of the course for theoretical medical physics /first academic level / the first course					
Week	Hours	**Required educational goals**	**Unit name and/or topic**	**education method**	**evaluation method**
1	2	Forces on and in the human body	Medical physics	Lecture	Exam
2	2	Frictional force, Dynamics, Clinical applications of gravity.	Medical physics	Lecture	Exam
3	2	Sedimentation velocity.	Medical physics	Lecture	Exam
4	2	Physics of the skeleton, The functions of bones	Medical physics	Lecture	Exam
5	2	Elastic properties of biological materials.	Medical physics	Lecture	Exam
6	2	Lubrication of bone joints.	Medical physics	Lecture	Exam
7	2	Heat and cold in medicine	Medical physics	Lecture	Exam
8	2	Heat therapy	Medical physics	Lecture	Exam
9	2	Cold in medicine	Medical physics	Lecture	Exam
10	2	Energy, work, and power of the body	Medical physics	Lecture	Exam
11	2	Pressure, measurement of pressure in the body	Medical physics	Lecture	Exam
12	2	The physics of lung and breathing function of the lung	Medical physics	Lecture	Exam
13	2	The physics of lung and breathing function of the lung	Medical physics	Lecture	Exam
14	2	The breathing mechanism	Medical physics	Lecture	Exam
15	2	Laplace law, Bernoulli's principle	Medical physics	Lecture	Exam

15- The structure of the course for practical medical physics /first academic level / the first course					
Week	Hours	**Required educational goals**	**Unit name and/or topic**	**education method**	**evaluation method**
1	2	Tools - Chart - How it works	Medical physics	Lecture+ lab	Exam

2	2	Finding the Earth's acceleration and its relationship to the human body	Medical physics	Lecture+ lab	Exam
3	2	Tools - Chart - How it works	Medical physics	Lecture+ lab	Exam
4	2	Finding the coefficient of friction and its relationship to joint diseases in the human body, and the reduction of fluids between the cartilage increases the rate of friction and causes joint pain	Medical physics	Lecture+ lab	Exam
5	2	Tools - Chart - How it works	Medical physics	Lecture+ lab	Exam
6	2	Finding Yunck's modulus and its relationship to sound vibrations and vibrations	Medical physics	Lecture+ lab	Exam
7	2	Tools - Chart - How it works	Medical physics	Lecture+ lab	Exam
8	2	Finding the moment of inertia and its relationship to vibrations and acoustic vibrations	Medical physics	Lecture+ lab	Exam
9	2	Tools - Chart - How it works	Medical physics	Lecture+ lab	Exam
10	2	Finding the half-life and its relationship to the decomposition of the treatment inside the human body	Medical physics	Lecture+ lab	Exam
11	2	Tools - how it works	Medical physics	Lecture+ lab	Exam
12	2	Finding the focal length and its relationship to lenses and optics	Medical physics	Lecture+ lab	Exam
13	2	Shows both EEG-ECG	Medical physics	Lecture+ lab	Exam

14	2	Tools - how it works	Medical physics	Lecture+ lab	Exam
15	2	Finding resistance and its relationship to bone fractures	Medical physics	Lecture+ lab	Exam

16- The structure of the course for theoretical medical physics /first academic level / the second course					
Week	Hours	**Required educational goals**	**Unit name and/or topic**	**education method**	**evaluation method**
1	2	Electricity within the body	Medical physics	Lecture	Exam
2	2	Electrical activity of the heart	Medical physics	Lecture	Exam
3	2	Cardiovascular Instrumentation	Medical physics	Lecture	Exam
4	2	Sound in medicine	Medical physics	Lecture	Exam
5	2	The loudness and intensity level	Medical physics	Lecture	Exam
6	2	Ultrasonic sound	Medical physics	Lecture	Exam
7	2	Ultrasound to measure motion	Medical physics	Lecture	Exam
8	2	Physics of the ear and hearing	Medical physics	Lecture	Exam
9	2	Light in medicine	Medical physics	Lecture	Exam
10	2	Application of ultraviolet	Medical physics	Lecture	Exam
11	2	The eye and vision	Medical physics	Lecture	Exam
12	2	Optical defects of the eye	Medical physics	Lecture	Exam
13	2	Laser	Medical physics	Lecture	Exam
14	2	Laser interaction	Medical physics	Lecture	Exam
15	2	Production of X-ray beams	Medical physics	Lecture	Exam
16	2	Application of Radiation in medicine • Production of X-ray beams. • Absorption of X-ray by the materials. • Making an X-ray image • Radiation to patient from X-ray • Producing live X-ray images-		Lecture	Exam

		fluoroscopy • X-ray slices of the body Radiation taken without film			
17	2	Physics of Nuclear medicine and application of Radioisotopes • Basic characteristics and units of radioactivity • Sources of radioactivity for Nuclear medicine • Statistical aspects of Nuclear medicine • Basic instrumentation and its applications • Nuclear medicine imaging devices • Physical principles of Nuclear medicine imaging procedure • Therapy with radioactivity • Radiation doses in nuclear medicine		Lecture	Exam
18	2	Physics of Radiation therapy • Dose units used in Radiotherapy • Principles of		Lecture	Exam

		Radiation therapy • Short course in Radiotherapy treatment planning • Megavoltage therapy • Short-distance in Radiotherapy or brachy thereby • Other Radiation sources • Closing though on Radiotherapy			
19	2	Radiation Protection • Biological effect of ionizing Radiation • Radiation protection units and limits • Radiation protection instrumentation • Radiation protection in diagnostic radiology • Radiation protection in Radiation therapy • Radiation protection in Nuclear medicine • Radiation accidents • Application of Nuclear		Lecture	Exam

		physics in medicine • Nuclear magnetic Resonance NMR • Magnetic resonance imaging (MRI)			

17- The structure of the course for practical medical physics /first academic level / the second course					
Week	Hours	**Required educational goals**	**Unit name and/or topic**	**education method**	**evaluation method**
1	2	Tools - Chart - How it works	Test tube	Lecture+ lab	Exam
2	2	Finding the density of water	Test tube	Lecture+ lab	Exam
3	2	Tools - how it works	Spherometer	Lecture+ lab	Exam
4	2	Finding the radius of curvature for mirrors and lenses and its use in medical devices	spherometer	Lecture+ lab	Exam
5	2	Tools - how it works	Wheatstones bridg	Lecture+ lab	Exam
6	2	Finding resistance and its relationship to bone fractures	Wheatstones bridge	Lecture+ lab	Exam
7	2	Tools - Chart - How it works	Spiral spring	Lecture+ lab	Exam
8	2	Finding the wavelength and its relationship to elasticity on the movement of the human body	Spiral spring	Lecture+ lab	Exam
9	2	Tools - Chart - How it works	CRO	Lecture+ lab	Exam
10	2	Shows both EEG-ECG	CRO	Lecture+ lab	Exam
11	2	Tools - Chart - How it works	Friction for wood on wood	Lecture+ lab	Exam
12	2	Finding the coefficient of friction and its relationship to	Friction for wood on wood	Lecture+ lab	Exam

		joint diseases and the lack of fluid between the cartilage and increase the friction and thus cause joint pain			
13	2	Tools - Chart - How it works	Viscosity of water	Lecture+ lab	Exam
14	2	Finding a wife and its relationship to blood viscosity and high blood pressure	Viscosity of water	Lecture+ lab	Exam
15	2	Explains its use in medical devices used magnetic imaging	Ohms law	Lecture+ lab	Exam

18-Infrastructure of histopathology	
1-Required course books	Medical physics By: John R. Cameron & James G. Skofronick Practical Physics **in** SI By: Armitag
2- main references (sources)	-All medical physics books and magazines
3- Recommended books and references (scientific journals, reports)	All medical physics books and magazines
4- Electronic references, websites	

5- • Academic Description Form For The Branch Of Human Anatomy

This course description provides a summary of the most important characteristics of the course and the learning objectives that the student is expected to achieve, demonstrating whether he has made maximum use of the available learning opportunities. It must be linked to the description of the program.

1- educational institution
University of Diyala \college of medicine
2-Scientific Department / Center
Human anatomy, histology, embryology and biology
3-Academic or professional program name
Human medicine
4-Final certificate name
Bachelor of Medicine and General Surgery
5-Academic system (annual / courses / semesters)
semesters
6- Semester/year
First course + second course / 2021
7-Available forms of attendance
Actual mandatory attendance
8-The number of study hours
Anatomy... 60 hours theoretical // 120 hours of practice Histology ... 60 hours of theory // 60 hours of practice Embryology .... 30 hours theoretical // There is no practical Biology...60 hours theoretical // 60 hours practical // 15 hours tutorial
9-Accredited Accreditation Program
Theoretical and practical study and discussions of blended learning, attendance, and electronic (via the Classroom platform)
10-Other external influences
A teaching hospital, library, internet, community, doctors' syndicate
11-Description creation date
15/6/2021
12-Academic Program Objectives
1 -Identify the different parts of the body. 2 -Describe the relationship of the different body systems and determine the functions of the different body systems.

3 -Estimation of the normal values of vital activities about different biological conditions.
4 -Distinguishing between the normal and abnormal functions of the different body systems.
5 -Studying the sequence of biological events in the human body.
-6 Studying the cell structure microscopically.
7 -Apply the basic scientific building blocks he has acquired to conduct scientific research and medical studies.
8 -Studying the different organs in the body and the mechanism of their formation.
9 -Studying tissues microscopically, classifying cells and distinguishing them from each other.
10 -A review of placenta formation and physiology.
11- Teaching the formation of gametes and the formation of the two-layered and triple-lamellar germ disk and describing the growth of the fetus.

13-Required program outcomes and methods of teaching, learning and assessment

- **Cognitive goals**

1 -Learning the basics of human physiology and its various vocabulary.
2 -Developing mental abilities through various modern academic and practical education methods
3 -Linking basic sciences with applied sciences in the future
4 -Giving lectures, tutorials and laboratory sessions.
5 -Enabling the student to use his full strength in observation and interpretation.
6 -Encouraging the student to constantly share and evaluate learning outcomes throughout the study period.
5 -Learn the method of scientific discussion.
6- Acquisition of laboratory skills.

- **Skills objectives of the program**

Methods of dealing with laboratory animals and scientific equipment.
2 -Teaching plastic models (models) similar to the human body.
3 -Acquisition of laboratory examination skills.
4- The ability to dissect the human body using a natural body and to identify the components of the body in detail.

- **Teaching and learning methods**

1 - Lectures - computers - plasma screens - modern scientific equipment - clinical tours - educational seminars, audio-visual equipment - discussions.
2 -The use of plastic models and human corpses.
3 -Use of optical microscopes.
4 -In-person and electronic blended learning (via the Classroom platform).
5- Illustrations using tissue slides

- **Evaluation Methods**

1- Discussion in lectures.
2 -Mid-course exams and end-of-course exams.
3 -Periodic evaluation.
4 -Small education groups.
5 -Practical exams.
6- Oral exams.

- **Behavioral and value objectives**

1-Ethical and professional discipline.

2 -Good interaction of students with each other.
3 -Develop a spirit of help.
4 -Eliminate class differences.
5- Teaching medical and professional ethics and how to deal with laboratory animals..

- **Teaching and learning methods**

1-Small scientific circles
2- Discussions and seminars
3- Scientific reports
4- In-person and electronic blended education (via the Classroom platform).
5- Use the graphic to facilitate the description of the member histologically.

- **Transferred general and qualification skills (other skills related to employability and personal development)**

1-The student should cooperate with his colleagues and teachers in an atmosphere of cordiality and understanding
2 -To work with his peers as a team
3- To interact with them on scientific trips and the media.

- **Teaching and learning methods**

-1Linking the presentation of the main material to the clinical benefit
-2Use the time perfectly for discussions with students
-3E-learning via e-learning platforms (Classroom).

- **Evaluation Methods**

1- Follow up on attendance and reasons for non-attendance.
2- Follow-up educational supervision concerning the subject.
3-Evaluate students' answers to exam questions related to this aspect.
-4End and mid-course exam

Academic description of anatomy for the first academic level

This summary provides a summary of the most important characteristics of the scheduled and expected learning outcomes from student achievement that show whether or not he or she has made the most out of learning opportunities is correlated with the program description.

1- symbol
Ana10**1**
2-Scientific Department / Center
Human anatomy
3-The number of study hours
Anatomy... 60 hours theoretical // 120 hours of practice
4-Academic Program Objectives
1 -Differentiate between the upper, lower, and thoracic nerves 2 -Differentiate between the upper, lower and thoracic veins. 3 -Differentiate between the upper, lower and thoracic arteries. 4 -Differentiate between the muscles of the upper and lower extremities and the chest. 5- Differentiate between the bones of the upper and lower extremities and the chest.
5-Required program outcomes and methods of teaching, learning and assessment
➢ **Cognitive goals**
1 -Learning the basics of human physiology and its various vocabulary. 2 -Developing mental abilities through various modern academic and practical education methods 3 -Linking basic sciences with applied sciences in the future 4 -Giving lectures, tutorials and laboratory sessions. 5 -Enabling the student to use his full strength in observation and interpretation. 6 -Encouraging the student to constantly share and evaluate learning outcomes throughout the study period. 5 -Learn the method of scientific discussion. 6- Acquisition of laboratory skills.
➢ **Skills objectives of the program**
1 -Promote the student to research problems and find solutions to them. 2 -Analyzing the results for use in learning. 3 -Analysis and plans to deal with problems in the field of human medicine. 4- Supporting the continuous updating of his information by accessing the latest research.
• **Teaching and learning methods**
1 -Scientific and weekly surprise tests. 2 -In-class exercises and activities 3- Guide students to some websites.
• **Evaluation Methods**
1-Daily theory exams 2 -Daily practical laboratory exams 3 -Theoretical and practical exam for half of the course and the end of the course

4- Oral exam 5 -Practical exams.
6- Oral exams.

- **Behavioral and value objectives**

1 -Doctors can understand others and understand and treat pain
2 -Doctors who can maintain an ethical standard and maintain medical information at a high level are considered.
3 -Preparations enable doctors to give priority to the patient.
4 -Preparing doctors who can take into account the human aspect of the patient.
5 -General skills, employing special motivation and personal development:
6 -Develop students' ability to deal with technical means
7 -Develop the student's ability to deal with the Internet.
8 -Develop the student's ability to deal with multimedia.
9- To develop the student's ability to dialogue and debate

6-The structure of the course for theoretical and practice anatomy /first academic level / the first course

Week	Hours	**Required educational goals**	**Unit name and/or topic**	**education method**	**evaluation method**
1	2 theoretical 4 practical	Teaching the student what is the meaning of position & movement	Introduction (Terms of position & movement of Human body	Lecture+ lab	General question discussion + exam
2	4 practica 2 theoretical l	Teaching the student what is The human body	-The human body Structure	Lecture+ lab	General question discussion + exam
3	4 practical 2 theoretical	Teaching the student what is-Structure of Human	Skin, fasciae Blood vessels	Lecture+ lab	General question discussion + exam
4	2 theoretical 4 practical	Identify the Muscles, Bones, Joints Nervous System	Muscles, Bones, Joints Nervous System	Lecture+ lab	General question discussion + +exam
5	4 practical 2 theoretical	Identify upper limb: Osteology of upper limb	Upper limb: Osteology of upper limb	Lecture+ lab	General question discussion + exam
6	2 theoretical 4 practical	Identify the Surface Anatomy Fasciae of upper limb Cutaneous nerves and Vessels	Surface Anatomy Fasciae of upper limb Cutaneous nerves and Vessels	Lecture+ lab	General question discussion + exam
7	4 practical 2 theoretical	Identify the Pectoral region	Pectoral region Axilla,	Lecture+ lab	General question

		Axilla, Back Lymphatic drainage	Back Lymphatic drainage		discussion + exam
8	2 theoretical 4practical	Identify the Brachial plexus Nerve injuries	Brachial plexus Nerve injuries	Lecture+ lab	General question discussion + +exam
9	4 practical 2 theoretical	Identify the Arm(anterior & posterior	Arm(anterior & posterior	Lecture+ lab	General question discussion + exam
10	2 theoretical 4 practical	Identify the Forearm (Anterior & posterior compartment	Forearm (Anterior & posterior compartment	Lecture+ lab	General question discussion + exam
11	4 practical 2 theoretical	Identify the Hand.	Hand	Lecture+ lab	General question discussion + exam
12	2 theoretical 4practical	Identify the Radiological Anatomy.	Radiological Anatomy	Lecture+ lab	General question discussion + exam
13	4 practical 2 theoretical	Identify the Lower limb Osteology of lower limb	Lower limb Osteology of lower limb	Lecture+ lab	General question discussion + exam
14	2 theoretical 4 practical	Identify the Surface Anatomy The fascia of the lower limb Cutaneous vessels, nerves & lymphatic's	Surface Anatomy The fascia of the lower limb	Lecture+ lab	General question discussion + exam
15	4 practical 2 theoretical	Identify the Surface Anatomy Cutaneous vessels, nerves & lymphatic's	Cutaneous vessels, nerves & lymphatic's	Lecture+ lab	General question discussion + exam

7-The structure of the course for theoretical and practice anatomy /first academic level / the second course					
Week	**Hours**	**Required educational goals**	**Unit name and/or topic**	**education method**	**evaluation method**
1	2 theoretical 4 practical	Identify the Gluteal region	Gluteal region Post compartment thigh	Lecture+ lab	General question

		Post compartment thigh Popliteal fossa	Popliteal fossa		discussion + exam
2	4 practica 2 theoretical l	Identify the Ant. compartment thigh Med. compartment thigh Lumbar plexus	Ant. compartment thigh Med. compartment thigh Lumbar plexus	Lecture+ lab	General question discussion + exam
3	4 practical 2 theoretical	Identify the Leg	Leg	Lecture+ lab	General question discussion + exam
4	2 theoretical 4 practical	Identify the Foot Arches of foot	Foot Arches of foot	Lecture+ lab	General question discussion + +exam
5	4 practical 2 theoretical	Identify the Radiological Anatomy	Radiological Anatomy	Lecture+ lab	General question discussion + exam
6	2 theoretical 4 practical	Identify the Thorax Thoracic walls Osteology	Thorax Thoracic walls Osteology	Lecture+ lab	General question discussion + exam
7	4 practical 2 theoretical	Identify the Muscles Nerves & vessels	Muscles Nerves & vessels	Lecture+ lab	General question discussion + exam
8	2 theoretical 4practical	Identify the Thoracic cavity Pleura, lungs	Thoracic cavity Pleura, lungs	Lecture+ lab	General question discussion + +exam
9	4 practical 2 theoretical	Identify the Mediastinum Superior mediastinum	Mediastinum Superior mediastinum	Lecture+ lab	General question discussion + exam
10	2 theoretical 4 practical	Identify the Heart Pericardium	Heart Pericardium	Lecture+ lab	General question discussion + exam
11	4 practical 2 theoretical	Identify the Heart chambers Conducting system	Heart chambers Conducting system	Lecture+ lab	General question discussion + exam
12	2 theoretical 4practical	Identify the Post. Mediastinum Joints, Movements	Post. Mediastinum Joints, Movements	Lecture+ lab	General question discussion + exam
13	4 practical	Identify the	Radiological Anatomy	Lecture+ lab	General

	2 theoretical	Radiological Anatomy			question discussion + exam
14	2 theoretical 4 practical	Identify the Gluteal region	Gluteal region	Lecture+ lab	General question discussion + exam
15	4 practical 2 theoretical	Identify Post compartment thigh Popliteal fossa	Post compartment thigh Popliteal fossa	Lecture+ lab	General question discussion + exam

8-Infrastructure of anatomy for the first academic level	
1-Required course books	Clinical Anatomy For Medical Students, by Richard S. Snell, Williams and Wilkins Cunningham"s Manual Of Practical Anatomy, Three Volumes, By G.J.Romanes: Oxford.Medical.Publications
2- main references (sources)	All human anatomy books and magazines
3- Recommended books and references (scientific journals, reports)	All human anatomy books and magazines
4- Electronic references, websites	https://themdjourney.com/20-best-anatomy-and-physiology-books-for-medical-students/#The_Anatomy_Coloring_Book

Academic Description Of Anatomy For The Second Academic Level

This summary provides a summary of the most important characteristics of the scheduled and expected learning outcomes of student achievement that show whether or not he or she has made maximum use of learning opportunities is correlated with the program description.

1-symbol
Ana212
2-Scientific Department / Center
Human anatomy
3-The number of study hours
Anatomy... 60 hours theoretical // 120 hours of practice
4-Academic Program Objectives
1-Differentiate between the abdominal component. 2 -Differentiate between the components of the aquarium 3 -Differentiate between the component of the head. 4 -Differentiate between the components of the neck 5- Differentiate between the components of the brain and spinal cord.
5-Required program outcomes and methods of teaching, learning and assessment
➢ **Cognitive goals**
.Promote the student to research problems and find solutions to them -1 .Analyzing the results for use in learning -2 .Analysis and plans to deal with problems in the field of human medicine -3 4- Supporting the continuous updating of his information by accessing the latest research.
➢ **Skills objectives of the program**
1 -Promote the student to research problems and find solutions to them. 2 -Analyzing the results for use in learning. 3 -Analysis and plans to deal with problems in the field of human medicine. 4- Supporting the continuous updating of his information by accessing the latest research.
• **Teaching and learning methods**
1 -Scientific and weekly surprise tests. 2 -In-class exercises and activities 3- Guide students to some websites.
• **Evaluation Methods**
1-Daily theory exams 2 -Daily practical laboratory exams 3 -Theoretical and practical exam for half of the course and the end of the course

4- Oral exam

- **Behavioral and value objectives**

Physicians can understand others, recognize the extent of pain, and treat it

2 -Doctors who can maintain an ethical standard and maintain medical information at a high level are considered.

3 -Preparations enable doctors to give priority to the patient.

4 -Preparing doctors who can take into account the human aspect of the patient.

5 -General skills, employing special motivation and personal development:

6 -Develop students' ability to deal with technical means

7 -Develop the student's ability to deal with the Internet.

8 -Develop the student's ability to deal with multimedia.

9 - Develop the student's ability to dialogue and debate.

6-The structure of the course for theoretical and practice anatomy /second academic level / the first course

Week	Hours	**Required educational goals**	**Unit name and/or topic**	**education method**	**evaluation method**
1	2 theoretical 4 practical	Teaching the student what is the meaning of Anterior abdominal wall Male external genitalia	Anterior abdominal wall Male external genitalia	Lecture+ lab	General question discussion + exam
2	4 practica 2 theoretical l	Identify the Abdominal cavity Peritoneum	Abdominal cavity Peritoneum	Lecture+ lab	General question discussion + exam
3	4 practical 2 theoretical	Identify the Abdominal viscera	Abdominal viscera	Lecture+ lab	General question discussion + exam
4	2 theoretical 4 practical	Identify Diaphragm Post. Abdominal wall	Diaphragm Post. Abdominal wall	Lecture+ lab	General question discussion + +exam
5	4 practical 2 theoretical	Identify the Blood supply of the abdomen & Pelvis Autonomic supply Lymphatic drainage	Blood supply of abdomen & Pelvis Autonomic supply Lymphatic drainage	Lecture+ lab	General question discussion + exam
6	2 theoretical 4 practical	Identify the Bony pelvis Pelvic walls Female external genitalia	Bony pelvis Pelvic walls Female external genitalia	Lecture+ lab	General question discussion + exam
7	4 practical 2 theoretical	Identify the Pelvic viscera	Pelvic viscera	Lecture+ lab	General question discussion +

					exam
8	2 thioretical 4practical	Identify the Perineum	Perineum	Lecture+ lab	General question discussion + +exam
9	4 practical 2 theoretical	Identify the Vessels, nerves of the pelvis & perineum.	Vessels, nerves of pelvis & perineum	Lecture+ lab	General question discussion + exam
10	2 thioretical 4 practical	Identify the Head & neck skull.	Head & neck skull	Lecture+ lab	General question discussion + exam
11	4 practical 2 theoretical	Identify the Vertebral column Cervical vertebrae	Vertebral column Cervical vertebrae	Lecture+ lab	General question discussion + exam
12	2 theoretical 4practical	Identify the Face, Muscles Blood & Nerve supply Lymphatic drainage scalp	Face, Muscles Blood & Nerve supply Lymphatic drainage scalp	Lecture+ lab	General question discussion + exam
13	4 practical 2 theoretical	Identify the Neck, surface anatomy Structural organization Fasciae of Neck Triangles & contents	Neck, surface anatomy Structural organization Fasciae of Neck Triangles & contents	Lecture+ lab	General question discussion + exam
14	2 theoretical 4 practical	Identify the Cranial Meninges Folds of dura mater venous sinuses	Cranial Meninges Folds of dura mater venous sinuses	Lecture+ lab	General question discussion + exam
15	4 practical 2 theoretical	Identify the Orbit Lacrimal apparatus	Orbit Lacrimal apparatus	Lecture+ lab	General question discussion + exam

7-The structure of the course for theoretical and practice anatomy /second academic level / the second course					
Week	**Hours**	**Required educational goals**	**Unit name and/or topic**	**education method**	**evaluation method**
1	2 theoretical 4 practical	Identify the Temporal & infra temporal fossae Tempromandibular joint	Temporal & infra temporal fossae Tempromandibular joint	Lecture+ lab	General question discussion + exam
2	4 practica	Identify the Root	The root of Neck	Lecture+ lab	General

	2 theoretical l	of Neck Thyroid & Parathyroid	Thyroid & Parathyroid		question discussion + exam
3	4 practical 2 theoretical	Identify the Cranial nerves Examination injuries	Cranial nerves Examination injuries	Lecture+ lab	General question discussion + exam
4	2 theoretical 4 practical	Identify the Lymphatic drainage Oral cavity, pharynx Larynx	Lymphatic drainage Oral cavity, pharynx Larynx	Lecture+ lab	General question discussion + +exam
5	4 practical 2 theoretical	Identify the Nose, Pterygopalatine fossa ear	Nose, Pterygopalatine fossa ear	Lecture+ lab	General question discussion + exam
6	2 theoretical 4 practical	Identify the Cervical plexus Autonomic nerve supply head & neck	Cervical plexus Autonomic nerve supply head & neck	Lecture+ lab	General question discussion + exam
7	4 practical 2 theoretical	Identify the Introduction-CNS parts, Divisions, Components Functional	Introduction-CNS parts, Divisions, Components Functional	Lecture+ lab	General question discussion + exam
8	2 theoretical 4practical	Identify the Blood supply of the brain & spinal cord Spinal cord	Blood supply of brain & spinal cord Spinal cord	Lecture+ lab	General question discussion + +exam
9	4 practical 2 theoretical	Identify the Brain stem Cranial nerve nuclei	Brain stem Cranial nerve nuclei	Lecture+ lab	General question discussion + exam
10	2 thioretical 4 practical	Identify the Cerebellum Diencephalon	Cerebellum Diencephalon	Lecture+ lab	General question discussion + exam
11	4 practical 2 thioretical	Identify the Cerebral hemispheres Cortex White mater Lateral ventricle	Cerebral hemispheres Cortex White mater Lateral ventricle	Lecture+ lab	General question discussion + exam
12	2 thioretical 4practical	Identify the Extropyramidal system Limbic system	Extropyramidal system Limbic system	Lecture+ lab	General question discussion + exam
13	4 practical	Identify the Major	Major pathways	Lecture+ lab	General

	2 theoretical	pathways			question discussion + exam
14	2 thioretical 4 practical	Identify the C.S.F circulation, hydrocephalus	C.S.F circulation, hydrocephalus	Lecture+ lab	General question discussion + exam
15	4 practical 2 theoretical	Intracranial hemorrhages	Intracranial hemorrhages	Lecture+ lab	General question discussion + exam

8-Infrastructure of anatomy for the second academic level	
1-Required course books	Clinical Anatomy For Medical Students, by Richard S. Snell, Williams and Wilkins Cunningham"s Manual Of Practical Anatomy, Three Volumes, By G.J.Romanes: Oxford.Medical.Publications
2- main references (sources)	All human anatomy books and magazines
3- Recommended books and references (scientific journals, reports)	All human anatomy books and magazines
4- Electronic references, websites	https://themdjourney.com/20-best-anatomy-and-physiology-books-for-medical-students/#The_Anatomy_Coloring_Book

Academic Description Of Histology For The Second Academic Level

This summary provides a summary of the most important characteristics of the scheduled and expected learning outcomes of student achievement that show whether or not he or she has made maximum use of learning opportunities is correlated with the program description.

1-symbol
HIS205
2-Scientific Department / Center
Human anatomy
3-The number of study hours
Histology... 60 hours theoretical // 60 hours of practice
4-Academic Program Objectives
1-Distinguish the cell component using light microscopy. 2 -Differentiation between different body tissues using a light microscope. 3 -Connecting cell structure, structure and tissues. 4 -The student participates in scientific discussions and presents them with confidence and consistency. 5 -Students gain experience in examining samples with different magnifications by drawing illustrations for each type of cell. 6- Keeping pace with scientific developments in the field of cells, tissues, and others.
• **Teaching and learning methods**
-1 Scientific and weekly surprise tests fixed. 2 -In-class exercises and activities 3- Guide students to some websites.
• **Evaluation Methods**
1 -Daily theory exams 2 -Daily practical laboratory exams 3 -Theoretical and practical exam for half of the course and the end of the course 4- Oral exam
➢ **Behavioral and value objectives**
1 -Doctors can understand others and understand and treat pain 2 -Doctors who can maintain an ethical standard and maintain medical information at a high level are considered. 3 -Preparations enable doctors to give priority to the patient. 4 -Preparing doctors who can take into account the human aspect of the patient. 5 -General skills, employing special motivation and personal development: 6 -Develop students' ability to deal with technical means 7 -Develop the student's ability to deal with the Internet. 8 -Develop the student's ability to deal with multimedia. 9 - Develop the student's ability to dialogue and debate.

5-The structure of the course for theoretical and practice histology /second academic level / the first course					
Week	**Hours**	**Required educational goals**	**Unit name and/or topic**	**education method**	**evaluation method**
1	2 theoretical 2 practical	Microscopy & their types. Primary tissue & their role in formation of tissue.	Introduction to the histology	Lecture+ lab	General question discussion + exam
2	2 practica 2 theoretical l	Teaching the student what is the meaning of tissue and its forms ,the cells which covered the body from outside and lining from inside .	Epithelial tissue	Lecture+ lab	General question discussion + exam
3	2 practical 2 theoretical	Modification unit for epithelial tissue. Exocrine glands & their classification.	Epithelial gland.	Lecture+ lab	General question discussion + exam
4	2 theoretical 2 practical	Identify the tissue which connect the tissue together and its types .	Connective tissue	Lecture+ lab	General question discussion + +exam
5	2 practical 2 theoretical	Identify the cells & fibers and its types	Cells of connective tissue	Lecture+ lab	General question discussion + exam
6	2 theoretical 2 practical	Identify the adipose cell and recognize it from other cell types	Adipose tissue	Lecture+ lab	General question discussion + exam
7	2 practical 2 theoretical	Identify the types of cartilage and its distribution in the body	Cartilage	Lecture+ lab	General question discussion + exam
8	2 thioretical 2 practical	Identify the bone tissue and its types	Bone	Lecture+ lab	General question discussion + +exam
9	2 practical 2 theoretical	The central & peripheral nerves system	Nervous system	Lecture+ lab	General question discussion + exam

10	2 theoretical 2 practical	Identify the nervous tissue and its types and explains the nervous impulse reach to rest body	Nerve tissue	Lecture+ lab	General question discussion + exam
11	2practical 2 theoretical	Identify the types of muscles and differences between them as longitudinal and transverse section	Muscle tissue	Lecture+ lab	General question discussion + exam
12	2 theoretical 2 practical	Identify the blood vascular system and its main function and	Circulatory system I	Lecture+ lab	General question discussion + exam
13	2practical 2 theoretical	The types of artery and vein.	Circulatory system II	Lecture+ lab	General question discussion + exam
14	2 theoretical 2 practical	Identify the types, shape and function of blood cells and the number of each type.	Blood cell	Lecture+ lab	General question discussion + exam
15	2practical 2 theoretical	Identify the way of derived of the blood cell from stem cell and differentiate of a blood cell .	hematopoiesis	Lecture+ lab	General question discussion + exam

6-The structure of the course for theoretical and practice histology /second academic level / the second course					
Week	**Hours**	**Required educational goals**	**Unit name and/or topic**	**education method**	**evaluation method**
1	2 theoretical 2 practical	Identify the lymphoid organ and tissue responsible for immunity of the body	Lymphoid organ	Lecture+ lab	General question discussion + exam
2	2 practica 2 theoretical l	Identify the digestive system and explain the digest and absorb in the organ of this system	Digestive system I	Lecture+ lab	General question discussion + exam
3	2 practical 2 theoretical	Digestive Tract; General structure,	Digestive system II	Lecture+ lab	General question

		the oral cavity and tongue. Pharynx and esophagus.			discussion + exam
4	2 theoretical 2 practical	Stomach and Small intestine Large intestine & appendix	Digestive system III	Lecture+ lab	General question discussion + +exam
5	2 practical 2 theoretical	Identify the organs which associated with digestive tract	Organs associated with digestive tract	Lecture+ lab	General question discussion + exam
6	2 theoretical 2 practical	Identify the parts of the respiratory system	The respiratory system I	Lecture+ lab	General question discussion + exam
7	2 practical 2 theoretical	Respiratory System; Nasal cavity, larynx and trachea.	The respiratory system II	Lecture+ lab	General question discussion + exam
8	2 theoretical 2 practical	Respiratory System The Lung Bronchial tree.	The respiratory system III	Lecture+ lab	General question discussion + +exam
9	2practical 2 theoretical	Identify the layers of the skin and the glands, hair and , nail	Skin	Lecture+ lab	General question discussion + exam
10	2 theoretical 2 practical	Identify The Urinary System The Kidney and blood supply.	The Urinary System I	Lecture+ lab	General question discussion + exam
11	2practical 2 thioretical	Identify nephrons Ureter, urinary bladder, urethra	The Urinary System II	Lecture+ lab	General question discussion + exam
12	2 thioretical 2 practical	Identify the glands and its structure	Endocrine glands	Lecture+ lab	General question discussion + exam
13	2practical 2 theoretical	Identify the parts of the male reproductive and their structure	Male reproduction	Lecture+ lab	General question discussion + exam
14	2 theoretical 2 practical	Identify the parts of the female reproductive and its structure	Female reproductive	Lecture+ lab	General question discussion + exam
15	2practical	Identify the ear	Photoreceptors and	Lecture+ lab	General

	2 theoretical	and the eye	audio receptors		question discussion + exam

7-Infrastructure of histology for the second academic level	
1-Required course books	-Human Anatomy and cell physiology by Mcgraw hill 17th ed
2- main references (sources)	All human histology books and magazines
3- Recommended books and references (scientific journals, reports)	All human histology books and magazines
4- Electronic references, websites	https://themdjourney.com/20-best-histology-and-physiology-books-for-medical-students/#The_Anatomy_Coloring_Book

Academic description of embryology for the second academic level

This summary provides a summary of the most important characteristics of the scheduled and expected learning outcomes from student achievement that show whether or not he or she has made the most out of learning opportunities is correlated with the program description.

1-symbol
EMB206
2-Scientific Department / Center
Human anatomy
3-The number of study hours
embryology... 60 hours theoretical // there is no practical
4-Academic Program Objectives
1 -Introduction to the regulation of molecular signals. 2 -Converting the gynogenesis of germ cells to males and females. 3 -The first week of development: from ovulation to implantation. 4 -The second week of the development of the bacterial disc B laminar 5 -The third week of development: a triple germinal disc. 6- Gastrointestinal tube and body cavities.
4-Acquired skills
1 -Promote the student to research problems and find solutions to them. 2 -Analyzing the results for use in learning. 3 -Analysis and plans to deal with problems in the field of human medicine. 4- Supporting the continuous updating of his information by accessing the latest research.
• **Teaching and learning methods**
-1 Scientific and weekly surprise tests fixed. 2 -In-class exercises and activities 3- Guide students to some websites.
• **Evaluation Methods**
1 -Daily theory exams 2 -Daily practical laboratory exams 3 -Theoretical and practical exam for half of the course and the end of the course 4- Oral exam
➢ **Behavioral and value objectives**
1 -Doctors can understand others and understand and treat pain 2 -Doctors who can maintain an ethical standard and maintain medical information at a high level are considered. 3 -Preparations enable doctors to give priority to the patient.

4 -Preparing doctors who can take into account the human aspect of the patient.
5 -General skills, employing special motivation and personal development:
6 -Develop students' ability to deal with technical means
7 -Develop the student's ability to deal with the Internet.
8 -Develop the student's ability to deal with multimedia.
9 - Develop the student's ability to dialogue and debate.

5-The structure of the course for theoretical embryology /second academic level / the first course					
Week	**Hours**	**Required educational goals**	**Unit name and/or topic**	**education method**	**evaluation method**
1	1	Teaching the student what is the meaning of embryology	Introduction to embryology	Lecture	General question discussion + exam
2	1	Teaching the student what is the meaning of molecular regulation signaling.	molecular regulation signaling	Lecture	General question discussion + exam
3	1	Identify Gametogenesis	Gametogenesis	Lecture	General question discussion + exam
4	1	Identify Gametogenesis conversion of germ cell into male	conversion of germ cell into male	Lecture	General question discussion + +exam
5	1	Identify male gametes	male gametes	Lecture	General question discussion + exam
6	1	Identify Gametogenesis conversion of germ cell into female	conversion of germ cell into female	Lecture	General question discussion + exam
7	1	Identify female gametes	female gametes	Lecture	General question discussion + exam
8	1	Identify the First week to development: Ovulation	First week to development to Ovulation	Lecture	General question discussion + +exam
9	1	Identify Fertilization	Fertilization	Lecture	General question discussion + exam

10	1	Identify implantation	Implantation	Lecture	General question discussion + exam
11	1	Identify Cleavage zygote	Cleavage zygote	Lecture	General question discussion + exam
12	1	Identify First week to development :Ovulation to implantation	First week to development: Ovulation to implantation	Lecture	General question discussion + exam
13	1	Identify Second week of development Bilaminar germ disc	The second week of development Bilaminar germ disc	Lecture	General question discussion + exam
14	1	Identify Third week of development :Trilaminar germ disc	Third week of development: Trilaminar germ disc	Lecture	General question discussion + exam
15	1	Identify the Third to eighth week the embryonic period	Third to eighth week the embryonic period	Lecture	General question discussion + exam

** there is no practice

6-The structure of the course for theoretical embryology /second academic level / the second course					
Week	**Hours**	**Required educational goals**	**Unit name and/or topic**	**education method**	**evaluation method**
1	1	Identify embryo from the 4^{th}-8^{th} weeks.	embryo from the 4^{th}-8^{th} weeks.	Lecture	General question discussion + exam
2	1	Identify The human fetus. And fetal membranes.	The human fetus. And fetal membranes.	Lecture	General question discussion + exam
3	1	Identify and transverse section of The gut tube	The gut tube	Lecture	General question discussion + exam
4	1	Identify and transverse sections of the body cavities	the body cavities	Lecture	General question discussion + +exam
5	1	Identify the Third month to birth	Third month to birth	Lecture	General question

					discussion + exam
6	1	Identify placenta	Placenta	Lecture	General question discussion + exam
7	1	Identify Somitogenesis	Somitogenesis	Lecture	General question discussion + exam
8	1	Identify Myogenesis	Myogenesis	Lecture	General question discussion + +exam
9	1	Identify Scheduled examination. Of embryo	Scheduled examination.	Lecture	General question discussion + exam
10	1	Identify the fetus	the fetus	Lecture	General question discussion + exam
11	1	Identify Teratology.	Teratology The	Lecture	General question discussion + exam
12	1	Identify The birth defects	birth defects.	Lecture	General question discussion + exam
13	1	Identify the Birth defects and prenatal diagnosis	prenatal diagnosis	Lecture	General question discussion + exam
14	1	Identify the Birth defects and Postnatal diagnosis	Postnatal diagnosis	Lecture	General question discussion + exam
15	1	Exam	exam	Lecture	General question discussion + exam

** there is no practice

7-Infrastructure of embryology for the second academic level	
1-Required course books	Medical Embryology
2- main references (sources)	Color Atlas of Embryology. Drews 1995-Developmental Biology. Gilbert 2003--2 2006
3- Recommended books and references (scientific journals, reports)	All embryos books and magazines
4- Electronic references, websites	https://themdjourney.com/20-best-emberyology-books-for-medical-students/#The_Anatomy_Coloring_Book

Academic Description Of Biology For The First Academic Level

This summary provides a summary of the most important characteristics of the scheduled and expected learning outcomes of student achievement that show whether or not he or she has made maximum use of learning opportunities is correlating them with the description of the program

1-symbol
BIO204
2-Scientific Department / Center
Human anatomy
3-The number of study hours
biology... 60 hours theoretical // 60 hours practical // 15 hours tutorial
4-Academic Program Objectives
1 -Identification of the different cellular parts. 2 -Describe the connection of different cellular parts and determine their functions. 3 -Estimation of the normal values of biological activities in relation to different biological conditions. 4 -Distinguishing between the normal and abnormal functions of the cellular parts. 5 -Studying the sequence of biological events in the human body. 6-Studying the cell structure microscopically. 7- Apply the basic scientific building blocks he has acquired to conduct scientific research and medical studies.
5-Acquired skills
1-Promote the student to research problems and find solutions to them. 2 -Analyzing the results for use in learning. 3 -Analysis and plans to deal with problems in the field of human medicine. 4- Supporting the continuous updating of his information by accessing the latest research..
• **Teaching and learning methods**
-1 Scientific and weekly surprise tests fixed. 2 -In-class exercises and activities 3- Guide students to some websites.
• **Evaluation Methods**
1 -Daily theory exams 2 -Daily practical laboratory exams 3 -Theoretical and practical exam for half of the course and the end of the course 4- Oral exam
➢ **Behavioral and value objectives**
1 -Doctors can understand others and understand and treat pain 2 -Doctors who can maintain an ethical standard and maintain medical information at a high level are considered. 3 -Preparations enable doctors to give priority to the patient.

4 -Preparing doctors who can take into account the human aspect of the patient.
5 -General skills, employing special motivation and personal development:
6 -Develop students' ability to deal with technical means
7 -Develop the student's ability to deal with the Internet.
8 -Develop the student's ability to deal with multimedia.
9 - Develop the student's ability to dialogue and debate.

6-The structure of the course for theoretical and practice biology /first academic level / the first course					
week	**Hours**	**Required educational goals**	**Unit name and/or topic**	**education method**	**evaluation method**
1	2	Introduction & Definitions	Cells make up living things	Theoretical lectures and practical laboratories	Discussions, reports, tests and exams (theoretical and practical)
	3	Practical Training			
2	2	Data Collection	Cells make up living things	Theoretical lectures and practical laboratories	Discussions, reports, tests and exams (theoretical and practical)
	3	Practical Training			
3	2	Sampling Methods	Cells make up living things	Theoretical lectures and practical laboratories	Discussions, reports, tests and exams (theoretical and practical)
	3	Practical Training			
4	2	Data Presentation	Cells make up living things	Theoretical lectures and practical laboratories	Discussions, reports, tests and exams (theoretical and practical)
	3	Practical Training			
5	2	Measurements of Central Tendency	Membrane models Have Changed	Theoretical lectures and practical laboratories	Discussions, reports, tests and exams (theoretical and practical)
	3	Practical Training			
6	2	Measurements of Variability	Membrane models Have Changed	Theoretical lectures and practical laboratories	Discussions, reports, tests and exams (theoretical and practical)
	3	Practical Training			
7	2	Range & Variance	Membrane models Have Changed	Theoretical lectures and practical laboratories	Discussions, reports, tests and exams (theoretical and practical)
	3	Practical Training			
8	2	Standard Deviation & Coefficient of	Membrane models Have Changed	Theoretical lectures and practical	Discussions, reports, tests and exams

		Variation		laboratories	(theoretical and practical)
	3	Practical Training			
9	2	Probability (Part 1)	Energy	Theoretical lectures and practical laboratories	Discussions, reports, tests and exams (theoretical and practical)
	3	Practical Training			
10	2	Probability (Part 2)	Energy	Theoretical lectures and practical laboratories	Discussions, reports, tests and exams (theoretical and practical)
	3	Practical Training			
11	2	Student's t-Test	Energy	Theoretical lectures and practical laboratories	Discussions, reports, tests and exams (theoretical and practical)
	3	Practical Training			
12	2	Chi-square Test (Part 1)	Energy	Theoretical lectures and practical laboratories	Discussions, reports, tests and exams (theoretical and practical)
	3	Practical Training			
13	2	Chi-square Test (Part 2)	How Cells Acquired ATP	Theoretical lectures and practical laboratories	Discussions, reports, tests and exams (theoretical and practical)
	3	Practical Training			
14	2	Correlation & Regression (Part 1)	How Cells Acquired ATP	Theoretical lectures and practical laboratories	Discussions, reports, tests and exams (theoretical and practical)
	3	Practical Training			
15	2	Correlation & Regression (Part 2)	How Cells Acquired ATP	Theoretical lectures and practical laboratories	Discussions, reports, tests and exams (theoretical and practical)
	3	Practical Training			

6-The structure of the course for theoretical and practice biology /first academic level / the first course					
week	**Hours**	**Required educational goals**	**Unit name and/or topic**	**education method**	**evaluation method**
1	2	Introduction & Definitions	Cells make up living things	Theoretical lectures and practical laboratories	Discussions, reports, tests and exams (theoretical and practical)
	3	Practical Training			
2	2	Data Collection	Cells make up	Theoretical	Discussions,

	3	Practical Training	living things	lectures and practical laboratories	reports, tests and exams (theoretical and practical)
3	2	Sampling Methods	Cells make up living things	Theoretical lectures and practical laboratories	Discussions, reports, tests and exams (theoretical and practical)
	3	Practical Training			
4	2	Data Presentation	Cells make up living things	Theoretical lectures and practical laboratories	Discussions, reports, tests and exams (theoretical and practical)
	3	Practical Training			
5	2	Measurements of Central Tendency	Membrane models Have Changed	Theoretical lectures and practical laboratories	Discussions, reports, tests and exams (theoretical and practical)
	3	Practical Training			
6	2	Measurements of Variability	Membrane models Have Changed	Theoretical lectures and practical laboratories	Discussions, reports, tests and exams (theoretical and practical)
	3	Practical Training			
7	2	Range & Variance	Membrane models Have Changed	Theoretical lectures and practical laboratories	Discussions, reports, tests and exams (theoretical and practical)
	3	Practical Training			
8	2	Standard Deviation & Coefficient of Variation	Membrane models Have Changed	Theoretical lectures and practical laboratories	Discussions, reports, tests and exams (theoretical and practical)
	3	Practical Training			
9	2	Probability (Part 1)	Energy	Theoretical lectures and practical laboratories	Discussions, reports, tests and exams (theoretical and practical)
	3	Practical Training			
10	2	Probability (Part 2)	Energy	Theoretical lectures and practical laboratories	Discussions, reports, tests and exams (theoretical and practical)
	3	Practical Training			
11	2	Student’s t-Test	Energy	Theoretical lectures and practical laboratories	Discussions, reports, tests and exams (theoretical and practical)
	3	Practical Training			

12	2	Chi-square Test (Part 1)	Energy	Theoretical lectures and practical laboratories	Discussions, reports, tests and exams (theoretical and practical)
	3	Practical Training			
13	2	Chi-square Test (Part 2)	How Cells Acquired ATP	Theoretical lectures and practical laboratories	Discussions, reports, tests and exams (theoretical and practical)
	3	Practical Training			
14	2	Correlation & Regression (Part 1)	How Cells Acquired ATP	Theoretical lectures and practical laboratories	Discussions, reports, tests and exams (theoretical and practical)
	3	Practical Training			
15	2	Correlation & Regression (Part 2)	How Cells Acquired ATP	Theoretical lectures and practical laboratories	Discussions, reports, tests and exams (theoretical and practical)
	3	Practical Training			

7-The structure of the course for theoretical and practice biology /first academic level / the second course					
week	**Hours**	**Required educational goals**	**Unit name and/or topic**	**education method**	**evaluation method**
1	2	Introduction & Definitions	Cells Divisions	Theoretical lectures and practical laboratories	Discussions, reports, tests and exams (theoretical and practical)
	2	Practical Training			
2	2	Data Collection	Cells Divisions	Theoretical lectures and practical laboratories	Discussions, reports, tests and exams (theoretical and practical)
	2	Practical Training			
3	2	Sampling Methods	Cells have a chromosome	Theoretical lectures and practical laboratories	Discussions, reports, tests and exams (theoretical and practical)
	2	Practical Training			
4	2	Data Presentation	Cells have a chromosome	Theoretical lectures and practical laboratories	Discussions, reports, tests and exams (theoretical and practical)
	2	Practical Training			
5	2	Measurements of Central Tendency	Cells have a chromosome	Theoretical lectures and practical laboratories	Discussions, reports, tests and exams (theoretical and
	2	Practical			

		Training			practical)
6	2	Measurements of Variability	Introducing Gregor Mendel	Theoretical lectures and practical laboratories	Discussions, reports, tests and exams (theoretical and practical)
	2	Practical Training			
7	2	Range & Variance	Introducing Gregor Mendel	Theoretical lectures and practical laboratories	Discussions, reports, tests and exams (theoretical and practical)
	2	Practical Training			
8	2	Standard Deviation & Coefficient of Variation	Introducing Gregor Mendel	Theoretical lectures and practical laboratories	Discussions, reports, tests and exams (theoretical and practical)
	2	Practical Training			
9	2	Probability (Part 1)	Chromosomes and genes	Theoretical lectures and practical laboratories	Discussions, reports, tests and exams (theoretical and practical)
	2	Practical Training			
10	2	Probability (Part 2)	Chromosomes and genes	Theoretical lectures and practical laboratories	Discussions, reports, tests and exams (theoretical and practical)
	2	Practical Training			
11	2	Student’s t-Test	Considering the Chromosomes	Theoretical lectures and practical laboratories	Discussions, reports, tests and exams (theoretical and practical)
	2	Practical Training			
12	2	Chi-square Test (Part 1)	Considering the Chromosomes	Theoretical lectures and practical laboratories	Discussions, reports, tests and exams (theoretical and practical)
	2	Practical Training			
13	2	Chi-square Test (Part 2)	Searching for the Genetic Material	Theoretical lectures and practical laboratories	Discussions, reports, tests and exams (theoretical and practical)
	2	Practical Training			
14	2	Correlation & Regression (Part 1)	Searching for the Genetic Material	Theoretical lectures and practical laboratories	Discussions, reports, tests and exams (theoretical and practical)
	2	Practical Training			
15	2	Correlation & Regression (Part 2)	What Genes Do	Theoretical lectures and practical	Discussions, reports, tests and exams

	2	Practical Training		laboratories	(theoretical and practical)

8-Infrastructure of biology for the first academic level	
1-Required course books	Medical Biology by Sylvia Madar
2- main references (sources)	Human Anatomy and Cellphysiology by Mc graw bill 17 th ed
3- Recommended books and references (scientific journals, reports)	All embryos books and magazines
4- Electronic references, websites	https://themdjourney.com/20-best-biology-books-for-medical-students/#The_Anatomy_Coloring_Book

6- • Academic Description Form For The Medicine Branch

This course description provides a summary of the most important characteristics of the course and the learning objectives that the student is expected to achieve, demonstrating whether he has made maximum use of the available learning opportunities. It must be linked to the description of the program.

1- educational institution
University of Diyala \college of medicine
2-Scientific Department / Center
Medicine
3-Academic or professional program name
Human medicine
4-Final certificate name
Bachelor of Medicine and General Surgery
5-Academic system (annual / courses / semesters)
Semesters
6- Semester/year
First course + second course / 2021
7-Available forms of attendance
Actual mandatory attendance
8-The number of study hours
• third level: Theoretical 45 hours, practical 60 hours • The fourth stage: Theoretical 120 hours, practical 90 hours • level five Medicine/theoretical 60 hours practical 45 hours Neurology/ Theoretical 30 hours Practical 45 hours Psychological/theoretical 30 hours practical 45 hours Dermatology/ theoretical 30 hours practical 45 hours • Sixth stage Practical 450 hours
9-Accredited Accreditation Program
Theoretical and practical study and discussions of blended learning, attendance and electronic (via the Classroom platform)
10-Other external influences
A teaching hospital, library, internet, community, doctors' syndicate
11-Description creation date
15/6/2021
12-Academic Program Objectives
1-Providing the scientific framework in terms of acquiring knowledge information and understanding its

importance in various pathological cases to facilitate the process of diagnosing and treating such cases.
2 -Practicing clinical skills by communicating with the patient, collecting information, performing a clinical examination, and developing an integrated treatment plan, starting with the differential diagnosis and ending with following up on the patient's response.
3 -The student should be able to take a medical history and examine patients in general with examining the various body systems (cardiovascular system, respiratory system, digestive system and nervous system).
4 -Attending the emergency of the teaching hospital and identifying the sick cases therein.
5- Develop a plan to treat sick conditions and how to conduct medical examinations
6 -Watching the pathological cases in the inner halls of the people of Nador, the Echo and the Unit of Psychiatry, Joints and Dermatology.
7- The student should be able to search in medical journals for a diseased condition that he witnessed during the scientific training and discuss this case through seminars

13-Required program outcomes and methods of teaching, learning and assessment

- **Cognitive goals**

1 -Studying various internal diseases, especially common ones or emergency cases that may face the doctor.
2 -Identify emergency internal cases and ways to treat them.
3 -Understanding the interactions between internal diseases and diseases in other branches.
4 -Knowing ways to prevent some diseases that may pose a danger to the doctor or patients.
5 -Knowing the legal responsibilities of some diseases, especially the transmissible ones.
6- Knowing the types of alternative medicine and their uses.

Skills objectives of the program

1-Accurate medical history taking, especially in emergency cases.
2 - The correct methods of measuring blood pressure and other vital activities.
3- Clinical skills in examining the patient.

- **Teaching and learning methods**

1-Lectures, computers, plasma screens, modern scientific equipment, clinical tours, educational seminars, audiovisual equipment, discussions, teaching hospitals.
2- In-person and electronic blended learning (via the Classroom platform)

- **Evaluation Methods**

1-Discussion in lectures
2-Mid-course exams and end-of-course exams
3-periodic evaluation
4-Small Education Groups
5-Practical exams

- **Behavioral and value objectives**

1-Self-development by dealing with emergency cases of internal diseases
2 -Recognize the professional responsibility necessary to deal with internal diseases, especially communicable diseases
3- Estimating and evaluating the uses of alternative and traditional medicine

- **Teaching and learning methods**

1 -Graduation of a doctor who is familiar with the most important common internal diseases to make him efficient in diagnosing emergency cases and methods of treatment and the impact of treatments and interventions on these diseases and vice versa as well

2- Enable students to develop continuous self-development after graduation to keep pace with the development in the field of specialization.

- **Evaluation Methods**

1-Discussion in lectures
2-Mid-course exams and end-of-course exams
3-periodic evaluation
4-Small Education Groups
5-Practical exams

14-The structure of the course for medecin /third academic level / the first course

Week	Hours	Required educational goals	Unit name and/or topic	education method	evaluation method
1	theoretical 1 practical 2	Introduction to clinical medicine	Introduction to internal medicine	Lecture+ practical	Exam
2	theoretical 1 practical 2	Introduction to clinical medicine	Introduction to internal medicine	Lecture+ practical	Exam
3	theoretical 1 practical 2	Introduction to clinical medicine	Introduction to internal medicine	Lecture+ practical	Exam
4	theoretical 1 practical 2	Pulse and temperature	Introduction to internal medicine	Lecture+ practical	Exam
5	theoretical 1 practical 2	Pain Headache	Introduction to internal medicine	Lecture+ practical	Exam
6	theoretical 1 practical 2	Pulse and temperature	Introduction to internal medicine	Lecture+ practical	Exam
7	theoretical 1 practical 2	Cyanosis	Introduction to internal medicine	Lecture+ practical	Exam
8	theoretical 1 practical 2	Temperature	Introduction to internal medicine	Lecture+ practical	Exam
9	theoretical 1 practical 2	Oral diseases	Introduction to internal medicine	Lecture+ practical	Exam
10	theoretical 1 practical	Dysphagia	Introduction to internal medicine	Lecture+ practical	Exam
11	theoretical 1 practical 2	Vomiting Hematamesis and Constipation	Introduction to internal medicine	Lecture+ practical	Exam
12	theoretical 1 practical 2	Diarrhea and malabsorption	Introduction to internal medicine	Lecture+ practical	Exam
13	theoretical 1 practical 2	Urinary symptoms	Introduction to internal medicine	Lecture+ practical	Exam
14	theoretical 1 practical 2	Dyspnea and cough	Introduction to internal medicine	Lecture+ practical	Exam
15	theoretical 1 practical 2	Palpitation	Introduction to internal medicine	Lecture+ practical	Exam

15-The structure of the course for medicine /third academic level / the first course					
Week	**Hours**	**Required educational goals**	**Unit name and/or topic**	**education method**	**evaluation method**
1	theoretical 1 practical 2	Electrolyte disturbance	Introduction to internal medicine	Lecture+ practical	Exam
2	theoretical 1 practical 2	Obesity	Introduction to internal medicine	Lecture+ practical	Exam
3	theoretical 1 practical 2	Dehydration and fluid overload	Introduction to internal medicine	Lecture+ practical	Exam
4	theoretical 1 practical 2	Edema	Introduction to internal medicine	Lecture+ practical	Exam
5	theoretical 1 practical 2	Bone diseases	Introduction to internal medicine	Lecture+ practical	Exam
6	theoretical 1 practical 2	Vitamins	Introduction to internal medicine	Lecture+ practical	Exam
7	theoretical 1 practical 2	Alkalosis and acidosis	Introduction to internal medicine	Lecture+ practical	Exam
8	theoretical 1 practical 2	Weight loss	Introduction to internal medicine	Lecture+ practical	Exam
9	theoretical 1 practical 2	Electrolyte disturbac	Introduction to internal medicine	Lecture+ practical	Exam
10	theoretical 1 practical	Obesity	Introduction to internal medicine	Lecture+ practical	Exam
11	theoretical 1 practical 2	Nutritional disorders	Introduction to internal medicine	Lecture+ practical	Exam
12	theoretical 1 practical 2	HLA disease	Introduction to internal medicine	Lecture+ practical	Exam
13	theoretical 1 practical 2	Immune deficiency state	Introduction to internal medicine	Lecture+ practical	Exam
14	theoretical 1 practical 2	Immunology of cancer	Introduction to internal medicine	Lecture+ practical	Exam
15	theoretical 1 practical 2	Immunosuppressive disorders	Introduction to internal medicine	Lecture+ practical	Exam

16-Infrastructure of medecine for the third academic level	
1-Required course books	Davidson's principle &practice of medicin e
2- main references (sources)	medicine of Textbook Harrison Cecile textbook of medicine. Kummer &clark of medicine Macleod clinical method.
3- Recommended books and references (scientific journals, reports)	All internal medicine books and magazines
4- Electronic references, websites	Medscape., e medicine

17-The structure of the course for medicine /fourth academic level / the first course					
Week	**Hours**	**Required educational goals**	**Unit name and/or topic**	**education method**	**evaluation method**
1	4	Symptoms and signs of cardiovascular system (CVS) disorders Investigations of CVS	heart and blood vessels	Lecture+ practical	Exam
2	4	Coronary artery disease	heart and blood vessels	Lecture+ practical	Exam
3	4	Heart failure	heart and blood vessels	Lecture+ practical	Exam
4	4	Arrhythmias and anti-arrhythmic drugs	heart and blood vessels	Lecture+ practical	Exam
5	4	Vascular diseases systemic and pulmonary hypertension	heart and blood vessels	Lecture+ practical	Exam
6	4	Congenital heart diseases Pericardial heart diseases	heart and blood vessels	Lecture+ practical	Exam
7	4	Viral infections	Infectious diseases	Lecture+ practical	Exam
8	4	HIV/AIDS	Infectious diseases	Lecture+ practical	Exam

9	4	STD infections	Infectious diseases	Lecture+ practical	Exam
10	4	PUO/Septicemia	Infectious diseases	Lecture+ practical	Exam
11	4	Infections by Mycoplasma,reckittsia, Spirockittes	Infectious diseases	Lecture+ practical	Exam
12	4	Mycobacterial and fungal infections	Infectious diseases	Lecture+ practical	Exam
13	4	Gram positive cocci and bacilli infections anaerobic gram positive infections	Infectious diseases	Lecture+ practical	Exam
14	4	Infections of gram negative organisms.	Infectious diseases	Lecture+ practical	Exam
15	4	Symptoms and signs of cardiovascular system (CVS) disorders Investigations of CVS	Infectious diseases	Lecture+ practical	Exam

18-The structure of the course for medicine /fourth academic level / the second course					
Week	**Hours**	**Required educational goals**	**Unit name and/or topic**	**education method**	**evaluation method**
1	4	Investigation of GIT	Digestive system	Lecture+ practical	Exam
2	4	Disease of mouth diseas of esophagus	Digestive system	Lecture+ practical	Exam
3	4	Peptic ulcer	Digestive system	Lecture+ practical	Exam
4	4	Gastritis and cancer of stomach	Digestive system	Lecture+ practical	Exam
5	4	Malabsorption syndrome	Digestive system	Lecture+ practical	Exam
6	4	Chronic diarrhea	Digestive system	Lecture+ practical	Exam
7	4	Introduction to respiratory system	Respiratory system	Lecture+ practical	Exam
8	4	Investigations	Respiratory system	Lecture+ practical	Exam
9	4	Pneumonias	Respiratory system	Lecture+ practical	Exam
10	4	Tuberculosis	Respiratory system	Lecture+ practical	Exam
11	4	Obstructive airway	Respiratory system	Lecture+	Exam

		disease		practical	
12	4	Introduction to endocrine	Endocrine	Lecture+ practical	Exam
13	4	Pituitary diseases	Endocrine	Lecture+ practical	Exam
14	4	Diabetes mellitus	Endocrine	Lecture+ practical	Exam
15	4	Thyroid disease	Endocrine	Lecture+ practical	Exam

19-The structure of the course for medicine /fifth academic level					
Week	**Hours**	**Required educational goals**	**Unit name and/or topic**	**education method**	**evaluation method**
1-30	1 theory 2 practiacl	Neuromedicine	Neurology	Lecture+ practical	Exam
1-30	1 theory 2 practical	Psychiatry	Psychiatry	Lecture+ practical	Exam
1-30	1 theory 2 practical	Dermatology	Dermatology	Lecture+ practical	Exam
1-10	1 theory	Rheumatology & connective tissue diseas	Rheumatology & connective tissue disease	Lecture	Exam
1-10	1 theory	Nephrology	Nephrology	Lecture	Exam
1-10	1 theory	Clinical pharmacology	Clinical pharmacology	Lecture	Exam
1-10	1 theory	Hematology	Hematology	Lecture	Exam

20-The structure of the course for medicine /sixth academic level					
Week	**Hours**	**Required educational goals**	**Unit name and/or topic**	**education method**	**evaluation method**
1-30	30 hours per week	Clinical medicine	Clinical medicine	practical	exam
Note: The theoretical material is presented through the seminars provided by the students					

21-Infrastructure of medicine	
1-Required course books	Davidson's principle &practice of medicin e
2- main references (sources)	medicine of Textbook Harrison Cecile textbook of medicine. Kummer &clark of medicine Macleod clinical method.
3- Recommended books and references (scientific journals, reports)	All internal medicine books and magazines
4- Electronic references, websites	Medscape., e medicine

22-course development plan
Develop academic curricula annually and update them to suit the development in the treatment of internal diseases

7- • Academic Description Form For Pediatrics

This course description provides a summary of the most important characteristics of the course and the learning objectives that the student is expected to achieve, demonstrating whether he has made maximum use of the available learning opportunities. It must be linked to the description of the program.

1- educational institution
University of Diyala \college of medicine
2-Scienpediatricstific Department / Center
Pediatrics
3-Academic or professional program name
Human medicine
4-Final certificate name
Bachelor of Medicine and General Surgery
5-Academic system (annual / courses / semesters)
Semesters
6- Semester/year
First course + second course / 2021
7-Available forms of attendance
Actual mandatory attendance
8-The number of study hours
Fifth stage / first course: 30 theoretical hours (2 units) + 45 practical hours (1.5 units) Second Course 2: 30 theoretical hours (2 units) + 45 practical hours (1.5 units) Sixth stage / 360 practical hours (12 units)
9-Accredited Accreditation Program
Theoretical and practical study and discussions of blended learning, attendance and electronic (via the Classroom platform)
10-Other external influences
A teaching hospital, library, internet, community, doctors' syndicate
11-Description creation date
15/6/2021
12-Academic Program Objectives
1 -Graduating students with the ability to work as a doctor in state institutions capable of serving and treating the individual 2 - Supplementing the ministries related to the public health of the individual and society to provide medical services to the fullest. 3 -Providing a medical staff specialized in medical floatation who can create job opportunities in the private sector and start work on their behalf without waiting for work in state institutions. 4 -The possibility of sending the first students to advanced countries in the field of pediatrics to transfer the latest findings of science to our country. 5 -Preparing and graduating students with a scientific and practical vision of all diseases and treatments for

children
6- They can pass local, Arab and international scientific tests to obtain job opportunities abroad or complete their studies
7- Can continue continuing education to develop their skills in all public and private sectors

13-Required program outcomes and methods of teaching, learning and assessment

- **Cognitive goals**

1 -Enable students to obtain knowledge and understanding of the basics of different types of medical sciences concerning child health.
2 -Enabling students to obtain knowledge and understanding of the genetic diseases of the child.
3 -Enable students to obtain knowledge and understanding of the nature of the development and growth of the child and his general health.
4 -Enabling students to obtain knowledge and understanding of the mental health of the child.
5 -Enabling students to obtain knowledge and understanding of the genetic ways of transmitting diseases in children.
6 -Learn the method of scientific discussion
7-Acquisition of laboratory skills

- **Skills objectives of the program**

1-Training students to obtain the scientific skills necessary to work in scientific institutions concerned with pediatrics.
2 - Training students to obtain practical skills in using the means, information, skills and laboratories necessary for the diagnosis and treatment of the child.
3 -Providing students with the practical field skills necessary to distinguish genetic phenomena such as the presence of beneficial genetic mutations and to benefit from them.
4 - Training students to obtain the skills required to work in the specialty of pediatrics.

- **Teaching and learning methods**

1-Lectures, computers, plasma screens, modern scientific equipment, clinical tours, educational seminars, audio-visual equipment, discussions, teaching hospitals.
2- In-person and electronic blended education (via the Classroom platform).

- **Evaluation Methods**

1-Discussion in lectures
2-Mid-course exams and end-of-course exams
3-periodic evaluation
4-Small Education Groups
5-Practical exams

- **Behavioral and value objectives**

1 -Instilling human values for a sense of responsibility among students.
2 -Cultivating noble values and ethical dealings during medical work, such as honesty, love of work and sincerity in it, and to feel that the human being everywhere is his goal in terms of health and treatment.
3- Making the student feel that medicine and the provision of medical services is a collective responsibility, and as a doctor, he must prepare himself for collective work in health institutions and stay away from narrow personal interests.

- **Teaching and learning methods**

1 -Theoretical lectures using illustration aids.
2 .Practical application of the concepts that have been studied in specialized laboratories and teaching

hospitals.

3 .Seminars (students are assigned a topic within the curriculum for presentation and discussion).

- 4. Solving scientific and medical problems by discussing their merits within small groups to reach the correct solution.

- **Evaluation Methods**

1 .Daily theoretical and practical exams.

2 .Semester exams (half a first course and half a second course) (and final courses) (theory and practical).

3. Seminars (assigning each student a topic for presentation and discussion).

- **Transferred general and qualification skills (other skills related to employability and personal development)**

.1-Using modern means to search for new parameters (scientific and medical websites)

2 .Attending specialized scientific symposiums to see the latest developments in the medical field.

3 .Active participation in practical sessions in specialized laboratories and teaching hospitals.

4. Applying the accumulated information in practice in educational hospitals and conducting scientific research.

- **Teaching and learning methods**

1 -Theoretical lectures using illustration aids.

2 .Practical application of the concepts that have been studied in specialized laboratories and teaching hospitals.

3 .Seminars (students are assigned a topic within the curriculum for presentation and discussion).

4. Solving scientific and medical problems by discussing their merits within small groups to reach the correct solution.

- **Evaluation Methods**

1 -Half-course exams (1+2) and the final of the courses.

2 -Preparing reports.

3 - Seminars and weekly seminars.

4- Daily exams (theoretical and practical)

14-The structure of the course for pediatric /fifth academic level / first course					
Week	**Hours**	**Required educational goals**	**Unit name and/or topic**	**education method**	**evaluation method**
1	2	1.Concept of Growth & Development 2.Assess and measure growth accurately 3.Determine the formation & eruption of teeth 4.Plot & interpret growth charts 5.Assess different stages of normal developmental milestones 6.Determine the Pattern of growth 7- Describe periods of	Growth, development, and Nutrition	Lecture	Exam

		growth 8- Describe the factors which affect the Growth 9- Describe the types of infant feeding 10- Advantages of breastfeeding 11- Contra-indications of breastfeeding 12- How to prepare bottle feed?			
	3	- Training about approaches to child patients and their families. - Outlines the items of history taking. - Identify the points that characterize history taking in pediatrics.	History taking	Practical	Exam
2	2	1- Overview of Nutritional Requirements 2- Use the history & physical exam. to evaluate nutritional status. 3- Identify etiologic categories of malnutrition,1ry,2ry, 4- Present an approach to recognizing & treating some common nutritional problems of childhood. 5- Display an understanding of the principles for managing severe childhood undernutrition. 6- Definition of Malnutrition 7- Explain the Causes of Malnutrition 8- Measurement and	Malnutrition	Lecture	Exam

		Types of Malnutrition (marasmus and kwashiorkor) 9- Mild/Moderate Malnutrition (Underweight and Stunting) 10- Identify the Nutritional Deficiencies (Iodine & Fe. Vitamins – A,B,C,D,E,K) 11- Outline management of Severe Malnutrition			
	3	- Practicing the whole history taking upon child patients admitted to hospital by each student separately. - Present the history in front of other students for discussion and correction of mistakes.	History taking	Practical	Exam
3	2	**1-** define the basic of human genetics. 2- describe the basics & types of inherited diseases. 3- identify the most common types of genetic aberrations in human beings.	Genetics	Lecture	Exam
	3	- Try to accommodate history taking according to the clinical conditions. - Concentrate on positive and negative relevant findings.	. History taking	Practical	Exam
4	2	- Differentiate between(Live vaccines, Attenuated live vaccines, Inactivated (killed vaccines) - Identify Types of vaccines. - Discuss Route of adminstration	Immunization	Lecture	Exam

		- Education & counseling for children, parents. - Discuss the benefits of immunization programs. - Communicate to patients and parents about vaccine benefits and risks - Conduct an effective plan of management for children regarding immunization - List possible complications of immunization - Diagnose potentially lethal anaphylaxis and initiate immediate treatment			
	3	- Training about approaches to child patients and their families. - Training about how to examine a child without interfering or crying him. - Reviewing the case sheets of the general examination and adding parts specific for pediatrics including growth parameters.	General Exam.	Practical	Exam
5	2	- Determine the IP & possible route of communication. - Outline measures of prevention - Identify the presenting features of the infection - Determine the immunization status of the infants/children. - Determine Hx of contacts, travel, farm visits, ingestion of unpasteurized milk or undercooked meat, source of water supply. - Elicit a Hx of the pregnancy &delivery,	Infectious - Typhoid. - Kala-azar. - Brucellosis. - Chickenpox -Measles, - Rubella	Lecture	Exam

		maternal Hx of fever, rash, flu-like illness, litter, etc.(Rubella) - List & interpret clinical & lab. findings which were key in the processes of exclusion ,DDx & Dx: - Describe rapid viral testing, stool tests, & viral serology. - Define Outline treatment of **(**Typhoid, Kala-azar, Brucellosis, ,,Chicken pox, Measles, Rubella.) - Enumerate complications of each disease.			
	3	- Practicing the general examination by each student separately upon child admitted to hospital. - Each student must present his finding in front of others.	General Exam.	Practical	Exam
6	2	- Determine the IP & possible route of communication - Outline measures of prevention to contain the spread of communicable disease. - Identify the presenting features of the infection. - Determine the immunization status of the infants/children. - Determine Hx of contacts. - Determine complications and prognosis of infectious diseases - List & interpret clinical & lab. findings which were key in the processes of exclusion ,DDx & Dx. - Conduct an initial plan of Mx for a pt with	Infectious - mumps. - pertussis -scarlet fever - Roseola	Lecture	Exam

		childhood communicable diseases - Outline Mx of specific communicable diseases.			
	3	- Concentrate on positive and negative relevant clinical findings. - Interpretation of the clinical findings. - Outlines the differential diagnosis. - Outlines the laboratory and radiological tests to reach diagnosis.	General Exam.	Practical	Exam
7	2	- Determine the IP & possible route of infection. - Outline measures of prevention of viral hepatitis. - Describe rapid viral testing for HAV, HBV,HCV,HDV,HEV) - Identify complications of viral hepatitis. - Identify the presenting features of the infection - Discuss specific treatment - Outline management - Conduct a counseling	Infectious - hepatitis A,B,C,D,E.	Lecture	Exam
	3	- Identify the anatomy and physiology/ patho-physiology. - Enumerate symptoms & signs of disease or problems may be developed regarding this system. - Concentrate on emergency conditions may arise in children regarding this system.	Respiratory system	Practical	Exam
8	2	Identify the concept of NN sepsis -Describe the risk factors for NN sepsis -Explain the types of NN sepsis according to the	Neonatology	Lecture	Exam

		onset -Identify the different etiologies -Discuss the clinical approach to NN sepsis -Describe the sepsis(infectious) screen - Outline the treatment			
	3	- Doing scientific steps of examination in sequence, including inspection, palpation, percussion, and auscultation. - Detection of signs of the implicated diseases.	Respiratory system	Practical	Exam
9	2	Define the concept Describe the pathophysiology of jaundice Identify the etiology of NN jaundice Describe the types of NN jaundice Identify the Risk factors of NN jaundice Describe the clinical approach to NN jaundice Outline the management of NN jaundice Explain the effects, Mechanism & complications of Phototherapy Enumerate the indications & complications of Exchange transfusion	Neonatology	Lecture	Exam
	3	- Concentrate on positive and negative relevant clinical findings. - Interpretation of the clinical findings. - Outlines the differential diagnosis. - Outlines the laboratory and radiological tests to reach diagnosis.	Respiratory system	Practical	Exam

10	2	1-Definitions 2-Eplain the Causes 3-What are the Problems encountered by LGA & SGA 4-outline management 5-Conduct a counseling & education program for caregivers of children with poor growth. 6-Conduct an ongoing program to monitor the progress of such children. 7-Appropriately utilize hospitalization, consultation with other health professionals & community resources	Neonatology	Lecture	Exam
	3	- Identify the anatomy and physiology/ pathophysiology. - enumerate symptoms & signs of disease may develop in this system. - Concentrate on emergency conditions may arise in children regarding this system.	Abdominal examination	Practical	Exam
11	2	,Fetal lung characteristics Causes and classification of cyanosis Identify the signs of Respiratory Distress , Describe the Evaluation and Investigation of Neonatal cyanosis General Management Differential diagnosis of و Neonatal cyanosis **RDS**(Describe the pathophysiology, Risk factors, clinical findings, X ray findings, Outline Management. Prevention, Prognosis) **Transient tachypnea of newborn(TTN)**(Concept, Mechanism, Risk factors, clinical findings, X-ray findings, Outline	Neonatology	Lecture	Exam

		Management) **Meconium Aspiration Syndrome**(Describe the epidemiology, clinical Features, X ray findings, management) **Diaphragmatic Hernia**(Identify the concept , Types , Describe the Clinical Features X ray findings, Outline the Management) **Congenital pneumonia** (explain the Pathophysiology, Identify the risk factors and common M.O. ,Describe Clinical findings, X ray findings, Outline Treatment.			
	3	- Doing scientific steps of examination in sequence, including inspection, palpation, percussion, and auscultation. - Detection of signs of the implicated diseases. - Diagnose and solve the problems	Abdominal examination	Practical	Exam
12	2	1- Identify the risks and risk factors for poisoning in children. 2- Describe the clinical presentation of the important common poisoning in children. 3- Outlines the most important steps of management of poisoning.	Poisoning	Lecture	Exam
	3	- Concentrate on positive and negative relevant clinical findings. - Interpretation of the clinical findings. - Outlines the differential diagnosis. - Outlines the laboratory and radiological tests to reach diagnosis.	Abdominal examination	Practical	Exam
13	2	Pneumonia (Definition	Respiratory	Lecture	Exam

		,etiology ,to assess the predisposing factors for recurrent pneumonia, clinical manifestations ,to differentiate between viral &bacterial pneumonia& out line the management &its complications) Bronchiolitis (Definition, etiology , clinical manifestations ,to know the criteria for admission to hospital ,to outline management& prevention.	system		
	3	- Review history taking and general examination.	Revision	Practical	Exam
14	2	Asthma(Definition, etiology , pathophysiology ,to classify asthma according to severity ,to assess risk factors of exacerbations ,to know the drugs used in the management of acute exacerbations &controller therapy)	Respiratory system	Lecture	Exam
	3	- Review respiratory system and abdominal examination.	Revision	Practical	Exam
15	2	Sore throat & strider(How to approach to a case presented with strider ,causes & management.	Respiratory system	Lecture	Exam
	3	- Clinical assessment.	Revision	Practical	Exam

15-The structure of the course for pediatric /fifth academic level / second course					
Week	**Hours**	**Required educational goals**	**Unit name and/or topic**	**education method**	**evaluation method**
1	2	Define chronic diarrhea as > .2 weeks in duration -Differentiate small bowel & large bowel diarrhea -Differentiate osmotic from secretory diarrhea, &maldigestion from Malabsorption -List & interpret clinical &	CVS examination	Lecture	Exam

		lab. findings which were key in the processes of DDx&Dx,exclusion -Outline plan of management for patients with ch. diarrhea, including the prevention & treatment of related complications (e.g. pts with CD, pancreatic insufficiency, vitamin & .mineral deficiencies Diarrhea : 1-Definition, Etiology& Mechanism of diarrhea & vomiting 2-Assess the degree of dehydration &Electrolytes disturbance 3-Differential Dx. 4- Outline Management of diarrheal diseases 5-Expected Complications & Prevention			
	3	- Identify the anatomy and physiology/ pathophysiology. - Enumerate symptoms & signs of disease may develop in this system. - Concentrate on emergency conditions may arise in children regarding this system.	GIT	Practical	Exam
2	2	Dehydration & electrolytes changes: 1- Determine the degree and type of dehydration/volume depletion, 2- investigate possibility of electrolyte abnormalities (sodium/potassium/hydrogen ion concentration,) 3-Determine Types of Fluids used in Replacement 4-Discuss Fluid Therapy in Pediatric age group . Pediatric surgery: Select patients with abdominal pain(AP) who	GIT Pediatric surgery	Lecture	Exam

		require emergency Tx. -Elicit clinical findings which are key to establish the most likely etiology of the pain -Differentiate acute from chronic pain & organic from functional -Interpret abdominal x-rays -Conduct an effective plan of Mx for a pt with AP -Determine which pts have significant liver dysfunction & its cause -Differentiate between the causes of jaundice -Describe the immunization status, past &Family Hx. -Discuss abnormal LFT in the context of the clinical presentation, & select pts requiring medical Mx. -Outline the epidemiology & natural Hx of viral hepatitis Differentiate between the causes of jaundice & determine if treatable; ask hepatitis risk ,about drugs factors - Describe complications related to the presence of .liver disease - Interpret clinical & lab. findings which were key in the processes of differentiation, & ,exclusion .diagnosis -List the indications for an abdominal U\S, spiral CT, .MRI, ERCP& PTC -Conduct an effective plan of Mx for a pt with jaundice and its causes including acute liver failure -Select pts in need of specialized care and/or in need of urgent .hospitalization			
	3	- Doing scientific steps of examination in sequence,	CVS examination	Practical	Exam

		including inspection, palpation, percussion, and auscultation. - Detection of signs of the implicated diseases. - Diagnose and solve the problems			
3	2	Define anemia, describe the clinical approach of anemia in children, Discuss the clinical presentations, management &prevention of IDA.	Hematology: Anemia & iron deficiency anemia	Lecture	Exam
	3	- Concentrate on positive and negative relevant clinical findings. - Interpretation of the clinical findings. - Outlines the differential diagnosis. - Outlines the laboratory and radiological tests to reach diagnosis.	CVS examination	Practical	Exam
4	2	- Describe the prevalence, clinical presentations, management and follow-up of thalassemia and G6PD deficiency. - Detect common causes of bleeding tendency in children, describe the clinical presentations, management & prognosis of hemophilia, von-Willebrand disease & ITP	Hematology: - Thalassemia & G6PD deficiency - Bleeding disorders (hemophilia, von-Willebrand disease & ITP)	Lecture	Exam
	3	- Concentrate on positive and negative relevant clinical findings. - Interpretation of the clinical findings. - Outlines the differential diagnosis. - Outlines the laboratory and radiological tests to reach diagnosis.	CVS examination	Practical	Exam
5	2	identify the prevalence, etiology & types of leukemia &lymphoma, describe the clinical presentations, management & prognosis of	Oncology: Leukemia& Lymphoma:	Lecture	Exam

		childhood leukemia & lymphoma.			
	3	- Identify the anatomy and physiology/ pathophysiology. - enumerate symptoms & signs of disease may develop in this system. - Concentrate on emergency conditions may arise in children regarding this system.	Neurology examination	Practical	Exam
6	2	- Define nephritic syndrome, describe types, etiology, pathophysiology, clinical presentations, complications, investigations, management & prognosis of nephrotic syndrome - Describe the definition, prevalence, etiology, pathophysiology, clinical presentations, complications, investigations, management & prognosis of acute post-streptococcal glomerulonephritis, Hemolytic-uremic syndrome &Henoch-Schonleinpurpura. - .	Nephrology: -Nephrotic syndrome: Acuteposts treptococcal glomerulonephritis, Hemolytic-uremic syndrome, Henoch-Schonleinpurpura:	Lecture	Exam
	3	Doing scientific steps of - examination in sequence, including inspection, palpation, percussion, and .auscultation Detection of signs of the - .implicated diseases - Diagnose and solve the problems	Neurology examination	Practical	Exam
7	2	Identify the concept, describe the prevalence, types, risk factors, clinical presentations, complications, investigations, management & prognosis of UTI & Enuresis.	Nephrology/ Urology UTI & Enuresis	Lecture	Exam
	3	- Concentrate on positive and negative relevant clinical findings.	Neurology examination	Practical	Exam

		- Interpretation of the clinical findings. - Outlines the differential diagnosis. - Outlines the laboratory and radiological tests to reach diagnosis.			
8	2	- Identify causes - Elicit symptoms and signs - List and interpret clinical and laboratory findings - Expected Complications & Prevention - Identify dose of thyroxin and fallow up oftreament - Determine whether the delay is global, isolated to speech/language or motor delay, includes abnormal social interaction - Outline the management	Endocrinology Thyroid gland - hypo/ hyperthyroidism.	Lecture	Exam
	3	- Concentrate on positive and negative relevant clinical findings. - Interpretation of the clinical findings. - Outlines the differential diagnosis. - Outlines the laboratory and radiological tests to reach diagnosis.	Neurology examination	Practical	Exam
9	2	- ClarifyDifferentfactors,may contribute to type 1 diabetes - Identify signs and Symptomsof DM1 - Discuss diagnosis of DM1(blood test and urine test) - Education & counseling for child, parents about DM1and diet control - Determine the Complications - Outline of management to child with DM TYPE1 - Definition ,Etiology, Pathophysiology - Diagnostic Consideration Of DKA - How To Manage A ten Year old Child With DKA?	Endocrinology - DM TYP1. - Diabetic Ketoacidosis (DKA)	Lecture	Exam

		- Describe Prevention & Prognosis Of DKA			
	3	- Definition of medical terms like preterm, fullterm, IUGR, ….etc. - Description of normal neonatal measures after birth. - identify of complication of birth process. - How to do rususstatation after birth and APGAR score	Neonatal examination	Practical	Exam
10	2	CHD(classification of CHD..Cyanotic & A cyanotic heart lesions),to know the common types of a cyanotic (VSD,ASD,PDA types ,presentations ,diagnosis &management), to know the common types of Cyanotic (TOF,TGA, types ,presentations ,diagnosis &management)	Cardiovascular system	Lecture	Exam
	3	Describe clinical approach to neonate and his/her mother Take proper neonatal history Perform complete neonatal examination	Neonatal examination	Practical	Exam
11	2	Acquired heart disease(RF. Criteria for diagnosis ,to out line management &prevention) Infective endocarditis (etiology ,major and minor criteria of diagnosis ,management)	Cardiovascular system	Lecture	Exam
	3	Describe gestational age assessment Explain clinical approach to neonate with hyperbilirubinemia Illicit primitive neonatal reflexes(Rooting, Sucking, Palmar. Plantar grasps, Moro reflex, Stepping, etc….)	Neonatal examination	Practical	Exam

12	2	- cvs 1- define heart failure and its pathophysiology. 2- enumerate the most common causes of HF. 3- perform management of HF. - seizure 1- Define seizure. 2- List causes of seizure in children. 3- Describe the specific types and characters of seizure in children.	Cardiovascular system - Neurology: seizure	Lecture	Exam
	3	Explain clinical approach to neonate with suspected neonatal sepsis Discuss different neonatal problems(Asphyxiated newborn, Apgar score,)Birth injuries (Caput succedaneum , Cephalhematoma , Bone fractures, Erbs palsy etc…)	Neonatal examination	Practical	Exam
13	2	FC: 1- Diagnose FC. 2- Evaluate febrile seizure. NS: 1- Analyze why neonatal seizures are different? 2- List the types of neonatal seizure. 3- List the causes of neonatal seizure. 4- Observe certain types of Neonatal seizure. 5- Evaluate the neonatal seizure. SE: 1- Define status epilepticus 2- Determine the risks of Status Epilepticus. 3- Perform management of status epilepticus.	Neurology - febrile convulsion - neonatal seizure - Status epilepticus	Lecture	Exam
	3	- Review of CVS examination.	Revision	Practical	Exam
14	2	AFP: 1- Define AFP	Neurology	Lecture	Exam

		2- Determine the clinical types of AFP.3- List the causes of each type of AFP.4- Describe the most common causes of AFP.5- Perform management of AFP. CP: 1- Define CP. 2-List its causes and types. 3- Describe the most common types. 4-Perform management. MR: 1- Define MR. 2- What are the grades and causes of MR? 3- Evaluate the child with MR.	- AFP - cerebral palsy - Mental retardation:		
	3	- Review of Neurology examination.	Revision	Practical	Exam
15	2	1- Define meningitis/ meningoencephalitis. 2- How to predict CNS infections? 3- Diagnose CNS infections. 4- Performing of CNS infection management. 5- Evaluate the patients for complications.	Neurology CNS infections	Lecture	Exam
	3	- Review of Neurology examination.	Revision	Practical	Exam

16-The structure of the course for pediatric /fifth academic level / second course						
Hrs	**Required educational goals**	**practical**	**Hrs**	**Required educational goals**	**seminar**	**Wk**
30	- Asthma (identify & management of acute exacerbations &control therapy) - Sore throat &strider(How to approach to a case	Respiratory system	2	TB(definition,how to diagnose acase of TB&management)	- Tuberculosis	1st

	presented with strider ,causes & management. - Pneumonia (diagnosis management & its complications) - Bronchiolitis (Diagnosis & outline management & prevention.			- Causes of recurrent cough,approach&management)	- Recurrent cough/ SOB	
30	CHD (Cyanotic& A cyanotic heart diseases): identify & management. - Acquired heart disease (RF, Infective endocarditis: criteria of diagnosis & management. - Heart failure: diagnosis &perform management.	Cardiovascular System	2	- Classification of Arrhythmias,ECG findings,& Management. - Definition, Diagnosis&management)	- Cardiac arrhythmia - Shock	2nd
30	- Diarrhea :Outline Management of diarrheal diseases - Dehydration & electrolytes changes: Determine the degree and type of dehydration/ volume depletion, with management - Assess nutritional state Identify macro- & micronutrient deficiency Manage malnutrition. - Pediatric surgery: Elicit clinical findings which are key to establish the most likely etiology of abdominal pain	GIT and nutrition	2	-Define the concept of chronic diarrhea&Malabsorption -Describe the anatomy &histology of small intestine -Describe screening tests for Malabsorption -Explain the occurrence of celiac disease(CD) -Mention the clinical features of CD -Outline treatment of CD - Define the concept of acid-base balance -Define the types of acid-base disturbances -mention the causes of Acid-base disturbances Outline the management of different types of acid-base disturbances - Dehydration & electrolytes changes: Determine the degree and type of dehydration/ volume depletion, with management.	- Malabsorption - Acid- Base Balance and disturbances	3rd

30	Fever and skin rash: Approach for diagnosis & outlines of management. - kala azar: approach for hepatosplenomegaly& manage visceral leishmaniasis. - DM1 & DKA: - Discuss diagnosis, Education & counseling for child, parents about DM1and diet control & Outline of management. - Growth and hypothyroidism: perform measurements and management.	- Infectious diseases - Endocrinology	2	-Determine the IP & possible route of transmission -Outline measures of prevention &to control the complications of the disease. identify the cause &give hormones incriminated.	- TORCHS infection - Ambiguous genitalia - Short Stature	4th
30	- Nephrotic syndrome: Diagnosis & management. - Acute post-streptococcal glomerulonephritis, Hemolytic-uremic syndrome & Henoch-Schonlein purpura: identification & management - UTI & Enuresis: clinical presentations, complications &management	Renal/ Urinary system	2	* Polyuria&Polydipsia including RTA 1. Detect the common causes of Polyuria&polydipsia 2. Define RTA including types & pathogenesis 3. Describe the clinical presentations, diagnosis &management& prognosis of RTA. * Renal failure 1. Define both acute kidney injury & chronic kidney disease 2. Identify causes of acute kidney injury & chronic kidney diseases. 3. Describe the clinical presentations, diagnosis, management & prognosis of acute kidney injury & chronic kidney disease.	- Polyuria and polydipsia, including RTA - Renal Failure	5th
30	- Anemia: clinical approach of anemia, management &prevention of IDA.	Hematology/ Oncology	2	* Aplastic anemia 1. Define aplastic anemia 2. Detect causes of aplastic anemia(congenital& acquired)	- Aplastic Anemia - Childhood	6th

	- Thalassemia and G6PD deficiency: Diagnosis and management. - Bleeding tendency: clinical presentations and management& prognosis of hemophilia, von-Willebrand disease & ITP - leukemia & lymphoma,: describe the clinical presentations & management			3. Describe the clinical presentations, diagnosis, management & prognosis of aplastic anemia. * Childhood malignancies 1. Enumerate the most common childhood malignancies 2. Discuss the clinical presentations, diagnosis, management, & prognosis of the most common childhood malignancies	Malignancies	
30	- Birth injury: List of complications & management. - RDS: Causes, approach for diagnosis, and management - Neonatal jaundice: Describe the clinical approach to NN jaundice	Neonatology	2	-Identify normal level of blood glucose, calcium -Why hypoglycemia, hypocalcemia is a problem? -Identify the risk factors for Hypoglycemia, hypocalcemia, -Describe Factors that negatively affect glucose availability after birth Outline the management -Identify the concept -Describe the anatomy of biliary system -Know the differential diagnosis for neonatal cholestasis. -Understand how to evaluate the neonate with conjugated hyperbilirubinemia. -Determine the intra and extrahepatic etiologies of cholestasis -Know the therapeutic management of neonates with cholestasis	- Neonatal metabolic disorders: Hypoglycemia, hypocalcaemia, hypomagnesaemia - Cholestatic Jaundice	7th
30	- seizure: List causes of seizure & management of fit & SE	Neurology	2	- Define Autism &AD?HD Identify the criteria for	- Psychological Disorders in	8th

	- AFP: List the causes of each type of AFP & Perform management of AFP. — — - CP: — List its causes and types & Perform management. — -CNS infections: perform diagnosis & management.			diagnosis. Discuss Possible risk factors Outlines the management steps. - Define NTD Discuss embryogenesis and classify the clinical types Enumerate the complications How to manage NTD?	Children - Neural tube defects	
30	- identify the most common childhood illnesses, diagnosis & management - discussion of most important steps for diseases prevention. - apply routine childhood care including vaccination & growth charts. - Nutrition enhancement & malnutrition management.		2	Vaccination: - Discuss Route of administration - Education & counseling for child, parents. - List possible complications of immunization - Diagnose potentially lethal anaphylaxis and initiate immediate treatment	Family/ community medicine	9
12	--	Review & exam	---	----	Review & exam	10

17-Infrastructure of pediatric	
1-Required course books	Nelson textbook of pediatrics
2- main references (sources)	Essential Nelson of pediatrics
3- Recommended books and references (scientific journals, reports)	Forfar and Arneils textbook of pediatrics
4- Electronic references, websites	- American academy of Pediatrics https://www.aap.org/en-us/about-the-aap/Pages/About-the-AAP.aspx - Pediatrics- medscape https://www.medscape.com/pediatrics - Pediatrics update pediatrics&aqs=chrome..69i57j0l5.10977j0j4&sourceid=chrome&ie=UTF-8

18-course development plan
1 . Assigning specialty doctors from health departments to increase the number, diversify faculty members, and add other clinical expertise. 2 . Suggesting and implementing a plan to develop the capabilities of faculty members to keep pace with the practical development in the subspecialties of pediatrics. 3 . Organizing courses, workshops and conferences for the branch's teachers in the fields of medical education and medical training. 4 . Participation of faculty members in various academic and cultural activities related to the development and modernization of curricula.

8- • Academic description form for obstetrics and gynecology

This course description provides a summary of the most important characteristics of the course and the learning objectives that the student is expected to achieve, demonstrating whether he has made maximum use of the available learning opportunities. It must be linked to the description of the program.

1- educational institution
University of Diyala \college of medicine
2-Scienpediatricstific Department / Center
obstetrics and gynecology
3-Academic or professional program name
Human medicine
4-Final certificate name
Bachelor of Medicine and General Surgery
5-Academic system (annual / courses / semesters)
semesters
6- Semester/year
First course + second course / 2021
7-Available forms of attendance
Actual mandatory attendance
8-The number of study hours
Fourth stage .....120 hours (60 hours per course) Fifth stage..... 60 hours (30 hours per course) Sixth stage.....360 hours
9-Accredited Accreditation Program
Theoretical and practical study and discussions of blended learning, attendance and electronic (via the Classroom platform)
10-Other external influences
A teaching hospital, library, internet, community, doctors' syndicate
11-Description creation date
15/6/2021
12-Academic Program Objectives
1 -Graduating students who can understand the various physiological changes that occur to pregnant women during pregnancy and the diseases that affect them, their diagnosis and how to treat them by taking a history, correct clinical examination and modern laboratory analyses to reach treatment and preserve the life of the mother and child. 2 -Understand the female reproductive system and the diseases that affect it and how to deal with them, as

well as the physiological changes that occur in the female body at different age stages and how to deal with them.
3 -Making the student able to solve problems, deal with them, communicate effectively with patients, and work in the public interest.
4- Develop abilities and talents and push students to excellence and creativity through scientific research and strengthening the spirit of cooperation among them and working to serve patients and the country to advance science to the highest levels.
5. Promote the acquisition of knowledge of women's health through pursuing innovative and valuable research.

13-Required program outcomes and methods of teaching, learning, and assessment

- **Cognitive goals**

1 -To enable students to have knowledge and understanding of how to take a medical history and clinical examination of pregnant and non-pregnant women.
2 -That the student learns about the stages of human development from fertilization of the egg with sperm to the different stages of maturation.
3 -That the student understands the physiological changes that occur in the body of a pregnant woman to receive and nourish the child.
4 -That the student understands the stages of a woman's maturity and the changes that occur in her body to qualify her to be a mother in the future.
5 -That the student distinguishes between the different types of diseases that affect the reproductive system before and after pregnancy and how to diagnose and treat them, as well as to understand the different surgical operations that are used to treat various gynecological diseases.
6- That the student understands the role of health centers and hospitals in caring for pregnant women and following up on pregnancy until delivery.

- **Skills objectives of the program**

1 -Performance skills by involving the student in the lesson and clinical training.
2 -Social skills by teaching the student how to communicate with colleagues and patients by opening the discussion.
3 -Apply what they have learned from the lesson practically when confronting patients in the hospital during clinical training under the supervision of academic staff.
4- Enable students to think and analyze issues related to the diagnosis and treatment of diseases.

- **Teaching and learning methods**

1 .Giving lectures.
2 .Teaching in the form of an integrative curriculum, meaning that the student is the basis for learning as a student center
3 .Workshops.
4 .Intensifying clinical training to include all stages, not just the final stages.
5. Blended online and physical learning on education platforms (classroom)

- **Evaluation Methods**

1-. Daily exams with multiple-choice questions that require high skills.
2 . Various practical exams that include several parts (patient history, clinical examination, skills test and examination on special places).
3 .Quiz Quiz
4. The practical and theoretical exam, the half-course and the end of the course.

➢ **Behavioral and value objectives**
1 Enabling the student to think and analyze issues related to obstetrics and gynecology. 2 -The student should participate in clinical training and perform homework and assigned reports. 3 -The student should yearn for scientific research, implement it honestly and sincerely, and reach results by relying on himself. 4- The student should develop his relations with his colleagues and patients and always act honestly and sincerely in his dealings.
• **Teaching and learning methods**
11. Providing the student with basics about additional topics from various sources in addition to textbooks. 2. Supervising the clinical training of students and supervising and following up scientific research. 3. Visiting health centers and medical institutions and being informed of the latest developments...
• **Evaluation Methods**
1- .Daily theoretical and practical exams with multiple-choice questions that require high skills. 2 .Semester exams (half a first course and half a second course) (and final courses) (theory and practical). 3. Seminars (assigning each student a topic for presentation and discussion).
➢ **Transferred general and qualification skills (other skills related to employability and personal development)**
.1. Using modern means to search for new parameters (scientific and medical websites) 2 .Attending specialized scientific symposiums to see the latest developments in the field of obstetrics and gynecology. 3 .Active participation in practical sessions in specialized laboratories and teaching hospitals. 4. Applying the accumulated information in practice in educational hospitals and conducting scientific research.
• **Teaching and learning methods**
1 -Theoretical lectures using illustration aids. 2 .Practical application of the concepts that have been studied in specialized laboratories and teaching hospitals. 3 .Seminars (students are assigned a topic within the curriculum for presentation and discussion). 4. Solving scientific and medical problems by discussing their merits within small groups to reach the correct solution.
• **Evaluation Methods**
1 -Half-course exams (1+2) and the final of the courses. 2 -Preparing reports. 3 - Seminars and weekly seminars. 4- Daily exams (theoretical and practical)

14- Structure of the text and theoretical and practical obstetrics and gynecology /fourth academic level / first course						
week	**Theory**	**Required educational goals**	**Hours**	**Practical**	**Required educational goals**	**Hours**
2	Fetal growth and	To know how the fetus is developing from a	2hr	History and exam	training how to assess fetal wellbeing and how to ask about important	2hr

	development	zygote to full developed fetus Clinical applications of embryonic development and early identification of developmental abnormality Summary of the aims of studying fetal development			point in history regarding fetal growth	
3	Hematological abnormalities in pregnancy	1-discuss the erythropoiesis in pregnancy 2- identify types of anemia 3- discuss effects of anaemia on pregnancy 4- Identify the clinical features of irondeficiency anaemia 5-Outline of specific management of anemia in pregnancy	2hr	History and exam	Training how to differentiate between placenta prevail and abruption and how to do management	2hr
4	Antenatal imaging and assessment of fetal wellbeing	To know Diagnostic ultrasound in obstetric practice Clinical applications of ultrasound . Scanning schedule in clinical practice Ultrasound in the assessment of fetal well-being Ultrasound and invasive procedures .	2hr	History and exam	training how to do assessment of fetal wellbieng and ultrasound role	2hr

		Summary of the aims of obstetric ultrasound Magnetic resonance imaging				
5	Prenatal diagnosis	1-To know the Every Visit need to asses / Weight, Blood pressure, Indications to go to hospital. 2-Discuss specific Prenatal labs 3- Estimated Detailed history and physical exam 4- Estimated date of delivery 5-Outline measures to asses fetal wellbeing in the 2nd trimester include(Fetal heart rate tones (starting at 12 weeks((nuchal translucency,;) Maternal serum screen (AFP, uE3, β-hCG; Chorionic villus sampling (11-13 weeks) •Amniocentesis (15-17 weeks) •To know Detailed Ultrasound 6.asses Fetal surveillance	2hr	History and exam	training how to do assessment of fetal wellbeing and ultrasound role with benefit of biochemical test	2hr
6	1st and 2nd trimester pregnancy loss	1- Identify the miscarriage 2--To evaluate factors associated with1st and second-trimester pregnancy loss 3-To know causes of miscarriage	2hr	History and exam	Training to detect the high risk for diabetes and how to do management	2hr

		4- Identify the Signs and symptoms of miscarriage 5- Determine infection causes miscarriage and Outline measures of prevention 6- List & interpret lab. findings 7- Discuss specific treatment And Outline management				
7	Minor disorders of pregnancy and problems due to abnormalities of pelvic organs	To know Anatomy of the female pelvis and the fetus relevant to labor Abnormality of pelvic organ that lead to abnormal labor	2hr	History and exam	How to assess the pelvic cavity	2hr
8	Venous thromboembolism	To know the 1. Pathogenesis ,risk factors 2. Sign and symptom Management	2hr	History and exam	Training to detect and diagnosed DVT and mange it	2hr
9	Antepartum and postpartum hemorrhage	1.Defined as vaginal bleeding from 24 wk to delivery of the baby 2.to know placenta prevail types, clinical feature, complications and treatment 3.to know the placental abruption types, causes, sequel,	2hr	History and exam	Training how to differentiate between placenta prevail and abruption and how to do management	2hr

		and treatments 4.to know the postpartum hemorrhage definition, risk factors, causes, diagnosis and treatments				
10	IUGR and amniotic fluid abnormalities	Define IUGR Describe the pathophysiology of IUGR Identify the etiology Of IUGR Describe the types of IUFR Identify the Risk factors of IUGR Describe the clinical approach to IUGR &how to differentiate between symmetrical asymmetrical IUGR Outline the management of IUGR Explain the effects, Mechanism & complications of each line of mangement	2hr	History and exam	Demonstrate how to diagnose IUGR - Present the history in front of other students for discussion and correction of mista Concentrate on positive and negative relevant clinical findings. - Interpretation of the clinical findings. - Outlines the differential diagnosis. - Outlines the laboratory and radiological tests to reach diagnosis.	2hr
11	Malposition and malpresentation	Define malposition& malpresentation 2-identifies the aetiological&risk factors of malpresentation& malposition 3- Present an approach to recognizing &	2hr	History and exam	- Doing scientific steps of examination in sequence, including inspection, palpation, percussion, and auscultation&leopold maneuver to identify the type of malpresentation & malposition - Detection of signs of	2hr

		treating the common types of malposition & malpresentation 4- Enumerate complications of each type 5- Use the history & physical exam. to recognize the presentation.			the implicated type.	
12	Multiple pregnancy	Definitions of twin pregnancy &what is multiple pregnancy 2-Eplain the Causes of multiple pregnancy, types of twin pregnancy 3-What are the complications encountered by each type of twin 4-outline management of each problem occur in each type 5-Conduct a counseling & education program for caregivers of pregnant women with twin pregnancy 6-Conduct an ongoing program to monitor a pregnant with twin pregnancy 7-Appropriately utilize	2hr	History and exam	Concentrate on positive and negative relevant clinical findings. - Interpretation of the clinical findings. - Outlines the differential diagnosis. - Outlines the laboratory and radiological tests to reach diagnosis.	2hr

		hospitalization, consultation with other health professionals & community resources Explain the mode of delivery according to the type of twin, presentation of first twin				
13	Hypertension in pregnancy	1-To know Classification of Hypertension in pregnancy 2- Discuss the Diagnosis of Hypertension and Proteinuria 3- Outline measures of Prediction and Prevention of Preeclampsia and Associated Complications 4- Discuss specific treatment And Outline Management Principles for the Hypertensive Disorders of Pregnancy	2hr	History and exam	How to deal with emergency obstetrics and how to do management	2hr
14	Preterm labour and (PPROM)	To know the Risk factors that predispose to preterm labor and PROM Management of preterm labour and PROM and how to differentiate	2hr	History and exam	Training how to manage the PROM and preterm labor	2hr

		between them				
15	Diabetes in pregnancy	To know the 3. Definitions 4. Maternal and fetal complications 5. Counseling and management	2hr	History and exam	Training to detect the high risk for diabetes and how to do management	2hr

15- Structure of the text and theoretical and practical obstetrics and gynecology / fourth academic level / second course						
week	**Theory**	**Required educational goals**	**Hours**	**Practical**	**Required educational goals**	**Hours**
1	Medical disorders in pregnancy	Know about management and complication of medical disease (congenital heart disease ,epilepsy, asthma, renal ,thyroid disease)	2hr	History and exam	How to deal with complication of medical obstetrics disease and how to do management	2hr
2	Perinatal infection	1. Viral hepatitis 2. Tb in pregnancy 3. Syphilis 4. Gonorrhea&chlamydia 5. Group b streptococcal 6. Toxoplasmosis: 7. Pyelonephritis in pregnancy Viral infections	2hr	History and exam	To know and differentiate between all type of infections	2hr
3	Labor	1.Defines as a physiological process characterized by painful ,regular uterine contraction associated with cervical changes	2hr	History and exam	Training how to diagnose labor clinically 2-identify the point that differentiate true from false labor 3- Outlines the items of history taking.	2hr

		ending by delivery of fetus &placenta 2.Describe mechanism of labor and how to diagnose labor by sign &symptoms 3-Determine the stages of labor				
4	Induction of labor and prolong pregnancy	To know Indication and contraindication and complications of induction Mode of induction	2hr	History and exam	Demonstrate the best method of induction	2hr
5	Operative delivery	To know 1. Indications and contraindications of instrumental delivery 2.effect on mother and baby	2hr	History and exam	Clinical skills to demonstrate the instrumental delivery	2hr
6	Hematoma . Perennial injures	1.Difination of episiotomy, indication. degree, and management	2hr	History and exam	Demonstrate of episiotomy, and who to suturing . Types of perinatal tears	2hr
7	Shoulder dystosia	1.recognized risk factors for shoulder dystocia 2.utilized a systemic approach to managing shoulder dystocia 3.demonstrate appropriate maneuvers to reduce a shoulder dystocia using the HELPERR mnemonic	2hr	History and exam	demonstrate appropriate maneuvers to reduce a shoulder dystocia using the HELPERR mnemonic	2hr
8	Normal and abnormal Puerperium	**1- Physiological changes of uterus ,cervix ,breast, and urinary system** **2- Abnormalities es of the Puerperium** **3- 1-Puerperal Pyrexia ,singe and symptom and management**	2hr	History and exam	acknowledgment of normal and Problems Of Puerperium	2hr
9	Psychiatri	To know All type of psychiatric	2hr	History and exam	Clinical skills to assess the psychological problem and	2hr

	c disorders in pregnancy and puerperium	problem How to differentiate between them			how to do management	
10	Neonatology and anesthesia and analgesia in pregnancy	1-Describe the placental transfer of drugs and their effect on embryogenesis. 2-Identify the methods to screen for drugs in the mother and neonate. 3-Understand the short- and long-term adverse effects of some drugs in the newborn. 4-Identify therapies for the drug-exposed neonate.	2hr	History and exam	Knowledge the anatomy of fetal skull and pelvis with normal and abnormal presentations	2hr
11	Drug misuse and physical abuse	2. Complication during neonatal period 3. Effect of different drugs during pregnancy	2hr	History and exam	Effect of drug on fetus	2hr
12	RH iso immunization	To know the 1.pathophysiology of immunization 2. Prevention of rhesus iso-immunization 3. Indication for administration of antiD 4.prevention and management	2hr	History and exam	Demonstrate how to give anti D, doses and indications	2hr
13	Obstetric emergency	**To know the** **1.uterin inversion etiology, epidemiology, diagnosis and management** **2. Umbilical cord accidents (cord prolapse)** ***Etiology and epidemiology***	2hr	History and exam	How to deal with emergency obstetrics and how to do management	2hr

		Diagnosis, risk factors and management				
14	Anatomy of the female pelvis and the fetus relevant to labor	**to know the** **1.anatomy of fetal skull and diameters** **2. the pelvic brim and types of pelvis**	2hr	History and exam	Knowledge the anatomy of fetal skull and pelvis with normal and abnormal presentations	2hr
15	Shock in obstetrics	1. To know the 2. Pathophysiology of shock 3. Classification of shock 4. Management of shock	2hr		To know all type of shock and how to management	2hr

16- Structure of the text and theoretical and practical obstetrics and gynecology / fifth academic level / first course

Week	Subject name	Required educational goals	Hours	Education method	Evaluation method
1	Gynecological assessment of the patient	1-TO know details history and physical examination 2- Elicit a history that is relevant, concise and accurate to context and preferences for the purposes of prevention and health promotion, diagnosis and/or management 3- Perform a focused physical examination that is relevant and accurate for the purposes of prevention and health promotion, diagnosis and/or management 4- Select medically appropriate investigative methods 5- Demonstrate effective clinical problem solving and judgment to address patient Problems	2hr	Lecture	Exam
2	Embryology and Anatomy	To know the Anatomy of pelvic organ and the embryological origin of organ	2hr	Lecture	Exam
3	Normal and abnormal	To know causes and management of both Precocious and delayed	2hr	Lecture	Exam

	sexual development and puberty	puberty			
4	The normal menstrual cycle	1.To know the physiology of menstruation 2-Discuss the clinical application of menstruation 3. differentiate between primary secondary dysmenorrhea 4-outline management of dysmenorrhea	2hr	Lecture	Exam
5	Disorder of menstrual cycle	1.To know the physiology of menstruation 2-Discuss the clinical application of menstruation 3. differentiate between primary &secondary dysmenorrhea 4-outline management of dysmenorrhea	2hr	Lecture	Exam
6	Fertility control	1.To know all type of contraception hormonal, non-hormonal 2.diffrentiate between all type 3.knowlage mode of use and contraindications for each type	2hr	Lecture	Exam
7	Hirsutism ,virilism and hyperprolactinemia	To know aetiology of Hirsutism ,virilism and hyperprolactinemia and management	2hr	Lecture	Exam
8	Lower genital tract infections	1.knowlage the normal physiology and defense mechanism 2.deffrentiatebetween all type of genital tract infections by history, clinical examination and laboratory test 3.know to counsel the patient about mode of transmission if sexually transmitted or not 4. how to treat and management and prevent recurrence	2hr	Lecture	Exam
9	Laproscopy and hysteroscopy	To know instrument, indication and complication of both Laparoscopy and hysteroscopy	2hr	Lecture	Exam
10	Pelvic inflammatory	2-Determine Risk factors of Pelvic Organ Prolapse	2hr	Lecture	Exam

	disease	3- Identify Cystocele (anterior prolapse(Cytourethrocele 3- Outline measures of prevention 4- Outline of management and specific treatment			
11 12 13	Infertility	Definition of infertility All types of infertility male and female type Who to do assessment of infertile couple All investigation done for both partner Management for each type of infertility	6hr	Lecture	Exam
14	Problems in early pregnancy	1-Difinition of ectopic pregnancy 2- causes and sign ,symptom 3- management. 4-Definition,types management, risk factor And follow-up	2hr	Lecture	Exam
15	Recurrent pregnancy loss(RPL)	1.Define recurrent pregnancy loss 2.Know the causes of RPL 3.Describe the routine investigation of RPL 4. Outline the management of RPL 5-Clarify how to counsel a women with RPL	2hr	Lecture	Exam

17- Structure of the text and theoretical and practical obstetrics and gynecology / fifth academic level / second course

Week	Subject name	Required educational goals	Hours	Education method	Evaluation method
1	Benign diseases of uterus and cervix	1.know all type of endometrial hyperplasia &its risk of malignant transformation 2-Clarify different type of malignant uterine tumor 2. Discuss the role of ultrasound, CT scan and MRI in diagnosis 3.List the risk factors of endometrial carcinoma 4. Clarify the staging of tumor and treatment by chemotherapy and surgery 5.Know how to do fallow up to patient with endometrial carcinoma	2hr	Lecture	Exam

2	Endometriosis and adenomyosis	Disease risk factors, risk factors, etiology, diagnosis and treatment	2hr	Lecture	Exam
3	Begnin and malignant Ovarian tumor	1.know all type of ovarian tumor begnin and malignant 2.role of ultrasound, CT scan and MRI in diagnosis 3.role of tumor marker in diagnosis of ovarian tumor 4.staging of tumor and treatment by chemotherapy and surgery 5. how to do fallow up to patient with ovarian tumor	4hr	Lecture	Exam
4	Malignant diseases of the uterus	1.know all type of endometrial hyperplasia &its risk of malignant transformation 2-Clarify diferrent type of malignant uterine tumor 2. Discuss the role of ultrasound, CT scan and MRI in diagnosis 3.List the risk factors of endometrial carcinoma 4. Clarify the staging of tumour and treatment by chemotherapy and surgery 5.Know how to do fallow up to patient with endometrial carcinoma	2hr	Lecture	Exam
5	Premalignant and malignant diseases of the cervix	1-Demonstrate Types of Carcinoma of cervix 2-outline of management and Treatments 3-Idetify Stages of malignancy 4-To know Risk factors 5-discuse the diagnosis And Managements	2hr	Lecture	Exam
6	Conditions affecting the vagina	1.To know Benign conditions that may affect the vagina and management 2.To know malignant conditions that may affect the vagina and management	2hr	Lecture	Exam
7	Conditions affecting the vulva	1.To know Benign conditions that may affect the vulva and management 2.To know malignant conditions that may affect the vulva and	2hr	Lecture	Exam

		management			
8	Urogynecology	1-To know -Vaginal prolapse -Uterine prolapse	2hr	Lecture	Exam
9	Pelvic organ prolapse	2-Determine Risk factors of Pelvic Organ Prolapse 3- Identify Cystocele (anterior prolapse(Cystourethrocele 3- Outline measures of prevention 4- Outline of management and specific treatment	2hr	Lecture	Exam
10	Menopause& Hormone replacement therapy(HRT	1-Define menopause 2-discuss physiological changes that preceding menopause 3-list the type of menopause 4-clarify the signs& symptoms of menopause 5-know the complications of menopause 6-discuss how to manage menopause 7-discuss the indications, contraindications of HRT 8-discuss the association of menopause with osteoporosis	4hr	Lecture	Exam
11 12 13	Primary and secondary amenorrhea	To know the type of amenorrhea and its definition How to do investigation and management	2hr	Lecture	Exam
14	Psychological and ethical aspects of gynecology	To know the ethical aspect of examination and how to deal with patient	2hr	Lecture	Exam
15	Common gynecological procedures	Minor and major procedure in gynecology	2hr	Lecture	Exam

18- Structure of the text and theoretical and practical level				**obstetrics and gynecology / sixth academic**		
Week	**Seminar**	**Required educational goals**	**Hours**	**Practical**	**Required educational goals**	**Hours**
1st	Antenatal imaging and	To know Diagnostic	**2**	History and exam	training how to do assessment of fetal wellbeing and	**30**

	assessment of fetal wellbeing	ultrasound in obstetric practice Clinical applications of ultrasound Scanning schedule in clinical practice Ultrasound in the assessment of fetal well-being Ultrasound and invasive procedures . Summary of the aims of obstetric ultrasound Magnetic resonance imaging			ultrasound role training how to do NST	
2nd	Venous thromboembolism	To know the 6. Pathogenesis ,risk factors 7. Sign and symptom Management	**2**	History and exam	Training to detect and diagnosed DVT and mange it To know risk factors for development DVT How to advise the mother to prevent DVT	**30**
3rd	Antepartum and postpartum hemorrhage	1.Defined as vaginal bleeding from 24 wk to delivery of the baby 2.to know placenta previa types,clinical feature, complications and treatment 3.to know the placental abruption types, causes sequel and	**2**	History and exam	Training how to differentiate between placenta prevail and abruption and how to do management Training how to manage patients in shock state and how to fallow the role ABCD	**30**

		treatments 4.to know the postpartum hemorrhage definition, risk factors, causes, diagnosis and treatments				
4th	Malposition and malpresentation	Define malposition& malpresentation 2-identifies the etiological &risk factors of malpresentation & malposition 3- Present an approach to recognizing & treating the common types of malposion & malpresentation 4- Enumerate complications of each type 5- Use the history & physical exam. to recognize the presentation.	**2**	History and exam	- Doing scientific steps of examination in sequence, including inspection, palpation, percussion, and auscultation & Leopold maneuver to identify the type of malpresentation &malposition - Detection of signs of the implicated type. -	**30**
5th	Obstetric emergency	**How to know** **1.uterin inversion etiology, epidemiology, diagnosis and management** **2. Umbilical cord accidents (cordprolapse)** ***Etiology and epidemiology*** **Diagnosis,risk factors and management** 3.recognized risk factors for shoulder dystocia 4.utilized a systemic approach to managing	**2**	History and exam	How to deal with emergency obstetrics and how to do management demonstrate appropriate maneuvers to reduce a shoulder dystocia using the HELPERR mnemonic	**30**

		shoulder dystocia 3.demonstrate appropriate maneuvers to reduce a shoulder dystocia using the HELPERR mnemonic				
6th	Medical disorders in pregnancy Diabetes in pregnancy Hypertension in pregnancy	Know about management and complication of medical disease (congenital heart disease ,epilepsy, asthma, renal ,thyroid disease) To know the 1. Definitions 2. Maternal and fetal complications Counseling and management 1-To know Classification of Hypertension in pregnancy 2- Discuss the Diagnosis of Hypertension and Proteinuria 3- Outline measures of Prediction and Prevention of Preeclampsia and Associated Complications 4- Discuss specific treatment And Outline Management Principles for the Hypertensive Disorders of Pregnancy	**2**	History and exam	How to deal with complication of medical obstetrics disease and how to do management Training to detect the high risk for diabetes and how to do management How to deal with emergency obstetrics and how to do management of patient with ecliptics fit and preeclampsia.	**30**

7th	labor & Operative delivery	1.Defines as a physiological process characterized by painful ,regular uterine contraction associated with cervical changes ending by delivery of fetus&placenta 2.Describe mechanism of labor and how to diagnose labor by sign &symptoms 3-Determine the stages of labor To know 4. Indications and contraindications of instrumental delivery 2.effect on mother and baby	**2**	History and exam	Training how to diagnose labor clinically 2-identify the point that differentiate true from false labor 3- Outlines the items of history taking. Clinical skills to demonstrate the instrumental delivery	**30**
8th	Gynecological assessment of the patient	1-TO know details history and physical examination 2- Elicit a history that is relevant, concise and accurate to context and preferences for the purposes of prevention and health promotion, diagnosis and/or management 3- Perform a	**2**	History and exam	Training to do: 1-history and physical examination 2- Elicit a history that is relevant, concise and accurate to context and preferences for the purposes of prevention and health promotion, diagnosis and/or management 3- Perform a focused physical examination that is relevant and accurate for the	**30**

		focused physical examination that is relevant and accurate for the purposes of prevention and health promotion, diagnosis and/or management 4- Select medically appropriate investigative methods 5- Demonstrate effective clinical problem solving and judgment to address patient Problems			purposes of prevention and health promotion, diagnosis and/or management 4- Select medically appropriate investigative methods 5- Demonstrate effective clinical problem solving and judgment to address patient Problems	
9th	Fertility control	1.To know all type of contraception hormonl, non-hormonal 2.diffrentiate between all type 3.knowlage mode of use and contraindications for each type	**2**	History and exam	Visit fertility control unite to know and see types of contraception's and how to use and side effect, contraindications and selection for patients	**30**
10	Genital tract infections and sexually transmitted disease	1.knowlage the normal physiology and defense mechanism 2.deffrentiatebetween all type of genital tract infections by history, clinical examination and laboratory test 3.know to counsel the patient about mode of transmission if sexually transmitted or not 4. how to treat	**2**	History and exam	Training how to take history and do pelvic examination to patients How to advise the patients about sexually transmitted disease	**12**

		and management and prevent recurrence				
11	Malignant diseases of the uterus Premalignant and malignant diseases of the cervix	1.know all type of endometrial hyperplasia &its risk of malignant transformation 2-Clarify different type of malignant uterine tumor 2. Discuss the role of ultrasound, CT scan and MRI in diagnosis 3.List the risk factors of endometrial carcinoma 4. Clarify the staging of tumor and treatment by chemotherapy and surgery 5.Know how to do fallow up to patient with endometrial carcinoma 1-Demonstrate Types of Carcinoma of cervix 2-outline of management and Treatments 3-Idetify Stages of malignancy 4-To know Risk factors 5-discuse the diagnosis And Managements	**2**	History and exam	Training 1-how to do DNC and instruments used, complications and how to manage 2-how to do pap smear and instruments used.	
12	Review					

19-Infrastructure of Obstetrics and Gynecology	
1-Required course books	Ten Teachers Obstetrics
2- main references (sources)	Essentials in Obstetrics Illustrated Obstetrics
3- Recommended books and references (scientific journals, reports)	**Dwuharts textbook of Obstetrics & Gynecology** **William's textbook of Obstetrics, DC Dutta's Textbook of Obstetrics, 8th Edition**
4- Electronic references, websites	https://www.rcog.org.uk/guidelines

20-course development plan
The college has a plan to adopt the integrated curriculum to apply it in different stages, starting from the first stage that was implemented last year and ending with the sixth stage. It also includes the introduction of clinical training to all stages so that the student can communicate with patients and learn clinical skills better..

9- • Academic description form for the branch of surgery

This course description provides a summary of the most important characteristics of the course and the learning objectives that the student is expected to achieve, demonstrating whether he has made maximum use of the available learning opportunities. It must be linked to the description of the program.

1- educational institution
University of Diyala \college of medicine
2-Scienpediatricstific Department / Center
Surgery
3-Academic or professional program name
Human medicine
4-Final certificate name
Bachelor of Medicine and General Surgery
5-Academic system (annual / courses / semesters)
semesters
6- Semester/year
First course + second course / 2021
7-Available forms of attendance
Actual mandatory attendance
8-**Symbol**

SUR317	Surgery 1	OPH505	Ophthalmology 1
SUR318	Surgery 2	OPH531	Ophthalmology 2
SURG403	Surgery 1	ORT509	Orthopedics 1
SURG404	Surgery 2	ORT535	Orthopedics 2
ENT 1	ENT 513	TRA551	Trauma surgery
ENT 2	ENT514	ANE553	Anesthesia
URO501	Urosurgery 1	PLS555	Plastic surgery
URO527	Urosurgery 2	NUS557	Neurosurgery
RAD503	Radiology 2	CVS529	Cardiovascular surgery
		SURG601	Surgery

9-The number of study hours

- Surgery stage III (30 ocular / no operative)
- Fourth stage surgery (90 ocular / 60 operative)
- Otorhinolaryngology stage 5 (30 visual / 30 practical)
- Specialized surgeries, the fifth stage:

1 .Urology (30 visual / 30 practical)
2 .Diagnostic Radiology (30 visual / 30 practical)
3 .War and external trauma surgery (5 visual/10 practical)
4 .Anesthesia and intensive care (5 visual/10 practical)

5 .Plastic surgery (5 visual/10 practical)
6 .Thoracic and Cardiovascular Surgery (8 visual / 15 practical)
7 .Neurosurgery (7 visual / 15 practical)
•Eye surgery and diseases (30 visual / 30 practical)
•Orthopedics and joints (30 visual / 60 practical)
8. Sixth stage surgery (360 practical)

10-Accredited Accreditation Program

Theoretical and practical study and discussions of blended learning, attendance and electronic (via the Classroom platform)

11-Other external influences

A teaching hospital, library, internet, community, doctors' syndicate

12-Description creation date

15/6/2021

13-Academic Program Objectives

1 -Preparing qualified students and thus qualified doctors who can be relied upon in the hospital halls
2 -Learn what is new in the treatment of some surgical diseases
3 -Learn the principles and basics of surgery
4 -Identifying surgical diseases that affect different parts of the body (symptoms and signs, method of diagnosis, and appropriate treatment)
5-Developing students' clinical skills
6- Putting the student in direct contact with the patient in the halls, emergency and consultations

14-Required program outcomes and methods of teaching, learning, and assessment

- **Cognitive goals**

Qualifying students with scientific competence to employ the symptoms and signs of surgical diseases.
2- Teaching the student the principles of general surgery

- **Skills objectives of the program**

1 -Teaching the student how to examine patients.
2 - Teaching the student how to communicate with the patient.
3 - Teaching the student how to do some minor operations that would revive the patient in the emergency ward.

- **Teaching and learning methods**

1 -Giving theoretical lectures.
2 - Giving practical lessons in the hospital inside the halls, emergency rooms, and operating rooms.
3 -In-person and electronic blended learning on electronic learning platforms (classroom).
4 .Theoretical lectures using illustrations.
5 .Practical application of the concepts that have been studied in specialized laboratories and teaching hospitals.
6. Seminars (students are assigned a topic within the curriculum for presentation and discussion).

- **Evaluation Methods**

1- Daily exams.
2 -Practical and theoretical exams for the half-course and the end of the course.
3- Students participate in discussions on various surgical topics.

- **Transferred general and qualification skills**

1 Acquiring high skills in first aiding the patient as quickly as possible.
2 -Informing the student that gathering the largest possible amount of information qualifies him to reach the correct diagnosis as soon as possible.
3 -Introducing the student to the importance of the speed of intuition in conclusion.
4- The student knows that he can gain experience from his predecessors.

15- Planning for personal development

Seeking to develop, refine and master the necessary skills to be able to rise to the top through the use of capabilities, qualifications and information acquired during theoretical, practical and applied studies, and this is done through:

16- Structure of the academic program for the surgery branch

Hours		Name of course	Symbol	Levels
Practical	Theory			
There is no practical	15	Surgery 1	SUR317	Third
	15	Surgery 2	SUR318	The first and second course
30	45	Surgery 1	SURG403	Fourth
30	45	Surgery 2	SURG404	The first and second course
15	15	Urosurgery 1	URO501	Fifth
15	15	Urosurgery 2	URO527	
30	15	Radiology 2	RAD503	
-	15	Ophthalmology 1	OPH505	
30	15	Ophthalmology 2	OPH531	
30	15	Orthopedics 1	ORT509	
30	15	Orthopedics 2	ORT535	
10	5	Trauma surgery 1	TRA551	
10	5	Anesthesia 1	ANE553	
10	5	Plastic surgery 1	PLS555	
15	7	Neurosurgery 1	NUS557	
15	8	Cardiovascular surgery 1	CVS529	
15	15	ENT 1	ENT513	

15	15	ENT 2	ENT 514	
30 hours per week for 12 weeks, including seminars provided by students	There is no theory	Surgery	SURG601	Sixth

Note: The sixth stage is fully clinical (practical) in hospital lobbies, consultations and operating rooms, with discussion activities of seminars provided by students.

17-The structure of the course for theoretical surgery /third academic level / the first course					
Week	Hours	**Required educational goals**	**Unit name and/or topic**	**education method**	**evaluation method**
1	1	Fluid balance	Principles of surgery	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
2	1	Electrolyte balance	Principles of surgery	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
3	1	Acid base balance	Principles of surgery	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
4	1	Shock	Principles of surgery	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
5	1	Hemorrhage	Principles of surgery	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
6	1	Transfusion of blood and blood products	Principles of surgery	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
7	1	Types of wounds	Principles of surgery	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
8	1	Wound healing and adverse scars	Principles of surgery	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
9	1	Wound infection	Principles of surgery	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
10	1	Ulcers, sinuses and fistulas	Principles of surgery	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
11	1	Tumor	Principles of surgery	Lecture	Daily exams, half-course

		terminology			exams, final course and discussing surgical topics
12	1	Benign and Malignant tumors	Principles of surgery	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
13	1	Biopsy	Principles of surgery	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
14	1	Preoperative care and preparation	Principles of surgery	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
15	1	Postoperative care	Principles of surgery	Lecture	Daily exams, half-course exams, final course and discussing surgical topics

18-The structure of the course for theoretical surgery /third academic level / the second course					
Week	**Hours**	**Required educational goals**	**Unit name and/or topic**	**education method**	**evaluation method**
1	1	Drains	Principles of surgery	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
2	1	Metabolic response to trauma	Principles of surgery	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
3	1	Nutrition in surgical patient	Principles of surgery	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
4	1	Burn	Principles of surgery	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
5	1	SIRS and septicemia	Principles of surgery	Lecture	Daily exams, half-course exams, final course and discussing surgical topics

6	1	Abdominal incisions	Principles of surgery	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
7	1	Postoperative complications	Principles of surgery	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
8	1	Surgical audit and Researches	Principles of surgery	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
9	1	Opportunistic infection	Principles of surgery	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
10	1	Hospital acquired infections	Principles of surgery	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
11	1	Gangrene	Principles of surgery	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
12	1	DVT prophylaxis	Principles of surgery	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
13	1	Sterilization, disinfection and sterile precaution	Principles of surgery	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
14	1	Lymphatic system diseases	Principles of surgery	Lecture	Daily exams, half-course exams, final

					course and discussing surgical topics
15	1	Venous system diseases	Principles of surgery	Lecture	Daily exams, half-course exams, final course and discussing surgical topics

19-Infrastructure of surgery/ third level	
1-Required course books	Bailey and love's short practice of surgery
2- main references (sources)	Schwartz principles of surgery
3- Recommended books and references (scientific journals, reports)	Illustrate principles of surgery
4- Electronic references, websites	e medicine.com

20-The structure of the course for theoretical surgery /fourth academic level / the first course					
Week	**Hours**	**Required educational goals**	**Unit name and/or topic**	**education method**	**evaluation method**
1	3	• The vermiform appendix • Anatomy • Microscopic anatomy • , symptoms, signs diagnosis and treatment) • Differential diagnosis of acute appendicitis Acute appendicitis (Pathophysiology • Appendicular mass • Appendicle carcinoid	General surgery	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
2	3	• Anatomy and investigations of stomach and duodenal diseases • Peptic ulcer • Perforated peptic ulcer • Gastritis and duodenitis • Gastric outlet obstruction	General surgery	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
3	3	• Gastric lymphoma • Hypertrophic pyloric stenosis of infancy	General surgery	Lecture	Daily exams, half-course exams, final course and discussing surgical topics

		• Adenocarcinoma of the stomach • Introduction to breast diseases (Anatomy, physiology, congenital abnormalities and investigations)			
4	3	• Mastitis • Aberrations of normal development and involution • Phyllodes tumours of the breast • CA breast	General surgery	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
5	3	• The gall bladder and the bile ducts anatomy. • functions and investigations of biliary diseases • Gallstons • Acute cholecystitis • CBD stones	General surgery	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
6	3	• Cholangitis • Bile duct stricture • CA gallbladder	General surgery	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
7	3	• Developmental disorders of the salivary glands • Inflammatory disorders of the salivary glands • Sialadenitis • Tumors of the salivary glands	General surgery	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
8	3	• Anatomy and functions of the liver • Investigations of liver diseases	General surgery	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
9	3	• amoebic liver abscess • Pyogenic liver abscess • Hepatic adenoma • Hydatid disease of the liver	General surgery	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
10	3	• Focal nodular hyperplasia of the liver • Liver haemangioma • Liver trauma	General surgery	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
11	3	• Approach to patient with	General	Lecture	Daily exams, half-course

		acute abdomen • Approach to patient with abdominal mass	surgery		exams, final course and discussing surgical topics
12	3	• Introduction to abdominal wall hernias • Inguinal hernias	General surgery	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
13	3	• Umbilical hernia • Para umbilical hernia • Femoral hernia	General surgery	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
14	3	• Incisional hernias • Burst abdomen	General surgery	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
15	3	• Introduction to intestinal obstruction (definition, types, complications...)	General surgery	Lecture	Daily exams, half-course exams, final course and discussing surgical topics

21-The structure of the course for theoretical surgery /fourth academic level / the second course					
Week	**Hours**	**Required educational goals**	**Unit name and/or topic**	**education method**	**evaluation method**
1	3	• History to reach the diagnosis to different types of intestinal obstruction • Investigations used in intestinal obstruction • Management of acute intestinal obstruction • Neonatal intestinal obstruction	General surgery	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
2	3	• Adhesional intestinal obstruction • Ileus • Intussusception • Sigmoid volvulus • Pseudo obstruction (Ogilvie's syndrome) • Mesenteric vascular occlusion	General surgery	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
3	3	• Anatomy of the esophagus • Physiology of the upper and lower esophageal sphincter • Investigations if esophageal diseases • Hiatus hernias • CA esophagus	General surgery	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
4	3	• Pancreas (Anatomy and investigations of pancreatic diseases) • Pancreatic fistula	General surgery	Lecture	Daily exams, half-course exams, final course and discussing surgical

		• Cystic fibrosis of the pancreas			topics
5	3	• Acute pancreatitis • Chronic pancreatitis	General surgery	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
6	3	• Adenocarcinoma of the exocrine pancreas • Insulinoma • Gastrinoma • VIPoma • Somatostatinoma	General surgery	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
7	3	• Anatomy of the anal canal • Symptoms and signs of anal diseases • Investigations of anal diseases	General surgery	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
8	3	• Perianal abscess • Fissure in ano • Fistula in ano	General surgery	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
9	3	• Hemorrhoids • Tumors of the anal canal	General surgery	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
10	3	• Meckles diverticulum • Small bowel diverticulum • Enterocutaneous fistula • Bowel preparation	General surgery	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
11	3	• Tuberculosis of the bowel • TB of the peritoneum • Peritonitis and peritoneal abscess • Mesenteric lymphadenitis • Crohn’s disease	General surgery	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
12	3	• Ulcerative colitis • Hirschsprung’s disease • Segmoid diverticulum	General surgery	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
13	3	• Stomas • angiodysplasia • Adenocarcinoma of the colon	General surgery	Lecture	Daily exams, half-course exams, final course and discussing surgical

		• FAP			topics
14	3	• Introduction to thyroid (anatomy, physiology and investigations) • Hyperthyroidism and thyrotoxicosis • Hypothyroidism	General surgery	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
15	3	• Retrosternal goiter • Solitary thyroid nodule • Thyroiditis • Neoplasms of the thyroid • Hyperparathyroidism • Con's disease • Pheochromocytoma	General surgery	Lecture	Daily exams, half-course exams, final course and discussing surgical topics

22-Infrastructure of surgery/ fourth level	
1-Required course books	Bailey and love's short practice of surgery
2- main references (sources)	Schwartz principles of surgery
3- Recommended books and references (scientific journals, reports)	Illustrate principles of surgery
4- Electronic references, websites	e medicine.com

23- The structure of the course for specialized surgeries / fifth academic level / first course					
Week	**Hours**	**Required educational goals**	**Unit name and/or topic**	**education method**	**evaluation method**
1	1	Primary survey and resuscitation of trauma patient	specialized surgeries	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
2	1	Secondary survey and management	specialized surgeries	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
3	1	Initial assessment and shock management in trauma patien	specialized surgeries	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
4	1	Imaging investigations in trauma patient	specialized surgeries	Lecture	Daily exams, half-course exams, final

					course and discussing surgical topics
5	1	Crush injuries	specialized surgeries	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
6	1	Triage	specialized surgeries	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
7	1	Damage control surgery	specialized surgeries	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
8	1	Metabolic response to trauma and lines of resuscitation	specialized surgeries	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
9	1	Head injury • PATHOPHYSIOLOGY • Brain metabolism • Cerebral blood flow and auto-regulation • Intracranial pressure and brain herniation • Primary versus secondary brain injury	specialized surgeries	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
10	1	• Classification of head injury • History taking in head injury • Clinical features • Examination • Glasgow coma score (gcs)	specialized surgeries	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
11	1	• Management of mild head injury • Nice guidelines for computerized	specialized surgeries	Lecture	Daily exams, half-course exams, final course and discussing surgical

		tomography (ct) in head injury • Management of mild head injury • Management of moderate to severe head injury			topics
12	1	• Extradural hematoma • Acute subdural hematoma • Chronic subdural hematoma	specialized surgeries	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
13	1	• Subarachnoid hemorrhage • Cerebral contusions	specialized surgeries	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
14	1	• Raised intracranial pressure	specialized surgeries	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
15	1	• Hydrocephalus • Cerebral abscess	specialized surgeries	Lecture	Daily exams, half-course exams, final course and discussing surgical topics

24- The structure of the course for specialized surgeries / fifth academic level / second course					
Week	**Hours**	**Required educational goals**	**Unit name and/or topic**	**education method**	**evaluation method**
1	1	• Spinal cord injuries	specialized surgeries	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
2	1	• Spontaneous pneumothorax • Tension pneumothorax • Surgical emphysema • Primary spontaneous pneumothorax • Inserting and managing a chest	specialized surgeries	Lecture	Daily exams, half-course exams, final course and discussing surgical topics

		drain			
3	1	• Definitive management of pneumothorax • Pleurectomy. • Pleural abrasion • Chemical pleurodesis • Pleural effusion	specialized surgeries	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
4	1	• Lung cancer	specialized surgeries	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
5	1	THORACIC INJURY • Immediately life threatening • Airway obstruction • Tension pneumothorax • Pericardial tamponed • Open pneumothorax • Massive haemothorax • Flail chest	specialized surgeries	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
6	1	Potentially life threatening • Aortic injuries • Tracheobronchial injuries • Myocardial contusion • Rupture of diaphragm • Esophageal injuries • Pulmonary contusion	specialized surgeries	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
7	1	Mediastinal masses	specialized surgeries	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
8	1	Deep venous thrombosis Varicosity of the lower limbs	specialized surgeries	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
9	1	Grafts	specialized surgeries	Lecture	Daily exams, half-course exams, final course and discussing

					surgical topics
10	1	Flaps	specialized surgeries	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
11	1	Burns	specialized surgeries	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
12	1	General anesthesia Induction Maintenance Fluid therapy	specialized surgeries	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
13	1	Regional and local anesthesia	specialized surgeries	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
14	1	Complications of anesthesia in general	specialized surgeries	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
15	1	Ventilatory machine	specialized surgeries	Lecture	Daily exams, half-course exams, final course and discussing surgical topics

25- The structure of the course for Urology / fifth academic level / first course					
Week	**Hours**	**Required educational goals**	**Unit name and/or topic**	**education method**	**evaluation method**
1	1	Urinary symptoms • Hematuria • Renal pain • Ureteric colic • Bladder pain • Per-renal pain • Urethral pain	Urology	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
2	1	Urinary symptoms • Altered bladder function • Out flow obstruction	Urology	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
3	1	Investigations of the urinary tract 1. Urine • Dipsticks impregnated with chemicals • *Microscopy* • Cytological examination	Urology	Lecture	Daily exams, half-course exams, final course and discussing surgical topics

		• Bacteriological culture • Biochemical examination 2. Tests of renal function			
4	1	Investigations of the urinary tract (Imaging) 1. Plain abdominal radiograph 2. Intravenous urography 3. *Retrograde uretero-pyelography* 4. Antegrade pyelography 5. Urethrography 6. Ultrasonography 7. Computerised tomography 8. Magnetic resonance imaging tomography 9. Endoscopy	Urology	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
5	1	Congenital abnormalities of the kidneys • Absence of one kidney • Renal ectopia • Horseshoe kidney • Unilateral fusion • Simple renal cysts	Urology	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
6	1	Congenital abnormalities of the kidneys • Congenital polycystic kidneys • Infantile polycystic disease • Unilateral multicystic disease	Urology	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
7	1	Congenital abnormalities of the renal pelvis	Urology	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
8	1	Congenital abnormalities of the	Urology	Lecture	Daily exams, half-course exams, final course and

		ureter			discussing surgical topics
9	1	Urinary Tract Infections	Urology	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
10	1	Hydronephrosis	Urology	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
11	1	Renal calculate	Urology	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
12	1	Ureteric calculus	Urology	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
13	1	Modern methods of stone removal	Urology	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
14	1	Renal injury	Urology	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
15	1	Urethral catheterization	Urology	Lecture	Daily exams, half-course exams, final course and discussing surgical topics

26- The structure of the course for Urology / fifth academic level / second course					
Week	**Hours**	**Required educational goals**	**Unit name and/or topic**	**education method**	**evaluation method**
1	1	➢ Benign prostatic hyperplasia	Urology	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
2	1	➢ Prostate cancer	Urology	Lecture	
3	1	➢ Scrotal Mass	Urology	Lecture	
4	1	➢ Voiding Disorders	Urology	Lecture	
5	1	➢ Urinary Retention	Urology	Lecture	
6	1	➢ Testicular Cancer	Urology	Lecture	
7	1	➢ Renal Failure	Urology	Lecture	
8	1	➢ Obstructive Uropathy	Urology	Lecture	
9	1	➢ Vesicoureteral Reflux	Urology	Lecture	
10	1	➢ Incontinence	Urology	Lecture	
11	1	➢ Sexually Transmitted Diseases	Urology	Lecture	
12	1	➢ Urethral Discharge	Urology	Lecture	
13	1	➢ Urologic Emergencies	Urology	Lecture	
14	1	➢ Kidney Tumors	Urology	Lecture	
15	1	Ambiguous Genitalia	Urology	Lecture	

27- The structure of the course for orthopedics, joints and fractures / fifth level / first course					
Week	**Hours**	**Required educational goals**	**Unit name and/or topic**	**education method**	**evaluation method**
1	1	Fractures	Orthopedics	Lecture	
2	1	Treatment of closed fracture	Orthopedics	Lecture	

3	1	Treatment of open fractures	Orthopedics	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
4	1	Complications of fractures.	Orthopedics	Lecture	
5	1	Nerve injury	Orthopedics	Lecture	
6	1	Fractures of the clavicle	Orthopedics	Lecture	
7	1	Acromioclavicular joint injuries	Orthopedics	Lecture	
8	1	Fractures of the proximal humerus	Orthopedics	Lecture	
9	1	Fractured head of radius	Orthopedics	Lecture	
10	1	Fractures around the elbow in children	Orthopedics	Lecture	
11	1	Separation of the medial epicondyle	Orthopedics	Lecture	
12	1	Fracture of a single forearm bone	Orthopedics	Lecture	
13	1	Colles' fracture	Orthopedics	Lecture	
14	1	Hand injuries	Orthopedics	Lecture	
15	1	Hand tumor	Orthopedics	Lecture	

28- The structure of the course for orthopedics, joints and fractures / fifth level / second course

Week	Hours	Required educational goals	Unit name and/or topic	education method	evaluation method
1	1	Injuries of the pelvis	Orthopedics	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
2	1	Dislocation of the hip	Orthopedics	Lecture	
3	1	Intertrochanteric fractures	Orthopedics	Lecture	
4	1	The isolated femoral shaft fracture	Orthopedics	Lecture	
5	1	Supracondylar fractures of the femur	Orthopedics	Lecture	
6	1	Acute knee ligament injuries	orthopedics	Lecture	
7	1	Rupture of patellar ligament	orthopedics	Lecture	
8	1	Tibial plateau fractures	orthopedics	Lecture	
9	1	Ankle ligament injuries	orthopedics	Lecture	
10	1	Malleolar fractures of the ankle	orthopedics	Lecture	
11	1	Acute haematogenous osteomyelitis	orthopedics	Lecture	
12	1	Osteoarthritis	orthopedics	Lecture	
13	1	Congenital and developmental conditions	orthopedics	Lecture	
14	1	Nerve injuries and repair	orthopedics	Lecture	
15	1	Neoplastic conditions of bone	orthopedics	Lecture	

29-The structure of the course for Ear, Nose and Throat Surgery / fifth level / first course

Week	Hours	Required educational goals	Unit name and/or topic	education method	evaluation method
1	1	Surgical anatomy and applied .physiology of the nose paranasal sinses	Ear, Nose and Throat Surgery	Lecture	
2	1	Radiology and endoscopy of the nose and paranasal sinuses.	Ear, Nose and Throat Surgery	Lecture	
3	1	Congenital malformation and injuries of the nose and paranasal sinuses.	Ear, Nose and Throat Surgery	Lecture	
4	1	Infection of the nose and paranasal	Ear, Nose and	Lecture	

		sinuses and their management	Throat Surgery		
5	1	Nasal allergy and vasomotor rhinitis.	Ear, Nose and Throat Surgery	Lecture	
6	1	Epistaxis.	Ear, Nose and Throat Surgery	Lecture	
7	1	Tumors of the nose and paranasal sinuses.	Ear, Nose and Throat Surgery	Lecture	
8	1	Surgical anatomy and applied physiology of pharynx and esophagus.	Ear, Nose and Throat Surgery	Lecture	
9	1	Inflammation of the mouth and pharynx.	Ear, Nose and Throat Surgery	Lecture	
10	1	Ulcers.	Ear, Nose and Throat Surgery	Lecture	
11	1	Tonsillitis and Adenoid is-Adenoid hyper atrophy.	Ear, Nose and Throat Surgery	Lecture	
12	1	Tonsillitis and Adenoidectomy, indications and complications.	Ear, Nose and Throat Surgery	Lecture	
13	1	Tumors of the nasopharynx and hypopharynx-Dyspagia.	Ear, Nose and Throat Surgery	Lecture	
14	1	Surgical anatomy and applied of the Larynx.	Ear, Nose and Throat Surgery	Lecture	
15	1	Congenital malformations and injuries of the Larynx.	Ear, Nose and Throat Surgery	Lecture	

30- The structure of the course for Ear, Nose and Throat Surgery / fifth level / second course					
Week	**Hours**	**Required educational goals**	**Unit name and/or topic**	**education method**	**evaluation method**
1	1	Acute and chronic Laryngitis.	Ear, Nose and Throat Surgery	Lecture	
2	1	Hoarseness.	Ear, Nose and Throat Surgery	Lecture	
3	1	Stridor.	Ear, Nose and Throat Surgery	Lecture	
4	1	Tumors of the Larynx.	Ear, Nose and Throat	Lecture	Daily

			Surgery		exams, half-course exams, final course and discussing surgical topics
5	1	Lump in the Neck.	Ear, Nose and Throat Surgery	Lecture	
6	1	Surgical anatomy of the ear –labyrinth.	Ear, Nose and Throat Surgery	Lecture	
7	1	Physiology of hearing and vestibular system.	Ear, Nose and Throat Surgery	Lecture	
8	1	Hearing impairment and audio logical assessment.	Ear, Nose and Throat Surgery	Lecture	
9	1	Vertigo and neurological assessment	Ear, Nose and Throat Surgery	Lecture	
10	1	Congenital malformation, trauma and neoplasm of the ear	Ear, Nose and Throat Surgery	Lecture	
11	1	Otitis media Acute, chronic and secretory	Ear, Nose and Throat Surgery	Lecture	
12	1	Complications of the middle ear infections	Ear, Nose and Throat Surgery	Lecture	
13	1	Principles of middle ear surgery	Ear, Nose and Throat Surgery	Lecture	
14	1	Otosclerosis Mienier's disease	Ear, Nose and Throat Surgery	Lecture	
15	1	Vestibular neuronitis	Ear, Nose and Throat Surgery	Lecture	

31- The structure of the course for diagnostic radiology/ fifth level / first course					
Week	**Hours**	**Required educational goals**	**Unit name and/or topic**	**education method**	**evaluation method**
1	1	The .Aims & objectives of radiology Basic principles of .imaging department X-ray, ultrasound, radio-nuclide imaging, CT & MRI	diagnostic radiology	Lecture	Daily exams, half-course exams, final
2	1	Indications, limitations, & contraindications of x-ray, ultrasound, radionuclide imaging, CT & MRI. Contrast medium used in radiology. X-ray hazards & radiation protection.	diagnostic radiology	Lecture	
3	1	Radiological anatomy of the lungs. Investigations in chest diseases. Chest x-ray technique & procedure,	diagnostic radiology	Lecture	

		interpretation of normal chest x-ray			course and discussing surgical topics
4	1	Diseases of the chest with normal chest x-ray. Radiological signs of lung disease (Silhouette sign, air space filling, pulmonary collapse, spherical shadows, cavitation, calcification, hilar enlargement, line & widespread shadows). Diseases of the pleura.	diagnostic radiology	Lecture	
5	1	Diseases of the mediastinum. specific lung diseases (pneumonia, Lung abscess, Pulmonary TB, Pulmonary Hydatid, Diseases of the airway, Pulmonary embolism, Bronchogenic carcinoma, Pulmonary metastases, Pulmonary lymphoma, RDS & ARDS, Chest trauma, Radiation pneumonitis, Cystic fibrosis). Diseases of the diaphragm.	diagnostic radiology	Lecture	
6	1	Investigations of the cardiovascular system. Radiological evidence of heart disease: (Heart size & shape, evidence of pericardial disease, pulmonary vessels).	diagnostic radiology	Lecture	
7	1	Specific heart disease (Heart failure, Valvular heart disease, ischemic heart disease, congenital heart disease). Diseases of the aorta. Dextrocardia.	diagnostic radiology	Lecture	
8	1	General considerations. Normal findings in plain abdominal films. Interpretation of abnormal plain abdominal film: (Bowel dilatation, Gas outside bowel lumen, Ascitis, Abdominal calcifications).	diagnostic radiology	Lecture	
9	1	Normal radiographic anatomy. Types of contrast study of the GIT Specific radiological terms in GIT diseases.	diagnostic radiology	Lecture	
10	1	Diseases of the esophagus.	diagnostic radiology	Lecture	
11	1	Diseases of the stomach and small bowel.	diagnostic radiology	Lecture	
12	1	Diseases of the large bowel.	diagnostic radiology	Lecture	
13	1	Radiological investigations of the biliary system.	diagnostic radiology	Lecture	
14	1	Radiological investigations of the spleen.	diagnostic	Lecture	

			radiology		
15	1	Radiological investigations & diseases of the pancreas.	diagnostic radiology	Lecture	

32- The structure of the course for diagnostic radiology/ fifth level / second course					
Week	**Hours**	**Required educational goals**	**Unit name and/or topic**	**education method**	**evaluation method**
1	1	Peritoneal cavity & retroperitonium Diseases of the peritoneum (ascitis, peritoneal tumors, intra-peritoneal abscesses(Investigations of the retro-peritoneum	diagnostic radiology	Lecture	Daily exams, half-course exams, final course and discussing surgical topics
2	1	Retroperitoneum Diseases of the retro-peritoneum (retro-peritoneal lymphadenopathy, disease of the adrenal gland, retro-peritoneal tumors, aortic aneurysm, retro-peritoneal hematoma, retro-peritoneal & psoas abscesses)	diagnostic radiology	Lecture	
3	1	Urinary tract Investigations of the urinary tract Urinary calculi & Nephrocalcinosis. Urinary tract obstruction. Renal parenchymal masses (simple renal cyst, Angiomyolipioma, Renal cell carcinoma) Urothelial tumor.	diagnostic radiology	Lecture	
4	1	Urinary tract (continue) Infection (acute & Emphysematous pyelonephritis, Renal & perinephric abscess, Pyonephrosis, Renal TB, Chronic pyelonephritis). Vesico-ureteric reflux. Renal trauma.	diagnostic radiology	Lecture	
5	1	Urinary tract (continue) Chronic renal failure. Congenital variation of the urtinary tract. Diseases of the UB, diseases of the prostrate, diseases of the Urethra. Diseases of the Sacrotum & testes.	diagnostic radiology	Lecture	
6	1	Female genital tract Investigations & normal radiographic anatomy. Specific diseases of the female genital tract (ovarian masses, uterine masses, pelvic inflammatory disease, endometriosis) Ultrasound appearance of normal uterine pregnancy. Ectopic pregnancy	diagnostic radiology	Lecture	
7	1	Breast imaging Investigations of breast.	diagnostic radiology	Lecture	

		Normal radiographic anatomy. Specific diseases of the breast (simple cyst, fibroadenoma, breast carcinoma).			
8	1	Radiology of bone diseases Plain radiographic Signs of bone diseases Classification of bone diseases. Radiological assessment of solitary bone lesion. Malignant bone tumors: (Osteosarcoma, Chondrosarcoma, Ewing s sarcoma, Giant cell tumor). Benign tumors tumor like lesion	diagnostic radiology	Lecture	
9	1	Radiology of bone diseases Bone infection (Osteomeylitis, TB). Multiple focal bone lesions (bone metastases & multiple myeloma) Generalized decrease in bone density. Generalized increase in bone density. Acromegally. Radiology of bone trauma	diagnostic radiology	Lecture	
10	1	Radiology of joint diseases Imaging techniques of joint diseases. Plain radiographic Signs of joint diseases Arthritis (rheumatoid arthritis, osteoarthritis, pyogenic arthritis) Avascular necrosis.	diagnostic radiology	Lecture	
11	1	Radiology of the spine Imaging investigations of the spine Anatomical review. Plain radiographic Signs of spinal abnormality.	diagnostic radiology	Lecture	
12	1	Radiology of the spine (continue) Specific diseases of the spine: (Metastases, lymphoma & Myeloma, spinal infection, spinal trauma, degenerative disc disease, Spinal stenosis, Ankylosing spondylitis, Spinal dysraphysim, spinal cord compression)	diagnostic radiology	Lecture	
13	1	Skull & brain Imaging investigations of the skull & brain Normal radiographic anatomy of the skull & brain. Specific brain disorders: (brain tumors, stroke, infection, multiple sclerosis) Radiology of head injury	diagnostic radiology	Lecture	
14	1	Sinuses, orbit & neck Imaging techniques & diseases of the para-nasal sinuses. Imaging techniques & diseases of the orbit. Imaging techniques & diseases of the salivary glands.	diagnostic radiology	Lecture	

		Imaging techniques & diseases of the thyroid & para-thyroid gland.			
15	1	Angiography Definition, indications, principles & complications of arteriograpy. Indications of venography. Specific vascular disorders (Aneurysms, Atheroma, arterio-venous fistula & malformation, Stenosis & Fibromuscular hyperplasia, Thrombosis & Embolism, vascular Tumors) Interventional radiology • Vascular interventional procedures. • Percutaneous needle biopsy. • Percutaneous drainage of abscess & fluid collections. • Interventions in urinary obstruction. • Interventions in biliary obstruction.	diagnostic radiology	Lecture	

33-Infrastructure of surgery/ fifth level	
1-Required course books	Bailey and love's short practice of surgery
2- main references (sources)	Schwartz principles of surgery
3- Recommended books and references (scientific journals, reports)	Illustrate principles of surgery
4- Electronic references, websites	e medicine.com

34-course development plan
Develop academic curricula annually and update them in line with the development taking place in the treatment of surgical diseases...

10 • Academic description form for the branch of pharmacology

This course description provides a summary of the most important characteristics of the course and the learning objectives that the student is expected to achieve, demonstrating whether he has made maximum use of the available learning opportunities. It must be linked to the description of the program.

1- educational institution
University of Diyala \college of medicine
2-Scienpediatricstific Department / Center
Pharmacology
3-Academic or professional program name
Human medicine
4-Final certificate name
Bachelor of Medicine and General Surgery
5-Academic system (annual / courses / semesters)
Semesters
6- Semester/year
First course + second course / 2021
7-Available forms of attendance
Actual mandatory attendance
8-Symbol
PHA309
9-The number of study hours
Theoretical.....96 hours Practical..... 64 hours
10-Accredited Accreditation Program
Theoretical and practical study and discussions of blended learning, attendance and electronic (via the Classroom platform)
11-Other external influences
A teaching hospital, library, internet, community, doctors' syndicate
12-Description creation date
15/6/2021
13-Academic Program Objectives
Defining how to use different groups of medicines and good drugs to treat different diseases. 2 -Describe the mechanism of work of the various body systems and the accompanying sequence of physiological and pathological events. 3 -Defining the mechanism of selecting the appropriate drugs in the event of more than one disease occurring at the same time 4 -Definition of the side effects associated with taking medicines and how to deal with them and reduce their

occurrence
5 -Estimation of the normal values of vital activities in relation to different biological conditions.
6 -Expanding knowledge through periodicals, medical books and the Internet.
7 -Apply the basic scientific building blocks acquired by him to conduct scientific research and medical studies.
8- Determining the functions of the various body systems

14-Required program outcomes and methods of teaching, learning, and assessment

- **Cognitive goals**

Learning the basics of drug action and its various groups.
2 -Learning to use appropriate doses and methods of administering medicine to medicines to treat various disease conditions
3 -Developing mental abilities through various modern academic and practical methods of education
4 -Linking basic sciences with applied sciences in the future
5 -Learn about the methods of action and effect of drugs
6 -Learn the method of scientific discussion
7- Acquisition of laboratory skills

- **Skills objectives of the program**

1 - Methods of dealing with laboratory animals and scientific equipment
2 -How to use and give medicines to the patient
3- Acquisition of human clinical examination skills

- **Teaching and learning methods**

1 - Lectures - computers - plasma screens - modern scientific equipment - clinical tours - educational seminars, audio-visual equipment - discussions.
2- In-person and electronic blended education (via the Classroom platform).

- **Evaluation Methods**

1-Discussion in lectures
2 -Mid-course exams and end-of-course exams
3 -Periodic evaluation
4 -Small education groups
5- Practical exams.

- **Transferred general and qualification skills**

1-The student should cooperate with his colleagues and teachers in an atmosphere of cordiality and understanding
2 -To work with his peers as a team
3- To interact with them on scientific trips and the media.

15- The structure of the course for pharmacology/ third level / first course

Week	Hours	Required educational goals	Unit name and/or topic	education method	evaluation method
1,2	6	Pharmacokinetics and Pharmacodynamics	Pharmacology	Lecture	Exam
3,4	6	Autonomic nervous System	Pharmacology	Lecture	Exam
5	3	Autocoids	Pharmacology	Lecture	Exam

6,7,8,9	12	Drugs for Central Nervous System	Pharmacology	Lecture	Exam
10,11,12	9	Drugs for Cardiovascular System	Pharmacology	Lecture	Exam
13,14	6	Drugs for Blood	Pharmacology	Lecture	Exam
15	3	NSAIDs and Gout	Pharmacology	Lecture	Exam

16-The structure of the course for theortical pharmacology/ third level / second course					
Week	**Hours**	**Required educational goals**	**Unit name and/or topic**	**education method**	**evaluation method**
1	3	Drugs for Respiratory System	Pharmacology	Lecture	Exam
2,3,4,5,6	15	Antimicrobial Drugs	Pharmacology	Lecture	Exam
7	3	Anticancer Drugs	Pharmacology	Lecture	Exam
8,9,10,11	12	Drugs for Endocrine System	Pharmacology	Lecture	Exam
12,13	6	Drugs for Gastrointestinal Drugs	Pharmacology	Lecture	Exam
14,15	6	Miscellaneous Drugs and subjects	Pharmacology	Lecture	Exam

17- The structure of the course for practical pharmacology/ third level / first course					
Week	**Hours**	**Required educational goals**	**Unit name and/or topic**	**education method**	**evaluation method**
1	3	Introduction to Pharmacology	Pharmacology	Lecture + laboratory experiment	Exam
2	3	Pharmacokinetics	Pharmacology	Lecture + laboratory experiment	Exam
3	3	Pharmacodynamics	Pharmacology	Lecture + laboratory experiment	Exam
4	3	Dosage forms	Pharmacology	Lecture + laboratory experiment	Exam
5	3	Routes of administration	Pharmacology	Lecture + laboratory experiment	Exam
6	3	Beta-Blockers	Pharmacology	Lecture + laboratory experiment	Exam

7	3	Nitric oxide	Pharmacology	Lecture + laboratory experiment	Exam
8	3	Eye drops	Pharmacology	Lecture + laboratory experiment	Exam
9	3	Physostigmine	Pharmacology	Lecture + laboratory experiment	Exam
10	3	Exercise and heart rate	Pharmacology	Lecture + laboratory experiment	Exam
11	3	Drug Interactions	Pharmacology	Lecture + laboratory experiment	Exam
12	3	Drugs in Pregnancy	Pharmacology	Lecture + laboratory experiment	Exam
13	3	Drugs in Lactation	Pharmacology	Lecture + laboratory experiment	Exam
14	3	Adverse Drug Reactions	Pharmacology	Lecture + laboratory experiment	Exam
15	3	Drug Calculations	Pharmacology	Lecture + laboratory experiment	Exam

18- The structure of the course for practical pharmacology/ third level / second course					
Week	**Hours**	**Required educational goals**	**Unit name and/or topic**	**education method**	**evaluation method**
1	3	Measuring blood pressure and heart rate	Pharmacology	Lecture + laboratory experiment	Exam
2	3	Effect of Atropine on the eye	Pharmacology	Lecture + laboratory experiment	Exam
3	3	Toxicity of Physostigmine	Pharmacology	Lecture + laboratory experiment	Exam
4	3	The effect of adrenaline on the heart	Pharmacology	Lecture + laboratory experiment	Exam
5	3	Drug dissolution and deposition	Pharmacology	Lecture + laboratory experiment	Exam
6	3	Animal handling	Pharmacology	Lecture + laboratory experiment	Exam
7	3	Injections	Pharmacology	Lecture +	Exam

				laboratory experiment	
8	3	Respirometer	Pharmacology	Lecture + laboratory experiment	Exam
9	3	Toxicity of the drugs	Pharmacology	Lecture + laboratory experiment	Exam
10	3	Clinical trials	Pharmacology	Lecture + laboratory experiment	Exam
11	3	Drug in renal failure	Pharmacology	Lecture + laboratory experiment	Exam
12	3	Drug in liver failure	Pharmacology	Lecture + laboratory experiment	Exam
13	3	Experimental Pharmacology	Pharmacology	Lecture + laboratory experiment	Exam
14	3	Drug Abuse	Pharmacology	Lecture + laboratory experiment	Exam
15	3	Discussion of Seminars	Pharmacology	Lecture + laboratory experiment	Exam

19-Infrastructure of surgery/ fifth level	
1-Required course books	Lippincott Illustrated Review of Pharmacology
2- main references (sources)	
3- Recommended books and references (scientific journals, reports)	- Katzung Basic and Clinical Pharmacology - Rang and Dale Clinical Pharmacology
4- Electronic references, websites	www.drugs.com www.Pubmed.com

11- • Academic description form for the branch of microbiology

This course description provides a summary of the most important characteristics of the course and the learning objectives that the student is expected to achieve, demonstrating whether he has made maximum use of the available learning opportunities. It must be linked to the description of the program.

1- educational institution
University of Diyala \college of medicine
2-Scienpediatricstific Department / Center
Microbiology
3-Academic or professional program name
Human medicine
4-Final certificate name
Bachelor of Medicine and General Surgery
5-Academic system (annual / courses / semesters)
Semesters
6- Semester/year
First course + second course / 2021
7-Available forms of attendance
Actual mandatory attendance
8-The number of study hours
- Medical bacteria and fungi 180 hours - Medical immunity 90 hour -Medical Parasitology 150 hours -Medical viruses 45 hours
9-Accredited Accreditation Program
Theoretical and practical study and discussions of blended learning, attendance and electronic (via the Classroom platform)
10-Other external influences
A teaching hospital, library, internet, community, doctors' syndicate
11-Description creation date
15/6/2021
12-Academic Program Objectives
1-Getting to know this vital science and its increasing importance to the doctor in particular and society in general. 2 -Providing the student with the forensic medical information necessary for them to practice the general medical profession in the future, especially about how they face various forensic medical cases and how to act well regarding them. 3 -How to write forensic medical reports and death certificates of all kinds. 4 -Identifying all kinds of diseases and studying them clinically and histologically.

5- Acquaintance with medical terminology, which facilitates its use in the primary and higher school years.

13-Required program outcomes and methods of teaching, learning, and assessment

- **Cognitive goals**

1. That the student recognizes the diseases of the human body and the effects of the disease on every part of the body.
2 .To distinguish between normal and abnormal conditions by studying general diseases and identifying them clinically and histologically.
4 - Familiarity with the science of forensic medicine
5 -How to deal with forensic medical cases received by health institutions.
6 -How to write medical reports for the living and the dead.
7 -How to write different death certificates and their importance.
8 -Get acquainted with the rest of the relevant forensic sciences.
9- Encouraging students to engage in this rare specialization in the future.

- **Skills objectives of the program**

1 - Avoid making mistakes when writing medical reports.
2 - Knowing how to safely send cases
- 3 Knowing the scientific methods for reading reports upon receiving medical cases from medical institutions.
4- The correct methods for diagnosing general diseases of humans.

- **Teaching and learning methods**

1. Theoretical lectures using data show to display the various medical images.
2 .Practical application of the concepts that have been studied in specialized laboratories.
3 .Seminars (students are assigned a topic within the curriculum for presentation and discussion)
4 -Field visits to public health laboratories.
5 -In-person and electronic blended education via e-learning platforms (Classroom).
6- Laboratory examination of microorganism samples using electron microscopes.

- **Evaluation Methods**

1-Theoretical and practical assessment exam for the middle and end of the course
3 -Short exams during the semester
4- Evaluate the reports prepared by the students

- **Transferred general and qualification skills**

1. Using modern means to search for new parameters (scientific and medical websites).
2 .Attending specialized scientific symposiums to see the latest developments in the medical field.
3 .Active participation in practical classes in specialized laboratories and teaching hospitals.
4 .Apply the accumulated information in practice in hospitals and disease labs, and conduct scientific research.
5 -Using PowerPoint to display educational models.
6 -Using the Internet to search for recent topics to develop medical information.
7- Using e-books to develop lectures

14- The structure of the course for theoretical bacteriology/ third level / first course					
Week	**Hours**	**Required**	**Unit name**	**education**	**evaluation**

		educational goals	and/or topic	method	method
1	2	Introduction to medical Microbiology, classification, nutrition, growth, Bacterial virulence Bacterial 2and enetics,metabolism	Bacteriology	Electronic and attending lectures	Exam
2	2	Sterilization and disinfection	Bacteriology	Electronic and attending lectures	Exam
3	2	Antibiotics and chemotherapeutic agents	Bacteriology	Electronic and attending lectures	Exam
4	2	Staphylococci	Bacteriology	Electronic and attending lectures	Exam
5	2	Streptococci	Bacteriology	Electronic and attending lectures	Exam
6	2	Gram negative cocci, Neisseria species	Bacteriology	Electronic and attending lectures	Exam
7	2	Gram positive non-spore forming bacilli, Corynebacterium diphtheria, Gram negative bacilli, H. influenza species	Bacteriology	Electronic and attending lectures	Exam
8	2	Exam	Bacteriology	Electronic and attending lectures	Exam
9	2	Gram positive aerobic spore forming bacilli, Bacillus anthracis, B.subtilis, B. cereus	Bacteriology	Electronic and attending lectures	Exam
10	2	Gram negative spore forming bacilli, Clostridia species	Bacteriology	Electronic and attending lectures	Exam
11	2	Gram negative bacilli, Bordetella	Bacteriology	Electronic and attending	Exam

		species& Yersinia species		lectures	
12	2	Gram negative bacilli, Compylobacter, H.pylori	Bacteriology	Electronic and attending lectures	Exam
13	2	Gram negative enteric bacilli, Pseudomonas and other G negative species	Bacteriology	Electronic and attending lectures	Exam
14	2	Gram negative enteric bacilli	Bacteriology	Electronic and attending lectures	Exam
15	2	Exam	Bacteriology	Electronic and attending lectures	Exam

15- The structure of the course for practical bacteriology/ third level / first course					
Week	**Hours**	**Required educational goals**	**Unit name and/or topic**	**education method**	**evaluation method**
1	2	Preparation of culture media	Bacteriology	Electronic and attending lectures	Exam
2	2	Mode of Sterilization and disinfection	Bacteriology	Electronic and attending lectures	Exam
3	2	Antibacterial susceptibility test	Bacteriology	Electronic and attending lectures	Exam
4	2	Diagnostic methods of Staphylococci	Bacteriology	Electronic and attending lectures	Exam
5	2	Diagnostic methods of Streptococci	Bacteriology	Electronic and attending lectures	Exam
6	2	Diagnostic methods of Neisseria	Bacteriology	Electronic and attending lectures	Exam
7	2	Diagnostic methods of Corynebacterium diphtheria& H. influenza species	Bacteriology	Electronic and attending lectures	Exam
8	2	Exam	Bacteriology	Electronic and attending lectures	Exam
9	2	Diagnostic methods of	Bacteriology	Electronic and attending	Exam

		Bacillus anthracis, B.subtilis, B. = cereus		lectures	
10	2	Diagnostic methods of Clostridia species	Bacteriology	Electronic and attending lectures	Exam
11	2	Diagnostic methods of Bordetella species& Yersinia species	Bacteriology	Electronic and attending lectures	Exam
12	2	Diagnostic methods of Compylobacter, H.pylori	Bacteriology	Electronic and attending lectures	Exam
13	2	Diagnostic methods of Enterobactereace	Bacteriology	Electronic and attending lectures	Exam
14	2	Diagnostic methods of Enterobactereace	Bacteriology	Electronic and attending lectures	Exam
15	2	Exam	Bacteriology	Electronic and attending lectures	Exam

16- The structure of the course for theoretical bacteriology/ third level / second course					
Week	**Hours**	**Required educational goals**	**Unit name and/or topic**	**education method**	**evaluation method**
1	2	E. coli	Bacteriology	Electronic and attending lectures	Exam
2	2	Klebsiella	Bacteriology	Electronic and attending lectures	Exam
3	2	Proteus	Bacteriology	Electronic and attending lectures	Exam
4	2	Salmonella	Bacteriology	Electronic and attending lectures	Exam
5	2	Shigella	Bacteriology	Electronic and attending lectures	Exam
6	2	Vibrio cholera	Bacteriology	Electronic and attending lectures	Exam
7	2	Vibrio parahemolyticus	Bacteriology	Electronic and attending	Exam

				lectures	
8	2	Mycobacterium species and Mycobacterium tuberculosis	Bacteriology	Electronic and attending lectures	Exam
9	2	Chlamydia, and Treponema	Bacteriology	Electronic and attending lectures	Exam
10	2	Rickettsia	Bacteriology	Electronic and attending lectures	Exam
11	2	Mycoplasma	Bacteriology	Electronic and attending lectures	Exam
12	2	Exam	Bacteriology	Electronic and attending lectures	Exam
13	2	Introduction to medical mycology	Mycology	Electronic and attending lectures	Exam
14	2	Dermatophytes	Mycology	Electronic and attending lectures	Exam
15	2	Aspergillosis	Mycology	Electronic and attending lectures	Exam

17- The structure of the course for practical bacteriology/ third level / second course					
Week	**Hours**	**Required educational goals**	**Unit name and/or topic**	**education method**	**evaluation method**
1	2	Rickettsia	Bacteriology	Electronic and attending lectures	Exam
2	2	Mycoplasma	Bacteriology	Electronic and attending lectures	Exam
3	2	- Laboratory Diagnosis of Viral Infections.	Bacteriology	Electronic and attending lectures	Exam
4	2	Overview of Laboratory Diagnostic Methods.	Bacteriology	Electronic and attending lectures	Exam
5	2	The Basics of Immunofluorescence & Immunohistochemistry.	Bacteriology	Electronic and attending lectures	Exam
6	2	Solid Phase Immunoassay (RIA & ELISA) & Unlabeled Methods.	Bacteriology	Electronic and attending lectures	Exam

7	2	Molecular Techniques (PCR & RT-PCR).	Bacteriology	Electronic and attending lectures	Exam
8	2	Indirect Methods (Virus Isolation) - Cell Culture.	Bacteriology	Electronic and attending lectures	Exam
9	2	Exam	Bacteriology	Electronic and attending lectures	Exam
10	2	Introduction to mycology	Mycology	Electronic and attending lectures	Exam
11	2	Molds medical importance	Mycology	Electronic and attending lectures	Exam
12	2	Candidiases	Mycology	Electronic and attending lectures	Exam
13	2	Exam	Mycology	Electronic and attending lectures	Exam
14	2	Rickettsia	Mycology	Electronic and attending lectures	Exam
15	2	Mycoplasma	Mycology	Electronic and attending lectures	Exam

18- The structure of the course for theoretical virology / third level / first course					
Week	**Hours**	**Required educational goals**	**Unit name and/or topic**	**education method**	**evaluation method**
1	1	_viral replication	Virology	Electronic and attending lectures	Exam
2	1	pathogenesis of virus	Virology	Electronic and attending lectures	Exam
3	1	viral vaccine	Virology	Electronic and attending lectures	Exam
4	1	herpes virus HSV	Virology	Electronic and attending lectures	Exam
5	1	Varicella _zoster virus	Virology	Electronic and attending lectures	Exam
6	1	Ebstan barr virus (EBV)	Virology	Electronic and attending	Exam

				lectures	
7	1	poxvirus +molluscum contagiosum virus	Virology	Electronic and attending lectures	Exam
8	1	Papillomavirus	Virology	Electronic and attending lectures	Exam
9	1	Parvovirus	Virology	Electronic and attending lectures	Exam
10	1	Adenovirus	Virology	Electronic and attending lectures	Exam
11	1	_Hepatitis B virus	Virology	Electronic and attending lectures	Exam
12	1	Exam	Virology	Electronic and attending lectures	Exam

19- The structure of the course for theoretical virology / third level / second course					
Week	**Hours**	**Required educational goals**	**Unit name and/or topic**	**education method**	**evaluation method**
1	1	RSV & Parainfluenza Viruses.	Virology	Electronic and attending lectures	Exam
2	1	Mumps Virus & Measles Morbillivirus.	Virology	Electronic and attending lectures	Exam
3	1	- Poliovirus.	Virology	Electronic and attending lectures	Exam
4	1	Rotavirus (Part 1).	Virology	Electronic and attending lectures	Exam
5	1	Rotavirus (Part 2).	Virology	Electronic and attending lectures	Exam
6	1	Hepatitis A Virus.	Virology	Electronic and attending lectures	Exam
7	1	Hepatitis E Virus.	Virology	Electronic and attending lectures	Exam
8	1	Hepatitis C, D, & G Viruses.	Virology	Electronic and attending lectures	Exam
9	1	Rubella Virus.	Virology	Electronic and attending lectures	Exam

10	1	Rabies Virus.	Virology	Electronic and attending lectures	Exam
11	1	)1Coronaviruses (Part	Virology	Electronic and attending lectures	Exam
12	1	Coronaviruses (Part 2).	Virology	Electronic and attending lectures	Exam
13	1	Arthropod Borne & Rodent Borne Viral Diseases (Part 1).	Virology	Electronic and attending lectures	Exam
14	1	Arthropod Borne & Rodent Borne Viral Diseases (Part 2).	Virology	Electronic and attending lectures	Exam
15	1	Exam	Virology	Electronic and attending lectures	Exam

20- The structure of the course for theortical parasitology/ third level / first course					
Week	**Hours**	**Required educational goals**	**Unit name and/or topic**	**education method**	**evaluation method**
1	2	Introduction of Protozoa	Parasitology	Electronic and attending lectures	Exam
2	2	Sarcodina)Pathogenic Entamoeba & Non-pathogenic Entamoeba	Parasitology	Electronic and attending lectures	Exam
3	2	(Mastigophora)Luminal	Parasitology	Electronic and attending lectures	Exam
4	2	flagellate parasite(Giardia Lumbelia, Chilomestic mesnil)	Parasitology	Electronic and attending lectures	Exam
5	2	Genital Flagellate(Trichomonas vaginalis)	Parasitology	Electronic and attending lectures	Exam
6	2	Blood flagellate(Trypanosomiasis) Leishmaniasis Plasmodium Apicomplexa(Toxoplasma gondii) (Cryptococcus) (Isospora).	Parasitology	Electronic and attending lectures	Exam

7	2	Ciliated protozoa(Balantidium coli)	Parasitology	Electronic and attending lectures	Exam
8	2	Exam	Parasitology	Electronic and attending lectures	Exam

21- The structure of the course for theoretical parasitology / third level / second course					
Week	**Hours**	**Required educational goals**	**Unit name and/or topic**	**education method**	**evaluation method**
1	2	Helminthology(platyhelminth):(Trematoda)	Parasitology	Electronic and attending lectures	Exam
2	2	Intestinal flukes(Fasciolopsis buski, Heterophyes heterophyes)	Parasitology	Electronic and attending lectures	Exam
3	2	Blood flukes (Schistosoma mansoni, Schistosoma plasmodium, Schistosoma falciparum)	Parasitology	Electronic and attending lectures	Exam
4	2	Liver flukes(Fasciola hepatica, Clonorchis sinensis)	Parasitology	Electronic and attending lectures	Exam
5	2	Lung flukes(Paragonimus westermani)	Parasitology	Electronic and attending lectures	Exam
6	2	Helminthology(platyhelminth):(Cestoda)	Parasitology	Electronic and attending lectures	Exam
7	2	Taenia solium, Taenia saginata	Parasitology	Electronic and attending lectures	Exam
8	2	Echinococcus granulosus	Parasitology	Electronic and attending lectures	Exam
9	2	Hymenolepis nana, Hymenolepis diminuta, dipylidum caninum)	Parasitology	Electronic and attending lectures	Exam
10	2	Nemathelminthes(Nematoda)	Parasitology	Electronic and attending lectures	Exam

11	2	Ascars lumbercoides, Toxicara canis, Toxicara cati	Parasitology	Electronic and attending lectures	Exam
12	2	Ancylostoma species, Necator American	Parasitology	Electronic and attending lectures	Exam
13	2	Strongyloides, Enterobius vermicularis	Parasitology	Electronic and attending lectures	Exam
14	2	Trichonella sparilis, Wuchereria bancrofti, loa loa	Parasitology	Electronic and attending lectures	Exam
15	2	Exam	Parasitology	Electronic and attending lectures	Exam

22- The structure of the course for practical parasitology/ third level / first course					
Week	**Hours**	**Required educational goals**	**Unit name and/or topic**	**education method**	**evaluation method**
1	2	Lab diagnosis Introduction of Protozoa	Parasitology	Electronic and attending lectures	Exam
2	2	Sarcodina)Pathogenic Entamoeba & Non-pathogenic Entamoeba	Parasitology	Electronic and attending lectures	Exam
3	2	(Mastigophora)Luminal	Parasitology	Electronic and attending lectures	Exam
4	2	flagellate parasite(Giardia Lumbelia, Chilomestic mesnil)	Parasitology	Electronic and attending lectures	Exam
5	2	Genital Flagellate(Trichomonas vaginalis)	Parasitology	Electronic and attending lectures	Exam
6	2	Blood flagellate(Trypanosomiasis) Leishmaniasis Plasmodium Apicomplexa(Toxoplasma gondii) (Cryptococcus) (Isospora).	Parasitology	Electronic and attending lectures	Exam

7	2	Ciliated protozoa(Balantidium coli)	Parasitology	Electronic and attending lectures	Exam
8	2	Exam	Parasitology	Electronic and attending lectures	Exam

23- The structure of the course for practical parasitology / third level / second course					
Week	**Hours**	**Required educational goals**	**Unit name and/or topic**	**education method**	**evaluation method**
1	2	Helminthology(platyhelminth):(Trematoda)	Parasitology	Electronic and attending lectures	Exam
2	2	Intestinal flukes(Fasciolopsis buski, Heterophyes heterophyes)	Parasitology	Electronic and attending lectures	Exam
3	2	Blood flukes (Schistosoma mansoni, Schistosoma plasmodium, Schistosoma falciparum)	Parasitology	Electronic and attending lectures	Exam
4	2	Liver flukes(Fasciola hepatica, Clonorchis sinensis)	Parasitology	Electronic and attending lectures	Exam
5	2	Lung flukes(Paragonimus westermani)	Parasitology	Electronic and attending lectures	Exam
6	2	Helminthology(platyhelminth):(Cestoda)	Parasitology	Electronic and attending lectures	Exam
7	2	Taenia solium, Taenia saginata	Parasitology	Electronic and attending lectures	Exam
8	2	Echinococcus granulosus	Parasitology	Electronic and attending lectures	Exam
9	2	Hymenolepis nana, Hymenolepis diminuta, dipylidum caninum)	Parasitology	Electronic and attending lectures	Exam
10	2	Nemathelminthes(Nematoda)	Parasitology	Electronic and attending	Exam

				lectures	
11	2	Ascars lumbercoides, Toxicara canis, Toxicara cati	Parasitology	Electronic and attending lectures	Exam
12	2	Ancylostoma species, Necator American	Parasitology	Electronic and attending lectures	Exam
13	2	Strongyloides, Enterobius vermicularis	Parasitology	Electronic and attending lectures	Exam
14	2	Trichonella sparilis, Wuchereria bancrofti, loa loa	Parasitology	Electronic and attending lectures	Exam
15	2	Exam	Parasitology	Electronic and attending lectures	Exam

24- The structure of the course for practical immunology / third level / first course					
1	2	Agglutination	immunology	Electronic and attending lectures	Exam
2	2	Precipitation	immunology	Electronic and attending lectures	Exam
3	2	Hemagglutination & Hemagglutination Inhibition	immunology	Electronic and attending lectures	Exam
4	2	Complement Fixation	immunology	Electronic and attending lectures	Exam
5	2	Immunoflourscent assay	immunology	Electronic and attending lectures	Exam
6	2	Radioimmunoassay	immunology	Electronic and attending lectures	Exam
7	2	Enzyme- Linked Sorbent -Immunoassay	immunology	Electronic and attending	Exam

				lectures	
8	2	Enzyme-linked –Immuno-Fluorescent assay	immunology	Electronic and attending lectures	Exam
9	2	Immunochromatography(Lateral Flow Assay)	immunology	Electronic and attending lectures	Exam
10	2	Immunohistochemistry(IHC)	immunology	Electronic and attending lectures	Exam
11	2	Exam	immunology	Electronic and attending lectures	Exam

25-Microbiology Infrastructure	
1-Required course books	Jaweds for medical students
2- main references (sources)	Medical Microbiology
3- Recommended books and references (scientific journals, reports)	Various reliable international sources and periodicals
4- Electronic references, websites	Ncbi ,Lancet

Prepared by.....

Head of the Quality Assurance and Acdemic Accreditation Division
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Assistant lecturer. Manar Abd Alrazaq Hassan Al-Zuhairy

15/6/2021