(ماجستير/ كورس اول) المقررات الدراسية لفرع الكيمياء والكيمياء الحياتية

Advance Biochemistry (4 unit , 60 hours)

- 1. Prof. Dr. Ban Mahmoud (30 hrs)
- 2. Asst.Prof. Khawla Abdulhamza (30 hrs)

No	Торіс	No of hours	Name of lecturer
1	Lipid metabolism I	4	Asst.Prof. Khawla
			Abdulhamza
2	Lipid metabolism II	4	=
3	Lipoprotein I	4	=
4	Lipoprotein II	4	=
5	B-Oxidation	4	=
6	General characteristic and metabolic	4	=
	pathway and Carbohydrate		
	metabolism		
7	Glycolysis and	4	=
	Gluconeogenesis		
8	TCA cycle and	2	Asst. Prof. Ban
	Oxidative phosphorylation		Mahmoud
9	Glycogen metabolism	2	=
	And HMP shunt pathway		
10	Sorbitol pathway and Fractose and	4	=
	galctose metabolism		
11	Protein metabolism I	4	
12	Protein metabolism II	4	=
13	Enzymes I	4	=
14	Enzyme II	4	=
15.	Vitamines	4	=

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Clinical Biochemistry (5 units, 75 hrs)

- 1. Asst.Prof. Sena Mohammed 30 hrs
- 2. Asst.Prof. Zena Abbas 30 hrs

No	Торіс	No of hours per week	Name of lecturer
1	water ,Na and K disturbance	5	Asst.Prof.Sena Bader
2	Acid –Base Balance	5	=
3	Renal disease	5	=
4	plasma protein abnormalities	5	=
5	Diagnostics Enzymology Liver disease	5	=
6	Deficiencies of trance elements	5	=
7	Disorders of Calcium and phosphorous	5	=
8	porphyria and Hb disorders	5	Asst.Prof.Zena Abbas
9	ferritin and iron	5	=
10	neoplasma ; cancer , tumors and tumor markers ,G.I tract disease	5	=
11	Disorder of carbohydrate metabolism	5	
12	Disorder of lipid metabolism	5	=
13	Disorder of vitamins	5	=
14	Disorder of hormones:Thyroids	5	=
	,steroids,pituitary,hypothalamus,gonads		
15.	Glycoprotein	5	=

*	Methodology of Research	15 weeks	Prof. Dr. Abdulsamie
			Alta'ee

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No	Subject	No. of Unit	No. of hours
1	Advance Biochemistry	4	60
2	Clinical Biochemistry	4	60
3	Microbiology	1	15
4	Physiology	1	15
5	English	1	15
6	Statistics	1	15
7	Chemical safety and security	1	15
8	Practical Clinical Biochemistry	1	15
9	Seminar	0	15

Table of Msc .1st course

MSc. Second course

Advance Biochemistry (4 units , 60 hrs)

- 1. Asst.Prof. Dr. Ban Shaker (30 hrs for each lecturers)
- 2. Asst. Prof. Dr. Zena Abbas (30 hrs for each lecturers

No	Торіс	No of hours per week	Name of lecturer
1	Hormones I	4	Asst. Prof. Dr. Zena
			Abbas
2	Hormones li	4	=
3	Heme Metabolism	4	=
4	Inborn Error Of Metabolism	4	=
5	Pyrmidine And Purine	4	=
	Metabolism I		
6	Pyrmidine And Purine	4	=
	Metabolism II		
7	Dna And Rna Transcription	4	=
8	Dna Recombination	2	=
9	Genetic Code	5	Asst.Prof. Ban M.Shaker
10	Protein Synthesis I	5	=



11	Protein Synthesis II	5	=
12	Minerals	4	
13	Nutrition	4	=
14	Regulation	4	=
	&Interrelation		
	Ofmetabolism		
15	Xenobiotic Metabolism	3	=

Clinical Biochemistry (4 units, 60 hours)

- 1. Asst. Prof. Dr. Seena Bader (30 hrs for each lecturers)
- 2. Asst. Prof.Dr. Thana M. Juda (30 hrs for each lecturers)

No	Торіс	No of hours per week	Name of lecturer
1	DISORDER OF HEME METABOLISM I	4	Asst.Prof.Seena
			B.Shukei
2	DISORDER OF HEME METABOLISM II	4	=
3	DISORDER OF PURINE METABOLISM I	4	=
4	DISORDER OF PURINE METABOLISM II	4	=
5	BIOCHEMISTRY OF PREGNANCY	4	=
6	BIOCHEMISTRY OF PREGNANCY	4	=
7	BIOMARKER OF MI (I)	4	=
8	BIOMARKER OF MI (II)	4	=
9	MUSCULAR SKELETAL BIOCHEMISTRY	4	Asst.Prof.Thana
			M.Juda
10	Toxicology	4	=
11	Interleukins	4	=
12	MUSCULAR SKELETAL BIOCHEMISTRY	4	=
13	NEUROCHEMISTRY	4	=
14	CLINICAL NUTRITION	4	=
15	BIOCHEMISTRY OF ELDERLY	4	=

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1.Asst.prof. Dr. Alaa J.Mahrath 2. Asst.Prof. Dr. Tarik Husain

No	Торіс	No of hours per	Name of lecturer
		week	
1	Electrophoresis I	2	Alaa J.Mahrath
2	Electrophoresis I	2	=
3	Gel chromatography I	2	=
4	Gel chromatography II	2	=
5	PCR I	2	=
6	PCR	2	=
7	Spectroscopy I	2	=
8	-Spectroscopy II	2	=
9	Spectroscopy III	2	Asst.Prof. Dr. Tarik
			Husain
10	Spectroscopy IV	2	=
11	ELISA I	2	=
12	ELISA II	2	=
13	-VIDUS I	2	=
14	HPLC I	2	=
15	HPLC II	2	=

[•] Medical Physiology (1 unit , 15 hours)

• English course

الماجستير الكورس الثاني

No	Subject	No. of Unit	No. of hours
1	Advance Biochemistry	4	60
2	Clinical Biochemistry	4	60
3	Medical Biotechnology	2	30
4	Physiology	1	15
5	English	1	15
6	Seminar	0	15

دكتوراه / كورس اول) المقررات الدراسية لفرع الكيمياء والكيمياء الحياتية

Endocrinology (4 units ,60 hrs)

$1.\ensuremath{\textit{Prof.Dr.}}$ Mufeed J.Ewadh 30 hrs .

2. Prof. Dr. Maha F.Smaism (30 hrs)

No	Торіс	No of	Name of
		hours	lecturer
		per	
		week	
1	Principles to the techniques used for hormonal assay	4	Prof.Mufeed
			J.Ewadh
2	Specify and sensitivity of hormonal assay	4	=
3	hormones and neoplasia.	4	=
4	Calcium regulating hormone	4	=
5	hypothalmics factors	4	=
6	The mechanism of action of hormones, Peptide and protein	4	=
7	Hormone Receptors, secretion and its regulation	4	=
8	Hypothalamuses, hormone Pituitary hormone	4	Prof.Maha
			F.Smaism
9	Adrenal Hormone	4	=
	a) adrenal cortex hormones		
10	b) hormones of adrenal medulla	4	=
	hormones		
12	Thyroid hormones.	4	=
13	GH hormones	4	=
14	Ganado hormone	4	=
15	Steroid hormones	4	=

Proteomics and Genomic (2 Units ,30 hrs)

1. Prof .Dr. Mohammed Baher Saheb

No	Торіс	No of hours per week	Name of lecturer
1	gene analysis and method	2	2. Asst.Prof. Mohammed
	genomics		Sahib
2	genetic engineering	2	=
3	DNA finger printing	2	=
4	molecular methods in diagnosis	2	=
	and monitoring of disease		
5	molecular methods in diagnosis	2	=
	and monitoring of disease		
5	application of genomicphos in	2	=
	medicine		
7	Introduction of proteomics	2	=
8	Two dimmention gel	2	=
	electrophoresis(2-DE)		
9	Two dimmention gel	2	=
	electrophoresis(2-DE)		
10	Flueresence 2-D difference gel	2	=
	electrophoresis (DIGE)		
11	Mass spectrometry	2	=
12	protein chip technology	2	=
13	protein chip technology	2	
14	Mass spectrometry II	2	=
15	Application of proteomic	2	=

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Clinical Biochemistry (4 units ,60 hrs)

- 1. Prof. Dr. Moaed O.Al Gazally (30 hrs)
- 2. Asst. Prof. Dr. Thana Mohammed (30 hrs)

No	Торіс	No of hours per	Name of lecturer
		week	
1	Kidney function tests	4	Prof. Dr. Moaed O.Al
			Gazally
2	Acid –Base disturbance	4	=
3	precaution in sample collection	4	=
4	Quality control in clinical	4	=
	chemistry		
5	Quality control in clinical	4	=
	chemistry		
6	water and sodium disorders	5	=
7	potassium metabolism disorders	4	=
8	disorders of carbohydrate	4	Asst. Prof. Dr. Thana
	metabolism		Mohammed
9	Disorder of lipid and lipoprotein	4	
	metabolism		
10	Disorders of calcium ,phosphate	4	=
	and magnesium metabolism		
11	Trace element and metal	4	=
	metabolism disorders		
12	Disorder of vitamin metabolism	4	=
13	Disorder of vitamin metabolism	4	=
14	GH function test	4	=
15	Disorder of plasma and urine proteins	4	=

Advance Metabolism (3 units, 45 hrs)

- **1.** Prof. Dr. Abdulsamie H. Alta'ee 21 hrs.
- 2. Prof. Dr. Maha F. Smaism 24 hrs.

No	Торіс	No of hours per	Name of lecturer
		week	
1	carbohvdrate metabolism I	3	Prof.Dr. Maha
			F.Smaism
2	carbohydrate metabolism II	3	=
3	carbohydrate metabolism III	3	=
4	carbohydrate metabolism IV	3	=
5	carbohydrate metabolism VI	3	=
6	lipid metabolism I	3	
7	lipid metabolism II	3	=
8	lipid metabolismIII	3	=
9	amino acid metabolism	3	Prof. Dr. Abdulsamie
			H. Alta'ee
10	amino acid metabolism I	3	=
11	amino acid metabolism I	3	=
12	amino acid metabolism II	3	=
13	amino acid metabolism III	3	=
14	Vitamins I	3	=
15	Vitamins II	3	=

الكورس الأول/ الدكتوراه

No	Subject	No. of Unit	No. of hours
1	Advance Biochemistry	3	45
2	Clinical Biochemistry	4	60
3	Proteomic & Genomic	2	30
4	Endocrinology	4	60
5	Seminar	0	15

Table for Ph.D first course

المنهاج الدراسي // دكتوراه /الكورس الثاني

(4 units ,60 hrs) Clinical Biochemistry

- 1. Prof.Dr. Moaed O.Al Gazally (30 hrs)
- 2. Prof. Dr. Suhayer A.Al Qaysi (30hrs)

No	Торіс	No of hours per week	Name of lecturer
1	Circulating tumor marker basic concept and clinical applications I	4	Prof.Moaed O.Al Gazally
2	Circulating tumor marker basic concept and clinical applications II	4	
3	Toxicology	5	=
4	Body fluid analysis I	4	=
5	Body fluid analysis II	4	=
6	laboratory marker and cardiac damage	5	=
7	Cytokines	4	=



8	Nutrition assessment.	4	Prof. Suhayer A.Al
			Qaysi
9	Nutrition assessment.	3	
10	Therapeutic drug monitoring	4	=
11	Therapeutic drug monitoring	4	=
12	Clinical chemistry and Geriatric patient	4	
13	Clinical chemistry and pregnancy	4	=
14	Clinical chemistry and pregnancy.	3	=
15	Clinical chemistry and pediatric patient	4	=

Enzymology (4 units ,60 hrs)

1. Prof. Dr. Mufeed J.Ewadh (30 hrs)

2. Prof. Dr. Abdulsamie H. Alta'ee (30 hrs)

No	Торіс	No of hours	Name of lecturer
		per week	
1	Fundamentals of enzymes, characteristic and	4	Prof.Dr. Mufeed
	properties		J.Ewadh
2	Enzymes classification, Nomenclature and mechanism of action.	4	=
3	Enzyme kinetic and graphical data analysis,PH and temp dependence.	4	=
4	Non Michaelis Menten kinetics	5	=
5	Substrates bindings and multi substrate reactions	5	=
6	Enzymes as clinical markers, diagnosis and diseases specificity	4	=
7	Enzymes as clinical markers, monitoring and prognosis of diseases.	4	=
8	Mid Exam		
9	Enzyme active site and chemical modification	4	Prof.Dr. Abdulsamie H. Alta'ee
10	Cofactors and coenzyme.	4	=



11	Types of regulation of enzymes catalysis actions	4	=
12	Behavior of allosteric enzymes.	4	=
13	Multi enzymes complex	4	=
14	Enzymes deactivation and functional degradation.	4	=
15	Enzyme activity, measuring and experimental techniques	4	=

Immunology (1 unite ,15 hrs)

Prof. Dr. Suhayer A.Al Qaysi (15 hrs)

No	Торіс	No of hours per	Name of lecturer
		week	
1	The immune system	1	Asst.Prof. Suhayer A.Al
			Qaysi
2	Immunoglobulins	1	=
3	Some specialized proteins of the	1	=
	immune system		
4	Cytokines	1	=
5	Organizing the immune response	1	=
6	Acute and chronic inflammation	1	=
7	Biochemical aspects of disorders	1	=
	of the immune system		
8	Immunochemical techniques	1	=
9	Production of antibodies	1	=
10	Antigen -antibody binding	1	=
11	Qualitative methods	1	=
12	Quantitative methods	1	=
13	Immunocytochemistry	1	=
14	Nanotechnology in	1	=
	immunoassay.		
15	Selected protocols in enzyme	1	=



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Molecular Biochemistry (Genetic) (3 units ,45 hrs)

1. Asst.Prof. Dr. Mohammed B.Sahib (45 hrs)

No	Торіс	No of hours	Name of lecturer
		per week	
1	Purification and detection of nucleic acid	3	Mohammed B.Sahib
2	Purification and detection of nucleic acid II	3	=
3	Different types of genetic material	3	-
4	Different types of genetic material	3	=
5	DNA fragment	3	=
6	Separation of DNA fragments by electrophoresis I	3	=
7	Separation of DNA fragments by electrophoresis II	3	=
8	Selective amplication of nucleotide sequence .	3	=
9	Selective amplication of nucleotide sequence .II	3	=
10	_ DNA sequence amplification by PCR .	3	=
11	RNA amplification as Cdna by RT_PCR I	3	=
12	RNA amplification as cDNA by RT_PCR . II	3	=
13	Quantitative PCR methods .	3	=
14	Molecular hybridization technique and applications I	3	=
15	Molecular hybridization technique and applications II	3	=

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Table Ph.D second Course

الكورس الثاني/ الدكتوراه

No	Subject	No. of Unit	No. of hours
1	Enzymology	4	60
2	Clinical Biochemistry	4	60
3	Immunity	1	15
4	Genetic	3	45
5	English	1	1
6	Seminar	0	15

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