Syllabus of Anatomy

The struct	The structure of the course for theoretical and practice anatomy /first academic level / the first course					
Week	Hours	Unit name and/or	education	evaluation		
		topic	method	method		
1	2 theoretical	Introduction (Terms of	Lecture+ lab	General		
	4 practical	position & movement		question		
		of Human body		discussion +		
				exam		
2	4 practica	-The human body	Lecture+ lab	General		
	2 theoretical	Structure	-	question		
	1	-	-	discussion +		
			-	exam		
3	4 practical	Skin, fasciae	Lecture+ lab	General		
	2 theoretical	Blood vessels		question		
				discussion +		
			-	exam		
4	2 theoretical	Muscles, Bones, Joints	Lecture+ lab	General		
	4 practical	Nervous System		question		
				discussion +		
				+exam		
5	4 practical	Upper limb:	Lecture+ lab	General		
	2 theoretical	Osteology of upper	-	question		
		limb	-	discussion +		
			-	exam		
6	2 theoretical	Surface Anatomy	Lecture+ lab	General		
	4 practical	Fasciae of upper limb		question		
		Cutaneous nerves and	-	discussion +		
		Vessels	-	exam		
			-			
7	4 practical	Pectoral region Axilla,	Lecture+ lab	General		
	2 theoretical			question		

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

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

Week	Hours	Required	Unit name and/or	education	evaluation
		educational goals	topic	method	method
1	2 theoretical	Identify the	Gluteal region	Lecture+ lab	General
	4 practical	Gluteal region	Post compartment thigh		question
		Post compartment	Popliteal fossa		discussion +
		thigh			exam
		Popliteal fossa			
2	4 practica	Identify the Ant.	Ant. compartment thigh	Lecture+ lab	General
	2 theoretical	compartment thigh	Med. compartment		question
		Med. compartment	thigh		discussion +
		thigh	Lumbar plexus		exam
		Lumbar plexus			
3	4 practical			Lecture+ lab	General
	2 theoretical	Identify the Leg	Leg		question
		Identify the Leg	Leg		discussion +
					exam
4	2 theoretical			Lecture+ lab	General
	4 practical	Identify the Foot	Foot		question
		Arches of foot	Arches of foot		discussion +
					+exam
5	4 practical	Identify the		Lecture+ lab	General
	2 theoretical	Radiological	Radiological Anatomy		question
		Anatomy	Radiological Tinatomy		discussion +
					exam
6	2 theoretical	Identify the	Thorax	Lecture+ lab	General
	4 practical	Thorax	Thoracic walls		question
		Thoracic walls	Osteology		discussion +
_		Osteology			exam
7	4 practical	Identify the		Lecture+ lab	General
	2 theoretical	Muscles	Muscles		question
		Nerves & vessels	Nerves & vessels		discussion +
0				τ	exam
8	2 theoretical	Identify the		Lecture+ lab	General
	4practical	Thoracic cavity	Thoracic cavity Pleura, lungs		question discussion +
		Pleura, lungs	Fleura, luligs		
9	4 practical	Identify the		Lecture+ lab	+exam General
)	2 theoretical	Mediastinum	Mediastinum	Lecture 1 Iau	question
		Superior	Superior mediastinum		discussion +
		mediastinum	Superior mediastinum		exam
10	2 theoretical	modiastinain		Lecture+ lab	General
10	4 practical			Lecture lub	question
	Provincent	Identify the Heart	Heart		discussion +
		Pericardium	Pericardium		exam
11	4 practical			Lecture+ lab	General
-	2 theoretical	Identify the Heart	Heart chambers Conducting system		question
		chambers			discussion +
		Conducting system	8 m j m m m		exam
12	2 theoretical			Lecture+ lab	General
	4practical	Identify the Post.	Post. Mediastinum		question
	1	Mediastinum	Joints, Movements		discussion +

	_		_	_	
					exam
13	4 practical	Identify the	Radiological Anatomy	Lecture+ lab	General

ſ		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

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			

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 1	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

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

Infrastructure of anatomy for the second acade	mic 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	

The structure of the course for theoretical and practice histology /second academic level / the first course

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 1	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

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 1	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

	and the eye	audio receptors	question
			discussion +
theoretical			exam

Infrastructure of histology for the second academic level					
1-Required course books	-Human Anatomy and cell physiology by Mcgraw hill 17 th 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				

			oryology /second academi		
Week	Hours	Required	Unit name and/or	education	evaluation
		educational goals	topic	method	method
1	1	Teaching the		Lecture	General
		student what is the	Introduction to		question
		meaning of	embryology		discussion -
		embryology			exam
2	1	Teaching the		Lecture	General
		student what is the			question
		meaning of	molecular regulation		discussion -
		molecular	signaling		exam
		regulation			
		signaling.			
3	1			Lecture	General
		Identify	Gametogenesis		question
		Gametogenesis	Gamerogenesis		discussion -
					exam
4	1	Identify		Lecture	General
		Gametogenesis	conversion of germ cell		question
		conversion of	into male		discussion
		germ cell into	into male		+exam
		male			
5	1			Lecture	General
		Identify male	male gametes		question
		gametes	mare guinetes		discussion
					exam
6	1	Identify		Lecture	General
		Gametogenesis	conversion of germ cell		question
		conversion of	into female		discussion
		germ cell into	into fermule		exam
		female			~
7	1	Identify female		Lecture	General
		gametes	female gametes		question
		0			discussion
0				T	exam
8	1	Identify the First	First week to	Lecture	General
		week to	development to		question
		development:	Ovulation		discussion -
		Ovulation			+exam
9	1	.		Lecture	General
		Identify	Fertilization		question
		Fertilization			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

Week Hours		Required	Unit name and/or	education	evaluation
		educational goals	topic	method	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 +
6	1	Identify placenta	Placenta	Lecture	exam 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

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 20032 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				

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 &		Theoretical	Discussions,	
		Definitions	Cells make up	lectures and	reports, tests	
	3	Practical Training	living things	practical laboratories	and exams (theoretical and practical)	
2	2	Data Collection		Theoretical	Discussions,	
	3	Practical Training	Cells make up living things	lectures and practical laboratories	reports, tests and exams (theoretical and practical)	
3	2	Sampling Methods	Cells make up	Theoretical lectures and	Discussions, reports, tests	
	3	Practical Training	living things	practical laboratories	and exams (theoretical and practical)	
4	2	Data Presentation	Calls make up	Theoretical lectures and	Discussions, reports, tests	
	3	Practical Training	Cells make up living things	practical laboratories	and exams (theoretical and practical)	
5	2	Measurements of Central Tendency	Membrane models Have	Theoretical lectures and practical	Discussions, reports, tests and exams	
	3	Practical Training	Changed	laboratories	(theoretical and practical)	
6	2	Measurements of Variability	Membrane	Theoretical lectures and	Discussions, reports, tests	
	3	Practical Training	models Have Changed	practical laboratories	and exams (theoretical and practical)	
7	2	Range & Variance	Membrane	Theoretical lectures and	Discussions, reports, tests	
	3 Practical Training models Have Changed		practical laboratories	and exams (theoretical and practical)		
8	2	Standard Deviation & Coefficient of	Membrane models Have Changed	Theoretical lectures and practical	Discussions, reports, tests and exams	

		Variation		laboratories	(theoretical and
	3	Practical			practical)
		Training			
9	2	Probability		Theoretical	Discussions,
		(Part 1)		lectures and	reports, tests
	3	Practical	Energy	practical	and exams
		Training		laboratories	(theoretical and
10	2	_		Theoretical	practical)
10	Z	Probability		lectures and	Discussions,
	3	(Part 2)	Energy		reports, tests and exams
	3	Practical	Energy	practical laboratories	(theoretical and
		Training		laboratories	practical)
11	2	Student's t-Test		Theoretical	Discussions,
	3			lectures and	reports, tests
	C	Practical	Energy	practical	and exams
		Training		laboratories	(theoretical and
		C C			practical)
12	2	Chi-square Test		Theoretical	Discussions,
		(Part 1)		lectures and	reports, tests
	3	Practical	Energy	practical	and exams
		Training		laboratories	(theoretical and
		_			practical)
13	2	Chi-square Test		Theoretical	Discussions,
		(Part 2)	How Cells	lectures and	reports, tests
	3	Practical	Acquired ATP	practical	and exams
		Training	1	laboratories	(theoretical and
14	2	Correlation &		Theoretical	practical) Discussions,
14	Ĺ	Regression		lectures and	reports, tests
		(Part 1)	How Cells	practical	and exams
	3	Practical	Acquired ATP	laboratories	(theoretical and
	5	Training		100100105	practical)
15	2	Correlation &		Theoretical	Discussions,
-	_	Regression		lectures and	reports, tests
		(Part 2)	How Cells	practical	and exams
	3	Practical	Acquired ATP	laboratories	(theoretical and
		Training			practical)

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

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

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

		Training			practical)
6	2	Measurements		Theoretical	Discussions,
		of Variability	Introducing	lectures and	reports, tests
	2	Practical	Gregor Mendel	practical	and exams
		Training	Oregor Mender	laboratories	(theoretical and
					practical)
7	2	Range &		Theoretical	Discussions,
		Variance	Introducing	lectures and	reports, tests
	2	Practical	Gregor Mendel	practical	and exams
		Training		laboratories	(theoretical and
0	2	-		TT1	practical)
8	2	Standard Deviation &		Theoretical lectures and	Discussions,
		Coefficient of	Introducing	practical	reports, tests and exams
		Variation	Gregor Mendel	laboratories	(theoretical and
	2	Practical	Gregor Wiender	laboratories	practical)
	<i>–</i>	Training			Practical
9	2	Probability		Theoretical	Discussions,
		(Part 1)	Character	lectures and	reports, tests
	2	Dreatical	Chromosomes	practical	and exams
		Practical	and genes	laboratories	(theoretical and
		Training			practical)
10	2	Probability		Theoretical	Discussions,
		(Part 2)	Chromosomes	lectures and	reports, tests
	2	Practical	and genes	practical	and exams
		Training	8	laboratories	(theoretical and
11		-			practical)
11	2 2	Student's t-Test		Theoretical	Discussions,
	2	Practical	Considering the	lectures and practical	reports, tests and exams
		Training	Chromosomes	laboratories	(theoretical and
		Training		laboratories	practical)
12	2	Chi-square Test		Theoretical	Discussions,
		(Part 1)	Consil i d	lectures and	reports, tests
	2	, i i i i i i i i i i i i i i i i i i i	Considering the	practical	and exams
		Practical Training	Chromosomes	laboratories	(theoretical and
		Ũ			practical)
13	2	Chi-square Test		Theoretical	Discussions,
		(Part 2)	Searching for	lectures and	reports, tests
	2	Practical	the Genetic	practical	and exams
		Training	Material	laboratories	(theoretical and
1 4	2	_		The grating 1	practical)
14	2	Correlation &	Sourching for	Theoretical lectures and	Discussions,
		Regression (Part 1)	Searching for the Genetic	practical	reports, tests and exams
	2	Practical	Material	laboratories	(theoretical and
	۷.	Training		10010101105	practical)
15	2	Correlation &		Theoretical	Discussions,
15	<u> </u>	Regression	What Genes Do	lectures and	reports, tests
		(Part 2)		practical	and exams
		(1 at 2)		practical	and crains

2	Practical	laboratories	(theoretical and
	Training		practical)

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			