

أسم الجامعة: جامعة ديالى
 أسم الكلية: الزراعة
 أسم القسم: البستنة وهندسة الحدائق
 أسم المحاضر: خالد إبراهيم مصطفى
 اللقب العلمي: أستاذ مساعد
 المؤهل العلمي: دكتوراه
 مكان العمل: كلية الزراعة



جمهورية العراق
 وزارة التعليم العالي و البحث العلمي
 جهاز الاشراف والتقويم العلمي

Weekly Lesson Schedule – First Semester

((Annual Teaching Plan Form))

Assoc. Prof. Khaled Ibrahim Mustafa					Teaching Name:
khalidibrahim@uodiyala.edu.iq					Email:
Anatomy of a plant					Material Name:
The first					Semester Course:
Introduce students to the types of plant cells and their components, the function of each component , plant tissues and their functions , and the internal structure of plant organs					Course Objectives:
Introduction, definition of plant anatomy, plant cell, types, study of the cell of high plants, cell wall, middle lamina, primary wall, secondary wall, click, plant tissue, permanent tissue, simple tissue, burnchemic tissue, collenchyma tissue, sklarenchyma tissue, cork tissue					Basic details of the material:
/					Textbooks:
Anatomy of a plant – written by Dr. Badri Owaid Al-Ani – 1980 / sources from the Internet					External sources:
Final Grade	Final Exam		Annual Quest		Semester
100	Practical	Theoretical	Practical	Theoretical	The first
	20	40	15	25	
3.5					Number of Units:

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Weekly Lesson Schedule – First Semester

Observations	Practical material	Theoretical material	Date	Week
	Microscope: getting to know its parts, how to deal with it, how to prepare glass slides	Introduction, definition of plant anatomy, plant cell, types, study of the cell of high plants, cell wall, middle plate, primary wall, secondary wall, click,.		1
	Making sections for the plant cell. And identify the cell wall, nucleus, protoplasm... Identify cell components in ready-made slides	Plant cell living contents, cytoplasm, mitochondria, ribosomes, Collgi system, plastids, spherical bodies, microtubules, cell membranes.		2
	Making sections of the plant cell to identify plastids (green, colored, colorless). and anthospanin dye in cellular juice	The non-living contents of the plant cell . Vacuoles, cellular juice, crystals and their types, starchy granules, alleron granules.		3
	Making clips to identify crystals (needle, star, pending...)	Plant tissues, permanent tissues, simple tissues, Brinkheemic tissue, collenchyma tissue, sklarenchyma tissue, cork tissue		4
	Making clips to identify the tissues of parenchymes, collenchymes, sklarenchymes.	Plant tissues, permanent tissues, simple tissues, Brinkheemic tissue, collenchyma tissue, sklarenchyma tissue, cork tissue		5
	Making clips to identify the meristem tissues at the growing top of the stem. And identify other types of meristem tissues through ready-made slides.	Plant tissues, complex tissues, epidermis, surrounding epidermis, vector tissues (phloem and xylem tissue).		6
	Making sections in the epidermis to identify guard cells in dicotyledons and monocotyledons, capillaries of all kinds	Plant tissues, mercetic, peripheral, interstitial, lateral tissues, primary and secondary mercetology		7

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	Identification of the xylem, the cell wall of the vessels and its types, bronchioles, fibers, wood barnechema (ready chip or flex)	Prederm, bark, commercial cork, lenticels, wound cork, leaf separation	8
	Identify phloem tissue, sieve tubes, companion cells, phloem fibers, phloem burning.	The growing apex in the stem, the apical cell theory, the theory of embryogenesis, the theory of the first mercet, the theory of the cover and the body, the theory of the growth of regions, the growing apex at the root	9
	Identify the internal structure of the leaf, upper epidermis, mesophil, lower epidermis, carrier vessels (veins) of a dicotyledonous plant (ready slide Offelix) Identify the leaf structure of a monocotyledonous plant, gymnospermous plant (ready slide or flex)	Internal structure of the leg, epidermis, cortex, vascular cylinder	10
	Identify the internal structure of the leg (ready slide or flex)	For the internal structure of the root, epidermis, cortex, vascular cylinder, vascular tissue, root zones, lateral roots are formed.	11
	Identify secondary growth in the stem, annual rings, secondary wood, secondary bark	Secondary thickening, of the stems, of the roots. Recognize the secondary growth of the stem, annual rings, secondary wood, secondary bark. Secondary thickening of vascular cambium, cork cambium,	12
	Recognize the internal structure of the root, the area of secondary root formation, identify the root regions	The internal structure of the leaf is dicotyledonous, monocotyledonous (leaf grass), identification of the internal structure of the leaf, upper epidermis, mesophyll, lower	13

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		epidermis, carrier vessels (veins)		
	Prederm, cork fabric, cork cambium, lenticels (ready chip or flex).	Anatomy of aquatic and desert plants		14
	Prederm, cork fabric, cork cambium, lenticels (ready chip or flex).	General review of all topics		15

Signature of the professor:

Signature of the Dean:

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