



Module Description

University of ALKafeel / College of Pharmacy. Academic Year (2020-2021)

Stage:	Second
Specialization:	Pharmacy
Name of the Course in Arabic	عقاقير 1
Name of the Course in English	Pharmacognosy I
Goals:	<p>How to identify medicinal plant including collection, drying and storage .</p> <p>How to explain the Chromatography, How it works, contrast between different types of chromatographic techniques.</p> <p>How to describe principle of operation for all types of chromatography, Mechanisms for each type of chromatographic techniques .Uses and application</p> <p>Describe plane chromatography, paper, Thin layer, HPLC, column, gas chromatography techniques..</p>
Description	This course is intended to study the scope of pharmacognosy, Medicinal plant nomenclature, classification of natural products, phytochemistry which include extraction and isolation of active constituents from natural sources
Number of Theoretical lectures	2
Number of Practical lectures	2
Credits	3
Name of Instructor in Arabic	ا.م.د. عباس محمد جواد (النظري) م.م. سند مؤيد عبد الحسين (النظري والعملي)
Name of Instructor in English	Abbaas mohammed jawad Sanad Muayad Abdulhussein
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Curriculum / Theoretical:

Week	Syllabus
1	General Introduction: The Scope of Pharmacognosy, definitions and basic principles.
2	Drugs from natural sources, crud drugs, official and non-official drugs.
3	Classification of natural products.
4	Plant nomenclature and taxonomy.
5	Production of crude drugs: Cultivation, collection, drying and storage.
6	Deterioration of crude natural products.
7	Pharmacological activities of natural products.
8	Chemistry of natural drug products.
9	Quality control: Evaluation of natural products; macroscopical evaluation; physical evaluation; chemical evaluation; biological evaluation; spectroscopical evaluation.
10	Quality control: Evaluation of natural products; macroscopical evaluation; physical evaluation; chemical evaluation; biological evaluation; spectroscopical evaluation.
11	Phytochemical investigation of herbal products: Extraction of the plant material; Separation and isolation of constituents; characterization of the isolated compounds.
12	Separation technique: Introduction; Mechanisms of separation and classification based on the type of technique; paper chromatography; Thin layer chromatography; Ion-exchange chromatography; Gel filtration chromatography; Column chromatography; Gas chromatography; HPLC; Electrophoresis; Affinity chromatography.
13	Separation technique: Introduction; Mechanisms of separation and classification based on the type of technique; paper chromatography; Thin layer chromatography; Ion-exchange chromatography; Gel filtration chromatography; Column chromatography; Gas chromatography; HPLC; Electrophoresis; Affinity chromatography.
14	Separation technique: Introduction; Mechanisms of separation and classification based on the type of technique; paper chromatography; Thin layer chromatography; Ion-exchange chromatography; Gel filtration chromatography; Column chromatography; Gas chromatography; HPLC; Electrophoresis; Affinity chromatography.
15	Traditional plant medicines as a source of new drugs.
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Curriculum / Practical:

Week	Syllabus
1	Micro measurement and magnification.
2	Microscopical identification of crude drugs and cell contents.
3	Extraction and separation techniques.
4	Chromatography.
5	Paper chromatography (circular and horizontal paper chromatography).
6	Introduction to tin-layer chromatography.
7	TLC on microscope slides.
8	Partition chromatography for the separation of volatile oils.
9	Effect of activity of adsorbents on R _f values.
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References :

Main References :

[1] Trease and Evans Pharmacognosy; (Latest edition).

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Secondary References:

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