

Department Courses

Bachelor Degree in Pharmacy (Pharm D)

PG 101 Medicinal Plants

The aim of the course is to provide students with knowledge necessary to identify and prepare a crude drug from the farm to the firm. Students should acquire knowledge on an introduction to the natural products and taxonomy of medicinal plants. In this course, the student will study: importance of natural products, preparation of natural products-derived drugs including collection, storage, preservation and adulteration. The course will introduce the students to the different classes of secondary metabolites. In addition, the course will discuss and address the variability in occurrence of pharmacologically active substances in certain official medicinal leafy plants according to their WHO monographs. The course introduces students to some botanical drugs of different organs as leaves, flowers,etc.

PG 202 Pharmacognosy

The aim of the course is to provide students with the knowledge on the general subject of natural products including their sources and identification. The course introduces students to some botanical drugs of other different organs in addition to drugs of marine and animal origin. During the lectures and practical sessions, students learn to identify examples of these drugs in their entire and powdered forms. Students will also be introduced to optimum nutrition and the therapeutics aspect of these drugs.

PG 503 Phytochemistry I

Following a solid introduction on the basis of pharmacognosy, this course aims to enable students to demonstrate the knowledge and experience that enables her/ him to understand, describe and deal with the chemistry of volatile oils, resins, miscellaneous terpenoids, bitters of plant or animal origin, carbohydrates and glycosides of plant or animal origin and different techniques used for their preparation, identification and determination.

PG 604 Phytochemistry II

Following a solid introduction on the basis of pharmacognosy, this course aims to enable students to demonstrate the knowledge and experience that enables her/ him to understand, describe and deal with the chemistry of alkaloids, tannins and antioxidants of plant, fungi or animal origin as well as techniques for their isolation, identification and determination in their respective sources. Finally, the course focuses on the structure activity relationships (SAR) of these natural products derived compounds and their pharmacophoric features.

PG 905 Phytotherapy and aromatherapy

Upon successful completion of this course, the students should be able to know guidelines for prescribing herbal medicinal drugs on the basis of the pharmacological properties of these drugs including therapeutic uses, mechanism of action, dosage, adverse reactions, contraindications & drug interactions. The course also allows students understand pharmacotherapeutic principles applied to the treatment of different diseases, pharmacovigilance and rational use of drugs. Also the student should understand the basis of complementary and alternative medicine with emphasis on herbal remedies, nutritional supplements, homeopathies, aromatherapy & their effect on maintaining optimum health and prevention of chronic diseases.

Department Courses

Bachelor Degree in Pharmacy (Pharm D clinical)

PG 101C Medicinal Plants

The aim of the course is to provide students with knowledge necessary to identify and prepare a crude drug from the farm to the firm. Students should acquire knowledge on an introduction to the natural products and taxonomy of medicinal plants. In this course, the student will study: importance of natural products, preparation of natural products-derived drugs including collection, storage, preservation and adulteration. The course will introduce the students to the different classes of secondary metabolites. In addition, the course will discuss and address the variability in occurrence of pharmacologically active substances in certain official medicinal leafy plants according to their WHO monographs. The course introduces students to some botanical drugs of different organs as leaves, flowers,....etc.

PG 202C Pharmacognosy

The aim of the course is to provide students with the knowledge on the general subject of natural products including their sources and identification. The course introduces students to some botanical drugs of other different organs in addition to drugs of marine and animal origin. During the lectures and practical sessions, students learn to identify examples of these drugs in their entire and powdered forms. Students will also be introduced to optimum nutrition and its therapeutics aspect.

PG 603C Natural Products I

Following a solid introduction on the basis of pharmacognosy, this course aims to enable students to demonstrate the knowledge and experience that enables them to understand, describe and deal with the chemistry of volatile oils, resins, miscellaneous terpenoids, bitters of plant or animal origin, carbohydrates and glycosides of plant or animal origin and different techniques used for their preparation, identification and determination.

PG 704C Natural Products II

Following a solid introduction on the basis of pharmacognosy, this course aims to enable students to demonstrate the knowledge and experience that enables her/ him to understand, describe and deal with the chemistry of alkaloids, tannins and antioxidants of plant, fungi or animal origin as well as techniques for their isolation, identification and determination in their respective sources. Finally, the course focuses on the structure activity relationships (SAR) of these natural products derived compounds and their pharmacophoric features.

PG 905C Phytotherapy

Upon successful completion of this course, the students should be able to know guidelines for prescribing herbal medicinal drugs on the basis of the pharmacological properties of these drugs including therapeutic uses, mechanism of action, dosage, adverse reactions, contraindications & drug interactions. The course also allows students understand pharmacotherapeutic principles applied to the treatment of different diseases, pharmacovigilance and rational use of drugs. Also the student should understand the basis of complementary and alternative medicine with emphasis on herbal remedies, nutritional supplements, homeopathies, aromatherapy & their effect on maintaining optimum health and prevention of chronic diseases.

Department Courses

Bachelor of Pharmacy (old system)

Botany (141/M)

The students will be able to demonstrate knowledge of basic concept in the principle of Pharmacognosy and to be able to apply this knowledge efficiently in macro- and microscopical examinations of different plants organs. Students should be able to illustrate the proper collection, storage methods of medicinal plants. Students should be also able to demonstrate knowledge of the active constituents of the lower and higher medicinal plants (secondary metabolites) as well as their medicinal uses also the methods of propagation via seeds, factors affecting plant growth, selection and breeding of medicinal plants and preparation of drugs from plants to pharmaceutical products.

Medical Botany (142/M)

The students will understand the importance of medicinal plants in the treatment of different disease conditions with respect to those drugs specified by the Pharmacopoeias. The student in this end of this course will be able to identify many medicinal plants morphological and histological structures of different organs of medicinal plants such as leaves, barks, woods, flowers in both their entire and powdered forms.

Pharmacognosy 1; Code: 241/8

At the end of studying this course the students should be aware of the unlimited role of various medicinal plants particularly their seeds, fruits and subterranean organs in the alleviation of numerous diseases as specified by the Egyptian Pharmacopoeia. Moreover, they will be trained to a great extent to discuss in detail and draw the morphological as well as histological structures of the various studied organs. The student will gain the talent of identifying the medicinal plant both in entire and powdered forms microscopically and to rely on simple chemical tests to further ascertain the identity.

Pharmacognosy 2; Code: (PG 232/8)

Upon successful completion of this course, the students should be able to understand the importance of herbs and unorganized drugs in the treatment of different disease conditions. The students will be able to identify many medicinal plants in both their entire and powdered forms. They should be able to demonstrate knowledge of basic concepts of optimum nutrition.

Chemistry of Natural Products 1 (342/8)

Upon successful completion of this course, the students should illustrate the plant metabolites (*viz*, carbohydrates, glycosides, tannins, and bitter principles). The students should apply this knowledge correctly in medicine. They should be able to demonstrate knowledge of the basic concepts of chromatography and apply the theories of chromatography to analyze and separate mixture of biologically active natural products

Chemistry of Natural Products 1 (441/8)

Upon successful completion of this course, the students should illustrate the secondary plant metabolites (*viz*, alkaloids & volatile oils) and to apply this knowledge correctly in phytomedicine.

Department Courses

Quality control of herbal products; (541/8)

After attending this course, the students would be expected to deal with the general principles of quality control: documentation, environmental monitoring, packaging systems, the finished product. Student should be able to deal with quality control laboratory schemes including quantitative chromatographic analysis of herbal products, storage, preservation, marker determination, validation and applications of the proposed schemes. In addition, students will be able to select the appropriate spectroscopic methods to elucidate the structures of natural products applying different techniques of spectral analysis such as, ultraviolet (UV), infrared (IR), nuclear magnetic resonance (NMR) spectroscopy and mass spectrometry. The students will also be familiar with the application of GC and HPLC techniques in the analysis of herbal medicines.

Department Courses

Bachelor Degree in Pharmacy (Drug design)

Medical Botany; Code: PHG 11

The students will have knowledge of basic principles of pharmacognosy and to apply this knowledge efficiently in macro- and microscopical examination of different plants organs. The students should be able to illustrate the proper collection, preparation and storage methods of medicinal plants and to apply this knowledge in the pharmaceutical industry. They should also be able to demonstrate knowledge of the active constituents of lower and higher medicinal plants as well as their medicinal uses. Also, the students should be able to illustrate the methods of propagation (by seeds and vegetative propagation, as well as by tissue culture technique), to demonstrate knowledge of the factors affecting plant growth, the selection and breeding of medicinal plants and the preparation of drugs from plants to pharmaceutical products

Pharmacognosy I, code PHG 12

The student in this end of this course will be able to identify many medicinal plants in both their entire and powdered forms. the students should be able to demonstrate the morphological and histological structures of leaves, barks, woods, flowers and seeds. The students should be also able to discuss role of these medicinal plants in the treatment of different disease conditions.

Pharmacognosy II, code PHG 23

Upon successful completion of this course, the students should be able to illustrate the morphological and histological structures of different organs of medicinal plants such as fruits, subterranean, herbs and unorganized drugs. The students should be also able to discuss role of these medicinal plants in the treatment of different disease conditions. The student in this end of this course will be able to identify many medicinal plants in both their entire and powdered forms

Phytochemistry I; PHG 24

Upon successful completion of this course: The students will have knowledge of basic principles of phytochemistry and to apply this knowledge efficiently in plant extraction, isolation of natural compounds and analysis of plant extracts. The students should be capable to demonstrate knowledge of the active constituents (plant metabolites), including, carbohydrates, glycosides, tannins, bitter principles, and to be familiar with their medical/pharmacological/pharmaceutical use. They should be also able to demonstrate knowledge of the basic concepts of chromatography, be familiar with the different types of chromatography, and to apply the theories of chromatography to analyze and separate mixtures of bioactive natural products.

Department Courses

Phytochemistry II; PHG 35

The students will acquire knowledge of basic principles of phytochemistry, and then apply this knowledge in plant extraction, isolation of natural compounds and analysis of plant extracts. The students should be capable to demonstrate knowledge of the active constituents (plant metabolites), including, alkaloids and essential oils. They should be familiar with the medical/pharmacological/pharmaceutical and economic uses of alkaloids and essential oils.

Phytotherapy & Quality control of Herbal Medicines; Code: (PHG56)

After attending this course, the students would be expected to deal with the general principles of quality control: definitions, documentation, environmental monitoring, packaging systems and the finished product. The students should be able to deal with quality control laboratory schemes including quantitative chromatographic analysis of herbal products, storage, preservation, marker determination, validation and applications of the proposed schemes. The student should be aware of the phytotherapy of digestive, cardiovascular and renal systems as examples. In addition, the students will be able to select the appropriate spectroscopic methods to elucidate the structures of natural products applying different techniques of spectral analysis such as, ultraviolet (UV), infrared (IR), and nuclear magnetic resonance (NMR) spectroscopy. The students will also be familiar with the application of GC and HPLC techniques in the analysis of herbal medicines