History:
The Faculty of Pharmacy was established in 2001.

Vision:
The faculty aims at becoming a global pioneer institute providing pharmaceutical education and pharmaceutical research and science and contributing to the advancement of pharmaceutical and therapeutic services.

Mission:
• To prepare and qualify distinguished pharmacists well-equipped to play a significant and active role in the field of social services, and therapeutic and health care.
• To prepare highly qualified graduates who are capable of optimally applying the practice of pharmacy and Pharm.D.
• To conduct research and scientific studies which aim at improving and developing pharmaceutical compounds and preparations, with concentration on investing in local natural resources.
Unique Features:
The curriculum is considered one of the best in Saudi Arabia and is based upon the latest international standards and guidelines in pharmaceutical education and is taught by experts in the field. It includes the following branches of sciences:
• Basic Sciences
• Biomedical Sciences
• Pharmaceutical Sciences
• Clinical Pharmacy Sciences

Graduation Requirements:
The duration of the program is 6 years and in order to earn the Pharm.D. degree, students must complete a total of 223 credit hours distributed as follows:
• 34 credit hours of faculty requirements,
• 17 credit hours of university requirements,
• 172 units of major faculty requirements made up of:
  • 66 credit hours of specialized courses in Clinical Pharmacy,
  • 36 credit hours of specialized courses in Pharmaceutical Chemistry,
  • 14 credit hours of specialized courses in Natural Products,
  • 15 credit hours of specialized courses in Pharmacology and Toxicology,
  • 9 credit hours of specialized courses in Clinical Biochemistry
  • 8 credit hours of Pharmaceutical microbiology,
  • 24 credit hours of specialized courses in Pharmaceutics.

Students study the following 34 credit hours of courses:
Scientific Track: Credit Hours 34

<table>
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<tr>
<th>No.</th>
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University requirements: Students study the following 17 credit hours of courses, Scientific Track: (Credit Hours 17)

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Total: 223 credit hours
Major Faculty Requirements: These are core courses offered by the faculty departments and certain departments of faculty of medicine worth 172 Credits, distributed as follow:

Department of Pharmacetics:

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<td>Biopharmaceutics and Pharmacokinetics</td>
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Department of Clinical Pharmacy:

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<th>Course Title</th>
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Department of Pharmaceutical Chemistry:

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<td><strong>Total Courses</strong></td>
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One academic year of clinical training consisting of 6 units worth 4 credits each.

Department of Pharmaceutical Chemistry:

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<td></td>
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<td>(b) Pharmaceutical Analytical Chemistry</td>
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<td><strong>Total Courses</strong></td>
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### Department of Natural Products:

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**Total Courses Offered by Department of Natural Products:**

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### Department of Pharmacology and Toxicology

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**Total Courses Offered by Department of Pharmacology and Toxicology:**

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### Department of Clinical Biochemistry: (Faculty of Medicine)

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**Total Courses Offered by Department of Clinical Biochemistry (Faculty of Medicine):**

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### Department of Microbiology: (Faculty of Medicine)

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**Total Courses Offered by Department of Microbiology (Faculty of Medicine):**

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### Courses Supervised by the Faculty Departments

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**Total Courses Supervised by the Faculty Departments:**

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Department of Clinical Pharmacy

Department Contact:
Chairman’s Office
Tel: 6401000 Ext: 22424  Fax: 6951696
E-mail: amalmohammady@kau.edu.sa
Website: http://pharmacy.kau.edu.sa

History:
The department of Clinical Pharmacology was established in 2001

Vision:
Providing education to students in various aspects of pharmacy practice, utilizing the principles of pharmaceutical care, problem-based learning and critical thinking that all together enable them to acquire in-depth expertise in pharmaceutical, social/economic management and in related sciences in order to function as practitioners and scientists.

• Serving the community by engaging in scholarly activities that lead to improvements in healthcare delivery and enhance health outcomes.
• Contributing to the profession of pharmacy by participation in leadership roles in pharmaceutical organizations and community programs.

Mission:
The mission of the department of Clinical Pharmacy is to advance health care through excellence and innovation in education, patient care research, and public health. The faculty works closely with the department to deliver quality programs leading to the Bachelor of Pharmacy degree, and the Doctor of Pharmacy (Pharm. D.) degree.

Departmental Requirements:
The duration of the program is 6 years and in order to earn the Pharm.D. degree, students must complete a total of 210 credit hours distributed as follows:

• 34 credit hours of faculty requirements,
• 17 credit hours of university requirements,
• 172 units of major faculty requirements made up of:
  • 66 credit hours of specialized courses in Clinical Pharmacy,
  • 36 credit hours of specialized courses in Pharmaceutical Chemistry,
  • 14 credit hours of specialized courses in Natural Products,
  • 15 credit hours of specialized courses in Pharmacology and Toxicology,
  • 9 credit hours of specialized courses in Clinical Biochemistry
  • 8 credit hours of Pharmaceutical microbiology,
  • 24 credit hours of specialized courses in Pharmaceutics.
Department Core Courses: Students study (66) credit hours of courses according to specialization.

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<th>Course Code</th>
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Course Descriptions:

**CP 301: Therapeutics-I (Pathophysiology)**
This course is designed to provide students with basic knowledge of disease processes, considering alterations, derangements, compensatory mechanisms involved and the pathogenesis for commonly encountered disease states.

**CP 402: Therapeutics-II**
This course is designed to provide students with a basic introduction to the therapy of common disease states. Considerations and precautions in selection, dosing and monitoring of drug used to treat commonly encountered pharmacotherapeutic problems.

**PH 411: Physical Assessment & First Aid**
This course is designed to introduce students to various physical assessment techniques and tools used in therapeutic drug monitoring. Formal lectures will be conducted to introduce students to equipment and techniques necessary to conduct physical examination.

**CP 471: Pharmacy Seminar-I**
This course is designed to provide students with an opportunity to integrate and apply the multiple components of their knowledge of basic pharmaceutical science to present a formal seminar on patient case studies or analysis of pharmacy practice problems.

**CP 503: Therapeutics-III**
This course is a continuation of Therapeutics II, designed to provide students with a basic introduction to the therapy of common disease states. Considerations and precautions in selections, dosing and monitoring of drugs used to treat commonly encountered pharmacotherapeutic problems.

**Prerequisites:**
CP 471, PPH 421

**CP 504: Therapeutics-IV**
This course is designed to explore the wide role of the pharmacist as a provider for valid information pertaining to parenteral and enteral nutritional support. Students will receive adequate information to answer the many questions that are associated with concepts in nutrition such as the rationale of using enteral or parenteral therapy and the advantages or disadvantages of each therapeutic modality.

**CP 521: Drug Information and Literature Evaluation**
Students will learn how to integrate information management principles and will be able to practically utilize, retrieve, relate, interpret and disseminate valuable drug information in daily practice.

**CP 531: Clinical Pharmacokinetics**
This course is a continuation of Pharmacokinetic and Bio-pharmaceuticals (PPH 421). It focuses on the application of the basic principles of therapeutic drug monitoring using actual patient’s drug pharmacokinetic parameters for optimizing drug therapy.

**CP 541: Contemporary Pharmacy Practice**
Upon completion of this course, student will be able to list basic rights of the consumer/patient, describe a process for ethical health care-related decision making, outline a systematic approach to selling an idea /program on an informal and formal basis and defend a personal position on selected contemporary pharmacy practice issues.

**PC 551: Hospital Pharmacy & Pharmacy Administration**
This course is designed to provide students with a basic knowledge of comprehensive pharmaceutical services provided by the pharmacy department and staff in hospitals. Students will learn various aspects of pharmacy services including technical or functional, professional and administrative services and how to apply them in daily practices.

**CP 561: Pharmacy Law and Ethics**
This course will introduce students to Saudi law and the legal system in general and its applicability to pharmacy and pharmaceuticals. Students will learn pharmaceutical laws, regulations, and legal cases applicable to the professional practice of pharmacy in Saudi Arabia. Students will also learn how to differentiate law from ethics.
CP 572: Pharmacy Seminar-II
A continuation of pharmacy seminar-II. This course is designed to provide students with an opportunity to integrate and apply the multiple components of their knowledge of basic pharmaceutical science to present a formal seminar on patient case studies or analysis of pharmacy practice problems.

CP (610-660) : CLINICAL CLERKSHIPS (Eight clinical clerkships, four weeks each/four units for each study)
The clinical clerkship program is designed to help students make a successful transition from the academic setting to the practical environment through application of what they have learned. This integration of classroom knowledge and professional practice performance will serve as the backbone of the student’s pharmacy education.

### FACULTY MEMBERS

#### Professors
- Atef AL-Issaway
  Pharmacology
  1979 Ein-shams University, Egypt
  abdelmoneim2008@kau.edu.sa
- Mahmud Abdel-moneim
  Pharmacology and Toxicology
  1970 EL-Mansura University, Egypt
- Abdul-rahman Mohammed Al-ahdal
  Clinical Pharmacy
  1991 King Saud University, Saudi Arabia
- Ahmed Abdulla Elbery
  Pharmacology
  1994 Cairo University, Egypt
- Amen Mohamed Almohamdi
  Clinical Pharmacy
  1990 King Saud University, Saudi Arabia
- Hala EL-Khalidi
  Clinical pharmacy
  1991 King Saud University, Saudi Arabia
- Fathia Elmasrefy
  Clinical Pharmacy
  1980 Tanta University, Egypt

#### Assistant Professors
- Mohamed Ahmed Morsy Sadk
  Clinical Pharmacy
  2002 Alexandria University, Egypt

#### Lecturer
- Hala EL-Khalidi
  Clinical pharmacy
  1991 King Saud University, Saudi Arabia
Department of Natural Product and Alternative Medicine

Department Contact:
Chairman’s Office
Tel: 6401000 Ext. 22241 Fax: 6951696
E-mail: akhedr@kau.edu.sa
Website: http://pharmacy.kau.edu.sa

History:
The department was established in 2001.

Vision:
The Natural Products department envisions that it will be internationally recognized for leadership and innovation in education, research and in professional pharmaceutical services.

Mission:
The mission of the Department of Natural Products is to serve the local and international community through discovery, learning and engagement that integrates the basic knowledge in the field of natural products, particularly medicinal plants and their derivatives for the improvement of human health. It also advances pharmaceutical science in the fields of natural products by performing drug-related research through evidence-based herbal medicine.

Departmental Requirements:
The duration of the program is 6 years and in order to earn the Pharm.D. degree, students must complete a total of 210 credit hours distributed as follows:

• 34 credit hours of faculty requirements,
• 17 credit hours of university requirements,
• 172 units of major faculty requirements made up of:
  • 66 credit hours of specialized courses in Clinical Pharmacy,
  • 36 credit hours of specialized courses in Pharmaceutical Chemistry,
  • 14 credit hours of specialized courses in Natural Products,
  • 15 credit hours of specialized courses in Pharmacology and Toxicology,
  • 9 credit hours of specialized courses in Clinical Biochemistry
  • 8 credit hours of Pharmaceutical microbiology,
  • 24 credit hours of specialized courses in Pharmaceutics.
**Department Core Courses:** (Credit Hours 8)  
Students study 46 credit hours of courses regardless of specialization.

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<td>Natural Products &amp; Evidence Based Herbal Medicine-II</td>
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</table>

**Course Descriptions:**

**NP 301: Natural Products & Evidence Based Herbal Medicine-I**  
The course introduces students to the use of medicinal natural products in pharmacy and medicine. Topics include introduction to herbal medicine, herbal evaluations, and quality assurance.

**NP 402: Natural Products & Evidence Based Herbal Medicine-II**  
A continuation of Herbal Medicine I. The course provides an understanding of forensic pharmacognosy, poisonous plants and fungi, plant products that affect the mental status, in addition to natural tumor inhibitors and herbal remedy, and evaluation of crude drugs.  
**Prerequisites:** NP 311

**NP 411: Pharmaceutical Biotechnology**  
Gene cloning systems, methods of finding the right clones, polymerase chain reactions, production of human biological by genetic engineered microorganisms, gene therapy, and the role of microorganisms, and plant and mammalian tissue culture in the commercial production of medicinally important compounds.  
**Prerequisites:** NP 321

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**Professors**

- **Ibrahim Atteia Shehata**  
  Natural Products  
  1973 Cairo University, Egypt

- **Nayera Ahmed Moneib**  
  Microbiology  
  1974 Cairo, Egypt

- **Mahmoud Abd El-Megead Yassien**  
  Natural Products  
  1975 Alexandria University, Egypt

- **Essam Abdel-Sattar**  
  Natural Products  
  1991 Cairo University, Egypt

- **Nagwa Salah aldin Alshaer**  
  Natural Products  
  1975 Alexandria, Egypt

---

**Assistant Professors**

- **Sabah Hussein Algayed**  
  Natural Products  
  1986 Cairo University, Egypt

- **Jihan Mohamed Badr**  
  Natural Products  
  1987 Alexandria University, Egypt

- **Hossam Mohamed Abdallah**  
  Natural Products  
  1991 Cairo University, Egypt
The Department of Pharmaceutical Chemistry was established in 2001.

**Vision:**
The department aims to be the core centre for pharmaceutical chemistry knowledge and practice, through advancements in research, teaching and service.

**Mission:**
The mission of the department of Pharmaceutical Chemistry is to provide learning experiences based on the best educational practices for all students. Giving comprehensive knowledge of the field of applied pharmaceutical chemistry that underpins the design and development of novel drugs and analytical methodologies and the applications of this knowledge to everyday life.

**Departmental Requirements:**
The duration of the program is 6 years and in order to earn the Pharm.D. degree, students must complete a total of 210 credit hours distributed as follows:

- 34 credit hours of faculty requirements,
- 17 credit hours of university requirements,
- 172 units of major faculty requirements made up of:
  - 66 credit hours of specialized courses in Clinical Pharmacy,
  - 36 credit hours of specialized courses in Pharmaceutical Chemistry,
  - 14 credit hours of specialized courses in Natural Products,
  - 15 credit hours of specialized courses in Pharmacology and Toxicology,
  - 9 credit hours of specialized courses in Clinical Biochemistry
  - 8 credit hours of Pharmaceutical microbiology,
  - 24 credit hours of specialized courses in Pharmaceutics.

**Preparatory Year Prerequisites:** (Credit Hours 36)

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</table>

**Course Descriptions:**

**PC101: Pharmaceutical Chemistry-I**
The course is divided into two parts; Part I. Introduction to organic chemistry and principals. Topics include the factors affecting electron availability in atoms and molecules, concepts and principals of organic reactions mechanisms. Highlighting the momen-tum, physical and chemical properties of organic compounds. Part II; The course provides the students the fundamental infor-mation about the different types of chemical reactions, chemical equations, reactions rate, mole concepts, and reaction of acids and basic in aqueous medium. Its also focuses in qualitative analysis of the most common acidic and basic radicals. Topics of physical chemistry include: gases, kinetics of chemical reactions, thermodynamics, photochemical reactions, and electric conductance. This course also covers topics related to the quantitative determination of chemicals using titrimetric methods (acid-base, and non aqueous titrations).
PC202: Pharmaceutical Chemistry-II
This course consists of two parts; analytical and organic pharmaceutical chemistry. The organic pharmaceutical chemistry part is designed to provide students with basic and applied organic chemistry in the area of pharmaceutical science and to prepare them to understand other courses such as biochemistry, medicinal chemistry, photochemistry, pharmacokinetics and pharmacodynamics. The analytical pharmaceutical chemistry part is designed to provide students with; quantitative methods (precipitation titrations, gravimetric, complexometry, and oxidation-reduction reactions).
Prerequisites: CHEM 101

PC 311: Medicinal Chemistry-I
Understanding fundamental concepts governing the relation between chemical structures of drugs and biological activity. The course provides knowledge of the medicinal chemistry aspects of drugs, including their structure, biological activity, medicinal uses and molecular mode of action of chemotherapeutic agents.
Prerequisites: PC 202

PC 412: Medicinal Chemistry-II
The aim of this course is to provide knowledge of chemical and biological activities and molecular mode of action of other classes of drugs not covered in Medicinal Chemistry I. Understanding chemical and computer aided methods for development of drugs.
Prerequisites: PC 311

PC 421: Quality Control
The course is directed towards science graduates contemplating a career in Pharmaceutical Analysis and/or Quality Assurance, or currently employed in the pharmaceutical industry, a research institute, the health service, or a regulatory authority. A broad knowledge of the pharmaceutical sciences is presented with an emphasis placed on both the academic and professional aspects of the subject. The course also prepares graduates for entry into research degree programs in the pharmaceutical sciences.
Prerequisites: PC 311

FACULTY MEMBERS

Professors

Alaauldeen Mahmoud Khedr
Pharmaceutical Chemistry-Analytical
1984 Assiut University, Egypt
akhedr@kau.edu.sa
http://akhedr.kau.edu.sa/

Magdy Mohammad Genena
Pharmaceutical Chemistry-Organic
1979 Mansoura University, Egypt

Mohammad Ayman Mohammad Zahaby
Pharmaceutical Chemistry-Organic
1981 Alazhar University, Egypt

Mona M. Mahran
Pharmaceutical Chemistry-Medicinal
1978 Mansoura University, Egypt

Huda Mahgoub Nagy
Pharmaceutical Chemistry-Analytical
1980 Alexandria University, Egypt

Oonyma Abdulrazak Ameen
Pharmaceutical Chemistry-Analytical
1982 Alexandria University, Egypt

Associate Professors

Lyla Mahmoud Gad
Pharmaceutical Chemistry-Organic
1971 Mansoura University, Egypt

Mohammad Foad Radwan
Pharmaceutical Chemistry-Medicinal
1984 Assiut University, Egypt

Shereef Ahmad Fawzy
Pharmaceutical Chemistry-Medicinal
1990 Alexandria University, Egypt

Eman Rady Albendary
Pharmaceutical Chemistry-Medicinal
1985 Mansoura University, Egypt

Ossama Tawfeek Fahmy
Pharmaceutical Chemistry-Analytical
1984 Alexandria University, Egypt

Doaa Ezzat Abdulrahman
Pharmaceutical Chemistry-Medicinal
1992 Cairo University, Egypt

Assistant Professors

Abdel-sattar Mansour Omar
Pharmaceutical Chemistry-Organic
1996 Alazhar University, Egypt
Department Contact:
Chairman’s Office
Tel: 6401000 Ext: 22233  Fax: 966 2 6951696
E-mail: aalhelo@kau.edu.sa
Website: http://pharmacy.kau.edu.sa

History:
The department of Pharmaceutics was established in 2001.

Vision:
The vision of the Department of Pharmaceutics is to serve the Western Region as well as the entire Saudi community by improving healthcare and the quality of life through excellence in teaching, education, service and enhancing the dissemination of knowledge in the pharmaceutics and pharmaceutical sciences by engaging in high quality research and scholarship.

Mission:
The mission of the Pharmaceutics Department is to prepare health care professionals, develop pharmacy leaders capable of providing high-quality health care to meet the diverse pharmaceutical care needs of the Saudi community and to serve the profession of pharmacy through a balanced program of education, research, service and patient care.

Departmental Requirements:
The duration of the program is 6 years and in order to earn the Pharm.D. degree, students must complete a total of 210 credit hours distributed as follows:

• 34 credit hours of faculty requirements,
• 17 credit hours of university requirements,
• 172 units of major faculty requirements made up of:
  • 66 credit hours of specialized courses in Clinical Pharmacy,
  • 36 credit hours of specialized courses in Pharmaceutical Chemistry,
  • 14 credit hours of specialized courses in Natural Products,
  • 15 credit hours of specialized courses in Pharmacology and Toxicology,
  • 9 credit hours of specialized courses in Clinical Biochemistry
  • 8 credit hours of Pharmaceutical microbiology,
  • 24 credit hours of specialized courses in Pharmaceutics.

Department Core Courses: (Credit Hours 24)

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Total: 2 1 1 0

Course Descriptions:

PH 101: Introduction to Pharmacy
The objective of this course is to acquaint students with the role of pharmacists in society and how the profession of pharmacy has changed and developed over recent years. It also deals with the general area of social and behavioral science including some of the important aspects of the sociology and psychology of patients and the important requirements for the effective communication skills of pharmacists.

PH 211: Pharmaceutics I
The course provides students with information about calculations needed in compounding pharmaceutical preparations and prescriptions. It also provides the principles and techniques involved in formulating, preparing, evaluating and bioavailability aspects of solid drugs.

Prerequisites: MATH 101

PH 312: Pharmaceutics II
This course covers the fundamental principles of interfacial phenomena, colloids, rheology, coarse dispersion and finally study of stability and kinetics of drug degradation and rate processes.

Prerequisites: PH 211

PH 413: Pharmaceutics III
This course covers the physical, chemical and biopharmaceutical principles involved in the design and formulation that could affect drug performance and development of an efficient dosage form. The course is designed to familiarize students with the new drug delivery systems, provide a framework for formulating a strategy of delivering drugs to their site of action, and optimizing their effects.

Prerequisites: PH 312

PH 421: Biopharmaceutics and Pharmacokinetics
This course is a study of the different pharmacokinetic (PK) parameters for different drugs. Via different routes of administrations.

Prerequisites: PH 312

PH 514: Pharmaceutics IV
The aim of this course is to teach students the different pharmaceutical unit operations concerned with drug preparations. Each unit involves the theory, principles as well as the practice of the operation.

Prerequisites: PH 312

PH 515: Fundamentals of Cosmetology
To provide students with fundamentals of body & skin, and hair care-principles of beauty technology by examining the importance of product development and innovative formulas. It will also provide an understanding of the principles of cosmetics’ compositions and ingredients and their vital importance to cosmetics technology.

Prerequisites: PH 514

FACULTY MEMBERS

Professors

Abdel-Rahim Mohammed El-Helw
Pharmaceutical Technology
1972 Assiut University, Egypt
aalhelo@kau.edu.sa

Nagwa Hussein Fouda
Pharmaceutics
1971 Cairo University, Egypt
pfouda@kau.edu.sa

Iman Ibrahim Solaiman
Pharmaceutics
1980 Cairo University, Egypt
isolaiman@kau.edu.sa

Seham El-Sayed Abd-Elhady
Pharmaceutics
1972 Assiut University, Egypt
sabdelhady@kau.edu.sa

Associate Professor and Assistant Professor

Osama Abdel-hakim Ahmed
Pharmaceutics
1993 Cairo University, Egypt
oahmed@kau.edu.sa

Shaima Badr
Pharmaceutics
1999 Cairo University, Egypt
sbadr@kau.edu.sa
Department of
Pharmacology and Toxicology

Department Contact:
Chairman’s Office
Tel: 6401000 Ext: 20190 Fax: 22424
E-mail: satteiah@kau.edu.sa
Website: http://pharmacy.kau.edu.sa

History:
The Department of Pharmacology and Toxicology was established in 2001

Vision:
The Department of Pharmacology and Toxicology aims to be a core centre for pharmacology, basic and clinical toxicology as well as biostatistics knowledge and practice, through advancements in research, teaching and service.

Mission:
Our mission is to provide the highest quality of educational opportunities to Bachelor of Pharm.D. students, to advance scientific knowledge and improve human health through leading research in drug-related sciences

Departmental Requirements:
The duration of the program is 6 years and in order to earn the Pharm.D. degree, students must complete a total of 210 credit hours distributed as follows:

- 34 credit hours of faculty requirements,
- 17 credit hours of university requirements,
- 172 units of major faculty requirements made up of:
  - 66 credit hours of specialized courses in Clinical Pharmacy,
  - 36 credit hours of specialized courses in Pharmaceutical Chemistry,
  - 14 credit hours of specialized courses in Natural Products,
  - 15 credit hours of specialized courses in Pharmacology and Toxicology,
  - 9 credit hours of specialized courses in Clinical Biochemistry
  - 8 credit hours of Pharmaceutical microbiology,
  - 24 credit hours of specialized courses in Pharmaceutics.
**Department of**

**Pharmacology and Toxicology**

**Department Core Courses:** (Credit Hours 15)

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**Course Descriptions:**

**PT 201: Bio Statistics**
The future practitioner or researcher in the medical sciences will need the skills required to plan, collect data, analyze and communicate the results of biological studies. Topics covered by this course include introduction to statistics & data analysis, collection of data, types of variables and different methods of data presentation including the tabular and graphical methods of presentation. The use of computer packages to perform analyses will be covered to further prepare students for real world applications.  
**Prerequisites:** STAT 101

**PT 311: Pharmacology**
The goal of this course is to provide students with basic knowledge and understanding of the actions of drugs in order to enable them to utilize therapeutic agents in a rational and responsible manner in the treatment of patients. Initially, basic principles of pharmacology will be presented, including absorption, distribution, metabolism, and excretion of drugs by the body. The concept of drug-receptor interaction will also be presented, and illustrated with appropriate examples, in addition to the pharmacology of the autonomic nervous system and local hormones, the pharmacology of the cardiovascular and central nervous systems, respiratory, renal, and blood and lymph systems, antimicrobial and cancer chemotherapeutic agents.  
**Prerequisites:** PHY 201

**PT 521: Basic and Clinical Toxicology**
This course will survey the principles of toxicology that pertain to human health and the environment. Course content will include a historical background of toxicology; principles of absorption, distribution, metabolism and elimination; types of toxicity; evaluation of safety of a new compound; management of a poisoned patient; and effects of toxic agents and drug over dosage. Students will work on a laboratory, library, or theoretical study under the supervision of faculty members.  
**Prerequisites:** PH 211

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**FACULTY MEMBERS**

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