

## **(PhD)**

**1-Code:** 0902803

**Name of the course :** Advanced topics in toxicology

**Theoretical:** 3 hour/week

**Practical:** -----

**Total:** 42 hours

### **Overall aims of the course:**

The course seeks to provide the graduate of Ph.D. in Pharmacology & Toxicology with the ability to:

- Maintain an updated in-depth view of toxicology and poison-related disciplines.
- Be able to apply knowledge about adverse effects & toxicity of different categories of drugs and newly introduced substances in research, teaching and to address toxicological problems affecting public health

The course focuses on the mechanisms of toxicity in cells, tissues and organs at the chemical, biochemical, cellular and molecular levels. The course involves investigation of the mechanisms of toxicity of environmental agents, the mechanisms controlling host responses to environmental toxicants, the potential hazards of exposure to such agents. Emphasis is made on cellular macromolecules, biochemical/molecular processes, and signaling pathways as targets for toxicants.

**2- Code:** 0902805

**Name of the course:** Biochemistry of Diseases

**Credit hours****Theoretical: 3 Credit Hrs****Practical: 0 Credit Hrs****Total: 3 Credit Hrs****Overall Aim of the Course**

This course aims to help PhD students to acquire full knowledge of the biochemical mechanisms which underlie a number of human diseases with the aim to find new therapeutic approaches. It also seeks to elaborate on the investigative methods for diagnosis of diseases.

**3- Code: 0902808****Name of the course :** Selected Topics in Clinical

Pharmacokinetics

**Theoretical:**3 credit hour**Practical:**0 credit hour**Total:** 3 hours**Over all aims of the course:**

To acquire the principles of the pharmacokinetic properties of individual drugs that necessitate the determination of plasma concentration.

Quantitative assessment of the relationship between drug and efficacy, Interpretations of measurements of drug concentrations in biological fluids, and studying pharmacokinetic parameters such as clearance and volume of distribution and their importance in dosage adjustment and improving efficacy In individual patients.

The course also elaborates on the relationship between pharmacological and toxicological effects of drug and their concentrations in a readily accessible site of the body.

**4-Code: 0902807****Name of the course:** Selected topics in histology**Credit hours****Theoretical: 3****Practical: 0****Total: 3****Overall Aim of the Course**

The course presents an overview of the basis of histology to the scientists working in the area of pharmacology and toxicology. The focus of this course is the basic understanding of the microscopic structure of organs and systems in the human body and the direct

relationship between the morphology (macro and microscopic structure) of such an organ and its function.

**5- Code:** 0902806

**Name of the course:** Selected topics in pathology

**Credit hours**

**Theoretical: 3**

**Practical: 0**

**Total: 3**

**Overall Aim of the Course**

The course seeks to present an overview of the basis of pathology to the scientists working in the area of pharmacology and toxicology. These bases are expected to help in understanding the damage of different body organ that results from diseases as well as toxic material.

**6- Code:** 0902802

**Name of the course:** Seminar I

**Theoretical: 3 credit hours**

**Practical: ---**

**Total: 3 credit hours**

**Overall aims of the course:**

The course aims to develop in the students skills enabling him to independently search in the scientific literature on new topics in advanced pharmacological research, to use up-to-date tools in retrieving information from reliable sources, to access relevant full articles and apprehend them, to prepare a referenced scientific report, and finally to present the information compiled in a clear and comprehensive way to an audience of the teaching staff in the department and answer their inquiries.

**7-Code:** 0902804

**Name of the course:** Seminar II

**Theoretical:** 3 credit hours

**Practical:** ---

**Total:** 3 credit hours

**Overall aims of the course:**

The course aims to supply the students with the skills of searching about new area in the field of pharmacological and toxicological sciences, to use up-to-date tools in retrieving information from reliable sources, to access relevant full articles and apprehend them, to prepare a referenced scientific report, and finally to present the information compiled in a clear and comprehensive way to an audience of the teaching staff in the department and answer their inquiries.

**8- Code:** 0902801

**Name of the course:** Therapeutics

**Theoretical:** 3 hours/ week

**Practical:** ---

**Overall aims of the course:**

- To provide the student with the general principles of pharmacotherapy in normal and special patients, impact of drug interactions on therapeutics ,pharmacotherapy for infectious diseases.
- To define the basis for variability in therapeutic and toxic responses to medicines