

Code	Course name	Description
PC 102	Pharmaceutical Organic Chemistry-1	<p>First year (First semester).</p> <p>Theoretical: 2 hrs/week Practical: 1 hr/week Total: 3 credit hrs/week</p> <p>The prime objective of this course is to provide students with the basic knowledge in the field of organic chemistry which will serve as fundamental for other courses that are offered during subsequent semesters.</p> <p>It allows students to have a solid understanding of structure hybridization and geometry, steric hindrance, electronegativity polarity and stereochemistry, and to make intuitive sense of mechanisms.</p> <p>The course also aims to teach students how to deal with organic substances through purification and identification depending on their physical and chemical properties.</p>
PC203	Pharmaceutical Organic Chemistry-2	<p>First Year (second semester)</p> <p>Theoretical: 2 Cr. hrs / week Practical: 1 Cr. hr / week</p> <p>Total: 3 credit hrs / week</p> <p>The prime objective of this course is to provide students with the basic knowledge in the field of pharmaceutical organic chemistry and to apply this knowledge in designing methods for drug synthesis.</p> <p>It familiarizes students with the physical and chemical characters of organic compounds with different functional groups.</p> <p>The practical sections of this course help students to identify organic compounds of different classes.</p>
PC 304	Pharm. Organic Chemistry 3	<p>Semester 3</p> <p>Theoretical: 2 hrs/week Practical: 1hr/week Total: 3 credit hrs</p> <p>This course aims to:</p> <ol style="list-style-type: none"> 1. To have a sense of enthusiasm for Pharmaceutical Organic Chemistry and its broad applications so that the student could continue Medicinal Chemistry courses and further studies as Biochemistry, Analytical chemistry, Phytochemistry, and other pharmacy branches or apply acquired Organic Chemistry knowledge in industry after his graduation. 2. Provide students with the basic knowledge in the field of mechanistic organic chemistry with an overall view of the basic synthetic techniques and applicability in the field of synthesis of medicinal drugs.

		<p>3. Emphasize mechanisms and their common aspects as often as possible and at the same time to use the features of functional groups as the basis of these studies.</p> <p>4. Show students, by means of structural and mechanistic aspects, what organic chemistry is and how it works and what it does in living systems both in biological terms and in our physical environment.</p> <p>5. Let students realize that life and much of the world around us involves organic chemistry.</p> <p>6. Provide specialized knowledge of different aspects of Heterocyclic Chemistry and integrate this knowledge with those of Medicinal Chemistry and other branches and perfectly apply them in professional Pharmaceutical Chemistry practice.</p> <p>7. Help the students to acquire skills to suggest the proper nomenclatures for heterocyclic organic compounds with special reference to drugs.</p> <p>8. Introduce the student to the current issues and progress in the field of Pharmaceutical Organic Chemistry.</p> <p>9. Teach students how to apply the acquired basic knowledge in organic chemistry in designing methods for drug synthesis.</p> <p>10. Provide an introduction about the use of different spectroscopic tools, including infrared (IR), nuclear magnetic resonance (NMR) and mass spectroscopy (MS) for the identification and differentiation of organic compounds.</p> <p>11. Enable students to employ available resources to the greatest benefit.</p> <p>12. Help the student, during practical sessions, to synthesize some medicinally used drugs.</p> <p>13. Provide the student with widespread information in the field of natural products such as carbohydrates, amino acids and peptides with reference to the encountered stereochemistry.</p>
PC 509	Medicinal Chemistry I	<p>Semester (6)</p> <p>Theoretical: 2 Practical: 1 Total: 3 credit h / week</p> <p>The prime objective of this course is to prepare the student for professional practice by understanding an introduction to the essentials of Pharmaceutical Chemistry, physicochemical properties of drugs in relation to biological action. and discussion of different classes of chemotherapeutic agents that treat different infectious diseases in addition to cancer chemotherapy. The course also aims to</p>

		<p>provide the students with the concept of molecular targeted therapies.</p> <p>The course also comprise discussion of properties, chemistry, mechanism of action of different chemotherapeutic agents and toxic side effects .</p> <p>The practical course is constructed to aquire the students the skills to determine the putity of the pharmaceutical chemicals according to the pharmacopeal standards and quantification of drugs in bulk and in different pharmaceutical forms.</p>
PC-610	Medicinal Chemistry-II	<p>Semester (8)</p> <p>Lectures: 2 Hours weekly</p> <p>Practical: 1 Hour weekly</p> <p>Total: 3 Credit hours/week</p> <p>The course is designed to assist the clinical pharmacy students to gain the skills required to understand drugs as organic chemicals whose biological activities and toxicological properties are derived from their chemical structures, physicochemical properties and metabolic pathways.</p> <p>The course provides discussions of specific drug classes (see course contents) by relating the pharmacodynamic and pharmacokinetic properties to the chemistry of the drugs.</p> <p>The practical part of the course is designed to assist the students to gain necessary skills for chemical quality control of some pharmaceuticals which belong to different therapeutic classes.</p> <p>To ensure national academic reference standards (NARS), the course is designed to qualify our graduates with the following skills and attributes.</p>
PC E11	Drug Design	<p>8th or 9th or 10th Semester</p> <p>Elective</p> <p>Theoretical: 2 Practical: 1 Total: 3</p> <p>The course is directed towards deepening the concepts presented in the medicinal chemistry course. As well, this course aims at application of modern <i>in silico</i> tools and recent techniques in different phases of drug discovery and design of new drug candidates. The following concepts of drug design are discussed:</p> <p>Molecular modeling, computer-aided drug design (CADD), <i>de novo</i> drug design, homology modeling, structure-based drug design, ligand-based drug design, pharmacophore searching, molecular docking, quantitative structure activity relationship (QSAR), fragment-based lead discovery, drug-likeness metrics, finding a lead</p>

		compound, multi-target drugs (MTDs), pharmacokinetic lead optimization strategies and pharmacodynamic lead optimization strategies.
Hu201	Human right حقوق الإنسان	<p>الفرقة الأولى – الفصل الثاني</p> <p>عدد الوحدات الدراسية: نظري (2) عملي (—)</p> <p>التعريف بحقوق الإنسان في الشريعة الإسلامية ، وماهية حقوق الإنسان ومصادرها وحمايتها في القانون الدولي العام ، ودراسة أنواع الحقوق والحريات العامة واللصيقة بالشخصية ، وحماية حقوق الإنسان في القانون الجنائي.</p>