Department	Pharmacy

Course Name	Practical Pharmaceutical Organic Chemistry (2)	Course No.	201212
Prerequisite	Practical General Chemistry	Credit Hours	1
Number & date of course plan approval		Brief Description	See form QF02/0409

Intended Learning Outcomes	1- **This course is complementary part to the theoretical lectures.** 2- **It provides the students important knowledge to acquire good practical skills in the following fields:** **a- Studying different chemical and physical properties of organic compounds using different apparatus.** **b-Synthesis of different organic compounds using one step synthesis and more advanced multi steps synthesis.** **c-Having a good overview on advanced separation techniques such as chromatography.** **d- Characterization and identification of organic compounds.**
Course Topics	1- **Includes investigation and characterization of the physical and chemical properties for many organic chemical classes.** 2- **It involves preparation, purification and identification of selected simple organic compounds, such as organic halides, aromatic compounds, alcohols, ethers, aldehydes, ketones, phenols, carboxylic acids, nitro compounds and amines..etc.**
Text Books	**Vogel's Text book of Practical organic chemistry by A. Vogel, et al, prentice Hall, 1996 , 5th edition .**
References	**Unitized Experiments in Organic Chemistry by Ray .Brewster and McEwen, wadsworth publishing company 1997, 10th edition.**

Grade Determination	1st Exam = 25% 2nd Exam = 25% Final Exam = 50%	Practical Course Grade Determination	Course Work = 50% (Reports, Term Papers, Quizes) Final Exam = 50%

Course Outline

Week	Hours	Subjects	Chapters in	Notes

			Textbook	
1	3	Melting point (Identification and purity examination of organic solids).		
2	3	Boiling point and distillation: Identification, separation and purification of organic liquids.		
3	3	Recrystallization (Purification of organic compounds).		
4	3	Extraction: Separation and isolation technique.		
5	3	Chromatography: Identification ,separation and purity examination of compounds.		
6	3	Elemental identification of organic compounds.		
7	3	Fischer esterification: Preparation of methyl benzoate		
8	3	Electrophilic aromatic substitution: Nitration of methyl benzoate.		
9	3	Preparation of Dibenzalacetone .		

Course Outline

Week	Hours	Subjects	Chapters in Textbook	Notes
10	3	Nucleophilic aliphatic substituation: Preparation of t-butyl chloride, reactivity of alkyl halides.		
11	3	Alcohols and phenols: Properties and reactions.		
12	3	Reactions of aldehydes and ketones.		

13	3	Amines: Properties and reactions.		
14	3	Chemical tests for the following functional groups: Alkenes and alkynes (Unsaturated compounds), organo halogen compounds, aldehydes, ketones, alcohols, phenols, carboxylic acids, aliphatic and aromatic amines.		
15	3	Final Examination		

Approved by Dept. Chair		Date of Approval	

Extra Information: (Updated every semester and filled by course instructor)

Course Instructor	
Office No.	
Extension **Email**	
Office hours	