University of Beni- Suef
College of Pharmacy
Quality Assurance Unit

جامعة بني سويف
كلية الصيدلة
وحدة ضمان الجودة

Course Specifications

University	Beni-Suef
Faculty	Pharmacy
Dept.	**Pharmaceutical Organic Chemistry**

1-Course Info.
Programme(s) on which the course is given: General Programme
Course Name and code No.: Pharmaceutical Organic chemistry-4/ 505
Academic year/ Level: 2017-18-second term-second year
Credit hours: Lecture (2) hour + Practical (1) hour

2-Overall Aim of the Course

By the end of this course, the student should be able to name, identify aromatic carbonyl compounds and non-fused heterocyclic compounds. The students should be able to use the knowledge gained t the chemical structure of a heterocyclic compound. Through the knowledge and skills gained, s should be able to differentiate between organic compounds using chemical tests and to practice organic synthesis using different reactions.

3-Intended Learning Outcomes of the course (ILOs)

a. Knowledge and understanding

After completion of this course, the student should be able to:

a1- Demonstrate knowledge and understanding principles of aromatic compounds and heterocycles
a2- Describe different synthetic methods for carbonyl aromatic, heterocyclic compounds
a3- Enumerate types, properties and chemical synthesis of aromatic and heterocyclic compounds

b. Professional and Practical Skills

After completing this course, the student should be able to:
b1- Use the suitable synthetic method for different organic classes
b2- identify organic compounds practically using chemical tests.
b3- Handle samples, reagents and other chemicals safely.

c. Intellectual Skills

After completing this course, the student should be able to:
b1- Apply simple scheme steps for organic compound identification
b2- Suggest suitable chemical test for organic compound separation

b3- compare between different classes of aromatic compounds

d. General and Transferable Skills

By the end of this course, the student should be able to:
d1- Demonstrate time management ability and decision-making skills.
d2- Use critical thinking in problem-solving.

4-Course Contents

Topics	No. of hours	
	Tutorial / Practical	Lecture
introduction to heterocyclic chemistry and Nomenclature of non fused heterocycles		2
Nomenclature of non fused heterocycles		2
Six memberd rings contain one heteroatom (pyridine) [chemical properties-chemical reactions-synthesis]		2
Benzo pyridines (quinoline & isoquinoline) [chemical properties-chemical reactions-synthesis]		2
Six memberd rings contain two heteroatom (diazines) [chemical properties-chemical reactions-synthesis]		2
five memberd rings contain one heteroatom (pyrrole-thiophene-furan) [chemical properties-chemical reactions-synthesis]		2
five memberd rings contain two heteroatom (thiazole-oxazole-pyrazole) [chemical properties-chemical reactions-synthesis]		2
Benzo pyrrole (indole & isoindole) [chemical properties-chemical reactions-synthesis]		2
Aromatic aldehyds, ketons		4
Aromatic carboxylic acids & deivatives		4
Identification of ethyl alcohol, carboxylic acids, Esterification of ethyl alcohol, Preparation of ethyl benzoate	3	
Preparation of phenylhydrazone of benzaldehyde	1	
Preparation of 4-(phenylazo)-1-naphtol	1	
Nitration of Naphthalene	1	
Preparation of naphthalene and anthracene picrate	1	
Preparation of Benzanilide	1	
Identification of sugars, Osazone formation	2	
Revision and practical assessments	2	
Total	12	24

5- Teaching and learning Methods

Lectures
Practical sessions
homework exercises
Problem solving and working in groups

Brain storming-

7- Student Assessment Methods

a-Methods

Exercises
Practical exam
Written exam
Oral exam

b- Assessment Schedule

Assessment 1: Exercises ……Weekly
Assessment 2: Practical exam……Week 12
Assessment 3: Final written exam…Week 13-14
Assessment 4: Final oral exam … Week 13-14
(According to the exam time table)

c- Weighting of Assessment Marks

Practical exam 33.33%
Final written exam: 53.33%
Final oral exam: 13.33%
Total : 100%

8-List of References

a. Notes

Theoretical and practical Notes by the department teaching staff

b. Mandatory Books

Organic chemistry, 6th ed., R. T. Morrison and Boyed (2003)

c. Suggested Books

d. Journals

Course Coordinator:

Head of department: Ass. Prof. Eman K. Ahmed

Date: 9/ 2017