Course Description Form

1. Course Name:

Organic Chemistry III

2. Course Code:

Phpch22_2210-

3. Semester / Year:

2nd Semester, 2nd year

4. Description Preparation Date:

24/3/2024

5. Available Attendance Forms:

Students' signatures on attendance sheets

6. Number of Credit Hours (Total) / Number of Units (Total)

2 hours theory + 2 hours practical (60) / 3 units

7. Course administrator's name (mention all, if more than one name)

Theory

Name: Lecturer Dr. Banan Borhan Saeed
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Name: Lecturer Dr. Nagham M. Zaki Dawood
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Practical

Name: Assit. Lecturer Nura Ahmed Mohamed
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Name: Assit. Lecturer Sara Ahmed Mohamed
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8. Course Objectives

The student obtains theoretical and practical information about heterocyclic compounds.

9. Teaching and Learning Strategies

Study of the nomenclature, reactions, and preparation of five- and six-ring heterocyclic compou such as pyridine, pyrrole, furan, and thiophene, in addition to heterocyclic rings containing two or m heteroatoms and some fused heterocyclic compounds such as, indole, isoindole, quinoline a isoquinoline.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1-2	4	Classes of heterocyclic syste heterocyclic rings (epoxides	Introduction of heterocyc compounds	Lectures	Paper-based exams
3-4	4	Nomenclature of heterocycl compounds	Nomenclature of heterocyclic compounds	Lectures	Paper-based exams
5	2	Properties and occurrence ir nature and in medicinal products	Properties and occurrenc in nature and in Medicinal products	Lectures	Paper-based exams

6-7	4	Five-membered ring heterocyclic compounds (pyrrole, furan and Thiophe and benzo[b]pyrrole (Indole	Five-membered ring heterocyclic compounds	Lectures	Paper-based exams
8	2	Source of Five-membered ri heterocyclic compounds (pyrrole, furan, Thiophene)	Source of (pyrrole, furan Thiophene)	Lectures	Paper-based exams
9-10	4	Electrophilic substitution rea orientation of Pyrrole, furan,	Reactions of pyrrole, fura Thiophene	Lectures	Paper-based exams
11	2	Saturated five-membered heterocyclic rings with one heteroatom (pyrrolidine tetrahydrofuran and tetrahydrothiophen) .	Saturated five-membered heterocyclic rings	Lectures	Paper-based exams
12-13	4	Six-membered ring heterocyclic compounds, structure, source and basicit of pyridine.	structure, source and basicity of pyridine.	Lectures	Paper-based exams
14-15	4	reactions of pyridine and benzopyridines (Quinoline and isoquinoline	reactions of pyridine and benzopyridines	Lectures	Paper-based exams
1-3	6	Introduction of practical organic chemistry	Introduction of practical organic chemistry	Practical	Lab-based unknown and quiz
4-5	4	Identification of alkyl and a halides	Identification of alkyl an aryl halides	Practical	Lab-based unknown and quiz
6	2	Unknown of alkyl and aryl halides	Unknown of alkyl and ar halides	Practical	Lab-based unknown and quiz
7-8	4	Identification of carboxylic acid salts	Identification of carboxy acid salts	Practical	Lab-based unknown and quiz
9	2	Unknown of carboxylic acid salts	Unknown of carboxylic acid salts	Practical	Lab-based unknown and quiz
10-11	4	Identification of carboxylic acid	Identification of carboxy acid	Practical	Lab-based unknown and quiz
12-13	4	Synthesis of thiopyrimidine	Synthesis of thiopyrimidi	Practical	Lab-based unknown and quiz
14-15	4	Synthesis of benzoimidazol	Synthesis of benzoimidazole	Practical	Lab-based unknown and quiz

11. Course Evaluation

- 20% Theoretical assessment (paper-based midterm exam, attendance)
- 20% Practical assessment (attendance, quizzes, unknows, reports)
- 60% paper-based theoretical final exam

- 100 M total

12. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	Morrison RT, Boyd RN. Organic Chemistry. 6th edition ,2008
Main references (sources)	Textbook of organic chemistry for pharmacy students KS Mukheriee
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	https://books-library.net/free-959800753-download