

**University of Al-Anbar**

**College of Pharmacy**

**Department of Pharmaceutical Chemistry**

Title of the course: ***Organic Pharmaceutical Chemistry IV*** Course number: **511**

Level: 5<sup>th</sup> Class, 1<sup>st</sup> Semester

Credit hours: **Theory 2 hours    Laboratory    -----**

Tutors:

Reference text: ***Wilson and Gisvold Textbook of Organic Medicinal and Pharmaceutical Chemistry; Delgado JN, Remers WA, (Eds.); Latest edition.***

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**Objectives:** To give the students knowledge and experience in pro-drug and hormones as part of their medicinal and pharmaceutical field. I include classification, synthesis, biotransformation and/or formulation of certain drugs to improve their action as well as to avoid some side effect.

No	Lecture title	hours
1.	Basic concept of prodrugs; Covalent bonds (cleavable); Prodrugs of functional groups; Types of prodrugs.	6
2.	Chemical delivery systems; Polymeric prodrugs; Types and structure of polymers; Cross-linking reagents.	6
3.	Drug targeting.	4
4.	Project.	4
5.	Combinatorial chemistry; Peptides and other linear structures; Drug like molecules; Support and linker; Solution-phase combinatorial chemistry.	5
6.	Detection, purification and analgesics; Encoding combinatorial libraries; High-throughput screening; Virtual screening; Chemical diversity and library design.	5