University of Al-Anbar
College of Pharmacy
Department of Pharmaceutics
Title of the course: ***Dosage form Design*** **Course** number: **5212**
Level: 5th Class, 2nd Semester
Credit hours: **Theory 2 hours** **Laboratory** **---------**
Tutors:
Reference text: ***Pharmaceutical Dosage Forms and Drug Delivery Systems by Haward A. Ansel; Latest edition.***

Objectives: This course enables students to understand the principles and factors that influence design of dosage forms; and the applications of these principles in the practice of pharmaceutical industry.

No	Lecture title	hours
1.	Pharmaceutical consideration: The need for the dosage form.	1
2.	General consideration for the dosage form.	3
3.	Pre-formulation; physical description, microscopic examination.	2
4.	Melting point; phase rule; particle size; polymorphism; solubility.	2
5.	Permeability; pH; partition coefficient; pka; stability; kinetics; shelf life.	2
6.	Rate reaction; enhancing stability.	2
7.	Formulation consideration: Excipients; definition and types; appearance; palatability; flavoring.	2
8.	Sweetening; coloring pharmaceuticals; preservatives; sterilization; preservatives selection.	2
9.	Biopharmaceutical considerations: Principle of drug absorption**;** dissolution of the drugs**.**	4
10.	Bioavailability and bioequivalancy; FDA requirements.	3
11.	Assessment of bioavailability; bioequivalence among drug products**.**	3
12.	Pharmacokinetic principles: Half life; clearance; dosage regimen considerations.	4