



Quality Assurance Unit



كلية الصيدلة - جامعة أسيوط



Assiut University  
Faculty of Pharmacy

Department of Pharmaceutics

Course Specification

### Course Specification

#### 1-Basic Information

Title: **Drug Targeting**

Code:

Level: **Ph.D (Special course)**

Department: **Pharmaceutics**

Unit: **Hour/week**

Lecture: Two hours per week

Tutorial

Practical:

Total: 2hr/week

#### 2- Aims of Course

The aim of this course is to introduce the different technologies that have been investigated recently to enhance the drug accumulation at their target sites.

The versatile attributes of different polymeric and lipidic materials make these systems an attractive approach for the delivery of various therapeutic agents *via* parenteral, oral and transdermal routes. These materials can be exploited to protect drugs from enzymatic degradation or to enhance the solubility of poorly water-soluble drugs. In addition, they can be utilized to decrease the toxicity or immunogenicity of the incorporated drug. Furthermore, they can be used to target the drug either passively or actively.

#### 3- Intended Learning Outcomes of Course (ILOs)

##### **a- Knowledge and Understanding:**

**The graduate should be able to:**

- a1- Define the principles and types of drug targeting.
- a1- List the delivery systems utilized for drug targeting.
- a1- Illustrate of the different routes of administration.
- a1- Be aware of the barriers towards the successful drug targeting

##### **b- Intellectual Skills:**

**The graduate should be able to:**

- b6- Design of efficient technologies for drug targeting
- b6- Analyze and evaluate the current techniques utilized for drug targeting
- b6- Evaluate the current status of improving and targeting the pharmaceutical drugs.

**c- Professional and practical Skills:**

**The graduate should be able to:**

- c2- Prepare different delivery systems used for drug targeting.
- c2- Find the appropriate technology for the targeting of a specific drug at a specific site.
- c2- Design of the optimal delivery system based on the type of the drug, the route of administration and the target site.

**d- General and Transferable Skills:**

**The graduate should be able to:**

- d2- Communicate efficiently with colleagues and coworkers.
- d4- Work effectively as a part of team

**Course Contents**

Topic	No. of hours	Lecture	Tutorial / Practical
Drug targeting	4		--
Delivery principles	4		--
Macromolecular drug carriers	4		--
Targeting to different sites	4		--
Design of targeting carriers	4		--
Novel approaches	4		--
Total	24		--

**4- Teaching and Learning Methods**

- 4.1-Lectures
- 4.2- Discussion
- 4.3- Essay writing and reports.

**5- Teaching and learning methods for disables**

Extra time to help the disable students to understand the hard topics.

**6- Student Assessment**

**a- Student Assessment methods**

- 6.1-Written exam to assess understanding and knowledge.

**b- Student Assessment Schedule**

No.	Assessment	week
1.	Final written exam	In June

### c- Weighting of Assessments

No.	Exam.	Mark	%
1.	Mid-Term Examination		
2.	Final-Term Examination	100	100%
3.	Oral Examination		
4.	Practical Examination		
5.	Semester Work		
6-	<u>Other types of assessment</u>		
	<u>Total</u>	100	100%

### 7- List of References

#### a- Course Notes

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#### b- Essential Books (Text Books)

- Anya M. Hillery, Andrew W. Lloyd, James Swarbrick.
- Drug Delivery and Targeting, Taylor and Francis, London and New York 2001.

#### c- Recommended Books

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#### d- Periodicals, Web Sites, .... etc

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### 8- Facilities Required for Teaching and Learning

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**Course Coordinator:** Dr. Mahmoud Fahmy

**Head of Department:** Professor Dr. Frgani Abdel- Hamid

**Date:** 12/ 10 /2010

**University**  
**Faculty**  
**Department**

**Assiut**  
**Pharmacy**  
**Pharmaceutics**

**Course Title**  
**Course Cod.**

**Drug targeting**  
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**Matrix of the Intended Learning Outcomes (ILOs) of the Course**

<b>Topic</b>	<b>Week</b>	<b>Knowledge and Understanding</b>	<b>Intellectual Skills</b>	<b>Professional and Practical Skills</b>	<b>General and Transferable Skills</b>
Drug targeting	1 <sup>st</sup> , 2 <sup>nd</sup>	a1	b6	c2	d2,d4
Delivery principles	3 <sup>rd</sup> , 4 <sup>th</sup>	a1	b6	c2	d2,d4
Macromolecular drug carriers	5 <sup>th</sup> , 6 <sup>th</sup>	a1	b6	c2	d2,d4
Targeting to different sites	7 <sup>th</sup> , 8 <sup>th</sup>	a1	b6	c2	d2,d4
Design of targeting carriers	9 <sup>th</sup> , 10 <sup>th</sup>	a1	b6	c2	d2,d4
Novel approaches	11 <sup>th</sup> , 12 <sup>th</sup>	a1	b6	c2	d2,d4

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