

Pharmaceutical Dosage Forms and Technology

(1000019)

I. Course Code: 1000019

Class Hour:32 Credit: 2

II. Suitable specialty: Applied Chemistry

III. Prerequisites: Foundation of Biology, Pharmacy, Chemistry

IV. Course Description and course target

The purpose of this course is to introduce the technologic and scientific principle underlying the preparation of dosage forms and drug delivery systems and to their use in patient care to the students. Through an integrated presentation, students gain an understanding of the relationship between physical pharmacy principle, dosage form design, product formulation, small and large-scale product manufacture, and the clinical application of pharmaceuticals in patients care. After completing this course, a student should be able to: Master the definition of different dosage forms, the prescription and the preparation of the normal dosage forms. For example the solid dosage form such as tablets, capsules. The liquid dosage form such as Oral solution, syrup. Transdermal Drug Delivery Systems, Ointments, Creams, Lotions and other Preparations. The related knowledge on the dissection of the body will also be introduced.

V. Teaching method:

Classroom lectures, Classroom discussions, Oral presentation on given topics.

VI. Course content

Classroom teaching: 32 class hours

1 Introduction and the basic knowledge 8 class hours

1.1 Introduction of the course

1.2 Dissection

1.3 What is BBB? The function of BBB? How can we overcome BBB?

1.4 What will the solid drug be changed in vivo and in vitro?

1.5 What is the difference between "drug""medicine" and "pharmacy"?

2 Different related knowledge. 4 class hours

2.1 What are the five senses do? What is the restricted drug in China?

2.2 What type of the drug are they?

2.3 What s the standard prescription in China?

2.4 How to get most from the medicine?

2.5 Oral presentation practice

3 Drug discovery and development. 4 class hours

3.1 What should you do when you take hard capsules?

3.2 How to find the new drug?

3.3 Drug discovery and development.

3.3 Oral presentation practice

4 Different related knowledge. 4 class hours

4.1 Drug interactions.

4.2 What is Pharmacokinetic? What is Pharmacodynamics?

4.3 Oral presentation practice

5 Different definitions on drugs. 4 class hours

5.1 The effect of medicine color.

5.2 DDS.

5.3 Oral presentation practice

6. Introduction of pharmaceuticals. 4 class hours

6.1 DDS in the future.

6.2 Example of DDS

6.3 Oral presentation practice

7. Drug delivery. 4 class hours

7.1 Example of DDS

7.2 Oral presentation practice

VII. Evaluation and exams

The score uses a hundred-mark system.

Total Score 100%: Examination 70%, Presentation 20%, Attend the class 10%.

VIII. References

[1] Howard C et al. Pharmaceutical Dosage Forms and Drug Delivery Systems. Williams & Wilkins. USA, 1995

[2] Zhang Qi. Military Pharmaceutical Preparation. BIT University Press. Beijing, 2012

[3] Cui FuDe. Pharmaceuticals (No. 5 Edition). People's Medical Publishing House. Beijing, 2003

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