



Drug form technology

ECTS: 1.00

SUBJECT MATTER CONTENT

LECTURE

Introduction to technology of the drug dosage form (the principles of preparation/production of particular drug dosage form). Characteristics (definition, preparation/production, types and application) of the major pharmaceutical drug dosage forms – tablets, capsules, powders, suppositories, solutions, ointments, liniments, creams, pastes, preparations for inhalations, suspensions, parenteral preparations, tinctures, extracts, infusions, decoctions, herbs, eye preparations, skin patches for transdermal administration. Modified-released dosage forms. Manufacturing sterile drug and biological products. Therapeutic systems and controlled drug delivery. Drug quality control.

CLASSES

Auditory classes: Quality assurance systems: (a) Good Manufacturing Practice; (b) Good Laboratory Practice; (c) Good Clinical Veterinary Practice. Practical classes: Pharmacy utensils. Presentation of: (a) the drug dosage forms produced on industrial scale; (b) the drug dosage forms only for veterinary use. Practical assessment of the influence of different oral tablet formulations on drug release. Preparation of selected compounded formulations: - suppositories, powders, ointments, liniments, pastes, creams, solutions, tinctures, extracts, eye drops and ointments.

TEACHING OBJECTIVE

The subject is designed to provide student theoretical and practical knowledge about the drug dosage technology (on a recipe- and industrial-scale) and the principles of the drug quality control.

DESCRIPTION OF THE LEARNING OUTCOMES OF THE COURSE IN RELATION TO THE DESCRIPTION OF THE CHARACTERISTICS OF THE SECOND LEVEL LEARNING OUTCOMES FOR QUALIFICATIONS AT LEVELS 6-8 OF THE POLISH QUALIFICATION FRAMEWORK IN RELATION TO THE SCIENTIFIC DISCIPLINES AND THE EFFECTS FOR FIELDS OF STUDY:

Symbols for outcomes related to the discipline:

R/WA_P7S+++

Symbols for outcomes related to the field of study:

A.W19. +, K.1.+ , A.U14. +, A.W20. +, B.W18. +, K.4.+ , A.U2. +, B.U13. +, B.U9. +, A.W16. +, B.U10. +, A.U3. +, K.8.+

LEARNING OUTCOMES:

Knowledge:

W1 – Student knows the rules and regulations concerning: (a) characteristic of drug dosage form; (b) drug quality control; (c) different drug dosage form manufacturing process; (d) equipment and devices used in pharmacy; (e) manufacturing sterile drug, biological

Legal acts specifying learning outcomes:

682/2020

Disciplines: Veterinary science

Status of the course: Fakultatywny

Group of courses: B - przedmioty kierunkowe

Code: ISCED 0841

Field of study: Veterinary Medicine

Scope of education:

Profile of education: General academic

Form of studies: full-time

Level of studies: uniform master's studies

Year/semester: 3/6

Types of classes: Lecture, Classes

Number of hours in

semester: Lecture: 5.00, Classes: 10.00

Language of instruction: Polish

Introductory subject: Chemistry, biochemistry, pharmacy and veterinary pharmacology

Prerequisites: Appropriate level of knowledge in the above mentioned subjects.

Name of the organisational unit conducting the course: Katedra Farmakologii i Toksykologii

Person responsible for the realization of the course: dr wet. Agnieszka Jasiocka-Mikołajczyk

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Additional remarks:

products, therapeutic systems and controlled drug delivery on an industrial-scale; (f) factors influencing the stability of the drug formulas; (g) principles of the functioning of discussed quality assurance systems.

Skills:

U1 – Student: (a) is able to evaluate the properties of discussed drug dosage forms and to describe the method of their preparation/production; (b) is able to explain the importance of the pharmaceutical form and product composition for its action; (c) is able to advice how particular drug dosage forms should be applied; (d) is able to characterize the factors may influence the stability of the drug formulations; (e) is able to execute basic assays with respect to the quality of the drug formulations; (f) is able to prepare the most important compounded formulations.

Social competence:

K1 – Student: (a) shows initiative and updates the knowledge in the drug dosage technology field; (b) is aware of the benefits and risks associated with drugs use; (c) is aware of personal limitations.

TEACHING FORMS AND METHODS:

Lecture(W1;U1;):Informative lectures with multimedia presentations.

Classes(W1;U1;K1;):Informative classes with multimedia presentations; preparation of selected compounded formulations; presentation of selected compounded formulations; laboratory classes/demonstration.

FORM AND CONDITIONS OF VERIFYING LEARNING OUTCOMES:

Lecture (Colloquium test) - At the end of the course the colloquium - as a written multiple choice test - will be conducted as it is described below. -

Classes (Colloquium test) - At the end of the course the colloquium - as a written multiple choice test - will be conducted. To pass the colloquium student is obliged to obtain at least 65% points. The grading scale is based on following point levels: 94-100%, degree: excellent (5,0); 87-93%, degree: very good (4,5); 80-86%, degree: good (4,0); 73-79%, degree: satisfactory (3,5); 66-72%, degree: sufficient (3,0); 65%, degree: unsatisfactory=fail (2,0). Student who fails the colloquium can retake it twice. Failure of the colloquium constitutes failure of the course. The verification of the achievement of learning outcomes with respect to lecture and auditory classes topics is carried out as part of the colloquium.

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BASIC LITERATURE:

1. Kayne S.B., Jepson M.H., *Veterinary Pharmacy*, Wyd. Pharmaceutical Press, R. 2004
2. Muller R.H. Hildebrand G., *Technologia nowoczesnych postaci leków*, Wyd. PZWL, R. 2003
3. Krówczyński L. Jachowicz R., *Ćwiczenia z receptury*, Wyd. Wydawnictwo Uniwersytetu Jagiellońskiego, R. 2000
4. Jachowicz R., *Receptura apteczna*, Wyd. PZWL, R. 2008

SUPPLEMENTARY LITERATURE:

1. , *Farmakopea Polska XI*, Wyd. URPLWMIpB, R. 2018
2. Papich M.G., *Leki w weterynarii. Małe i duże zwierzęta.*, Wyd. Elsevier Urban Partner, R. 2013